# PEOPLE'S DEMOCRATIC REPUBLIC OF ALGERIA MINISTRY OF HIGHER EDUCATION AND SCIENTIFIC RESEARCH University of Djilali Liabes of Sidi Bel-Abbes Faculty of Letters, Languages and Arts Department of English



# Moodle-based Peer Review as a Tool to Enhance and Improve EFL Learners' Writing Performance:

The Case of English Department 3<sup>rd</sup> Year Students (2014-2015) (University of Laghouat, Algeria)

A Thesis submitted to the English Language Department for the Requirements of the Doctorate Degree in Sciences: English Language Didactics

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Submitted by: Supervised by:

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Academic Year: 2016 - 2017

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#### (Acknowledgements)

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I am thankful to all those who have lived with me the ups and downs of my Doctorate experience. I also thank all those who were with me with their prayers, encouragement and support.

#### (ABSTRACT)

ABSTRACT

The purpose of this study was to investigate the effectiveness of Moodle-based peer review in enhancing and improving EFL learners' writing skills. The aim was to determine whether students who were trained as peer editors within a technologysupported environment became aware of the writing process steps and produced better written texts in terms of layout, development, cohesion, coherence, structure, vocabulary and mechanics than students who were subject to teacher-led writing sessions, and whether engaging in online peer review sessions, characterized by anonymity, had a positive effect on students' attitudes, motivation and perceptions. The subjects of the study were 69 Algerian university students distributed randomly in two groups: 36 were assigned to the experimental peer review training group and led the experience of writing essays (anonymously) using Moodle platform, while the other 33 were assigned to the control group and worked individually in a teacher-led classroom where feedback comes only from the teacher. Both groups of students were asked to write an essay as an entry test and complete a pre-experiment questionnaire at the beginning and did an exit test at the end of the study. Seven students from the peer review training group were selected at random for interview at the end of the study. The experiment consisted of a total of eight weeks of teaching writing skills. Results of both tests and the questionnaire responses were compared, taking into account the interview responses. The findings revealed that Moodle-based peer review resulted in many benefits for the students in terms not only of their attitudes and motivation but also led to improvement of their writing. The experience also helped reduce anxiety and shyness among students since it was led anonymously. The overall conclusion was therefore that not only did Moodle-based peer review enhance and improve EFL learners' writing, , but also that involvement in anonymous online peer review treatment helped overcome psychological obstacles, namely anxiety, shyness and fear of committing errors.

KEY WORDS: Moodle – Peer Feedback – Peer Review – Technology-supported environment – Writing Skills

(Dedication)

DECLARATION

I hereby declare that the substance of this dissertation is entirely the result of my investigation and that due reference or acknowledgement is made, whenever necessary, to the work of other researchers.

Date :	•••	•••	•••		• • •		••	 ••	 • •		 ٠.	 	 ٠.	 • • •	••	• •		
Signed	:			• • •		•••	· · ·	 	 	•••	 • • •	 · • •	 	 			•••	

	(Dedication)
	To the soul of my MOTHE
All I am I	owe to my mother. I attribute my success in all fields of life to the
	moral, intellectual and physical education I received from he
	Adapted from George Washingt
	Adupted from deorge washing

#### (List of Abbreviations)

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#### LIST OF ABBREVIATIONS

ASTD : American Society for Training and Development

BL : Blended Learning

CALL : Computer Assisted Language Learning

CBA : Competency Based Approach

CL : Collaborative learning

CLT : Communicative Language Teaching

CMC : Computer Mediated Communication

EFL : English as a Foreign Language

ELT : English Language Teaching

ESL : English as a Second Language

F2F : Face to Face

FL : Foreign Language

ICC : International Code Council

ICT : Information Communication and Technology

ILT : Instructor-Led Training

L2 : Second Language

LMD : Licence Master Doctorat

LMS : Learning Management System

Moodle : Modular Object-oriented Dynamic Learning Environment

NNS : Non-native Students

NS : Native Students

PAL : Peer Assisted Learning
PBL : Project Based Learning

PC : Personal Computer

PF : Peer Feedback

PR : Peer Review

SCI : Student Centered Instruction

ZPD : Zone of Proximal Development

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GENERAL INTRODUCTION	
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#### General Introduction

The teaching of English as a foreign language in secondary education in Algeria as defined in the official orientations by the policy makers is to equip our learners with required knowledge and skills so as to enable them to access documentation written in English and to use the target language for communicative purposes.

Subsequently, the educational authorities have designed new English textbooks that comply with the new syllabuses laid out by the National Curriculum Committee of the Ministry of National Education in March 2006. However, throughout our visits to different schools to attend seminars and training days and relying on our personal experience in the field of language teaching for observation, we noticed that in the application of the advocated approach, part of the objectives set to the teaching of foreign languages at this level were not reached. Witness, the unbalanced development of the skills with an overemphasis of the aural/oral skills at the expense of the writing skill mainly. Furthermore, the fact that the Baccalaureate (entrance exam to university) is exclusively of the written mode, it is not much to say that the teaching-testing congruency principle may be seriously questioned. This argument is evidenced through examinees' written performances at the baccalaureate exam.

A word of warning is necessary here. Our chief concern is not to diagnose the teaching-learning situation at high school and propose solutions. Rather, our main aim is to experiment a learning management system and assess its effectiveness as a sustainable remedial action at the receiving end, mainly third year tertiary education.

The writing skill in second or foreign languages is considered as one way of measuring one's language proficiency, and writing instruction aims mainly at enabling the students to write well. Yet, we know from our classes, as well as from scholars' writing publications, that

EFL students do not write as well as we think they should (e.g., Ping, 2000). The reasons for students' inability to write well enough to meet teachers' expectations are many and varied. Some teachers blame the students for being lazy, while most students lay it on the extreme complexity of the writing skill.

Writing is a demanding task especially for second or foreign language learners. It has been found that most language learners at all levels believe that writing is one of the most difficult language skills to master (Kurk & Atay, 2007, Latif, 2007). In Arab countries, several authors found weaknesses in second/foreign language writing (Fitze & Glasgow, 2009). It has been realized that students of EFL classes were unable to adopt a professional style of writing because essay writing from first draft to final draft is a stressful task for nonnative learners (Silva, 1992). In short, Arab learners of English which include Algerians encounter major problems in writing effectively because of many reasons.

The impetus to the present research work comes from personal experience as an EFL teacher at the University of Laghouat. Throughout the years of work in the field, we have detected that EFL students have many deficiencies for writing. These range from lack of skills to the use of incoherent ideas to writing style difficulties. While reviewing training reports from fourth year English department students, we noticed students' lack of a host of specific problems. Among them, we can enumerate incorrect punctuation, wrong word order, incorrect use of tenses, wrong use of connectors, lack of organization, incoherent ideas...etc.

Faced with this situation, the researcher has considered a project to stimulate university students to improve their writing skills. The project starts with the basic idea that any support we would develop towards this end should be related to collaborative learning (CL). Collaborative learning takes place because the group members interact with each other. The interactions include agreed rules, explanations, corrections etc. Teachers are supposed to

design well-specified collaborative scenarios. It is necessary therefore, to design the learning task and the learning environment.

A wide variety of collaborative work is frequently used to develop the different skills in the foreign language (FL) classroom. In FL writing, however, peer response (whether verbal or written) is the only form of collaborative work that has been widely adopted and studied since the 1990s (Hyland, 2000). The scenario which is adopted for the present work is peer review within an electronic atmosphere since nowadays most teenagers and adults spend the bulk of their time in front of their PCs. Besides, latest developments in the world have made traditional notions of education outdated and have given way to new, more innovative trends in teaching. These trends have been designed to meet student expectations. Thus more learner-centered approaches were sought in teaching any subject, including languages. These electronic approaches have emerged to facilitate student-centered learning. This has in turn led to face-to-face classroom teaching to be supplemented by technologically driven educational environments, which are more learner-centered, more collaborative and more innovative. Thus, in the present study, the researcher will work on peer review, as a form of collaborative remedial work of written composition using ICT, in our case Moodle software, to implement enhancement activities that are likely to bring about students' contribution to improve their writing performance.

Teachers have been given a chance by latest technologies to use a variety of tools to improve the quality of the teaching-learning process. This makes it important for teachers to be acknowledged about the advantages and possibilities of using technology in the classroom in order to help the struggling EFL learners (Kaminski, 2005).

Moodle, a learning management system (LMS), is a free and open source learning software platform. This e-learning tool allows students to continue learning outside the school environment where the teacher's role is still necessary to facilitate the planning and preparation processes. Moodle is one of the preferred types as a method of learning based on electronic media which is grounded on the use of sound pedagogical principles; this media is designed for helping educators create effective online learning communities.

Moodle helps educators to support traditional classroom pedagogies with numerous techniques (Suvorov, 2010). Moodle is acknowledged as self-directed, out of class practice which fosters learner autonomy. As indicated by Lamb (2004), learners generally welcome internet applications as they can learn at their own pace. Moreover, Moodle environment aims to enhance students' experience in learning and is designed with a constructivist pedagogical framework (Moodle Docs, 2006). Transmission of information from teacher to students and from student to student is no longer credited. Above all mentioned factors, the major factor that has a role for Moodle to be preferred as a way of learning is that teachers can easily access this software by the program's web page and design a page for their own course free of charge. Furthermore, students also can access to, for instance, to exchange writing assignments with their peers, review them, comment and give feedback (Tuzi, 2004). In this respect, and in an attempt to improve EFL learners' writing performance, this research is intended to make use of Moodle platform as a tool for peer review exchange.

The practice of peer review has been burgeoning in ESL/EFL writing classes for the last decade, given its strong support from social learning (Vygotsky, 1962, 1978) and rhetorical theories (Bruffee, 1993). Proponents of peer review have made a plethora of claims about its cognitive, affective, social, and linguistic benefits, most of which have been substantiated by extant empirical evidence. Peer review has been found to help both college (Mendonca &

Johnson, 1994) and secondary (Peterson, 2003) students obtain more insight into their writing and revision processes, foster a sense of ownership of the text (Tsui & Ng, 2000), generate more positive attitudes toward writing (Min, 2005), enhance audience awareness (Mendonca & Johnson, 1994), and facilitate their second/foreign language acquisition (Byrd, 1994).

Min (2005) conducted a classroom study to train 18 responders in a sophomore EFL writing class. She identified four characteristics of comments reported to facilitate students' revisions in previous research—clarifying writers' intentions, identifying problems, explaining the nature of problems, and making specific suggestions, and used them as guidelines during in-class training.

New technologies in the classrooms are a way for teachers to change ways of instructing to meet the ever-changing needs of their students. Utilization of Moodle platform is a way to empower students to become self-autonomous, on the one hand. In FL classrooms, peer review, an important instructional activity in process writing courses is highly recommended as a useful source of feedback on the other hand. Many scholars argue that the latter may encourage collaborative learning, foster learner autonomy and help overcome EFL learners' writing weaknesses.

The difficulties encountered when composing essays and reports in English indicate a need for a strategic methodology that will impact critical thinking and a better writing ability. Research in the field has proved that when teachers train their students on reviewing each other's draft within an e-environment, students' writing performance improves. Central to this present research work is the question: To what extent can Moodle-based peer review instruction help improving students' writing ability? In other words, how can educators secure the teaching ground for students' motivation and implication to the task at hand (in our case, peer review) that would render the learners' performance purposeful?

The purpose of this study is to identify the effects of ICT-supported peer review on EFL students' writing performance. In order to conduct an in-depth analysis and make inferences,

varied questions were raised:

- ➤ How can EFL learners be trained to review and evaluate their peers' written production (essays and reports) effectively?
- To what extent is Moodle software an enhancement tool conducive to effective peer review?
- ➤ Does peer review have any effects, whether negative or positive, on EFL learners' writing performance?
- Are there any differences on EFL learners' writing attainments between the effects of Moodle-based peer review and those of peer review led in traditional classrooms?

In the attempts to provide answers to the questions above, a set of hypotheses is laid:

- Firstly, students who are trained on this specific cooperative study skill would be better reviewers in peer review and evaluation of their peers' drafts.
- Secondly, peer review, with its attending sense of a wider audience and stronger social support, will be preferred over teacher review which engages no audience and generates no social support.
- Thirdly, when a peer review approach is applied, EFL teaching will be more learnercentered and will positively impact learners' writing performance.
- Finally, if students were instructed within a moodle-based peer review framework, those learners' writing achievement in FL would be better.

The objective of this experimental study is to investigate the relationship between Moodle-based peer review instruction and that of students' ability to write well, and its

implication on their academic writing performance. That is, the researcher attempts to highlight the need for a future research on the effects of ICT-supported writing instruction on EFL students' writing ability. In this respect, the research at hand aims first at examining whether EFL students are trained at and can effectively use peer review during their academic tasks. It aims also at measuring the effects of peer review on students' writing performance when applied within information and communications technologies environments. The research findings could serve teachers and course designers in conceiving an effective EFL writing course. It could be considered as a first step in the design of a course for EFL students that helps promote writing skills self-development through self-awareness raising and cooperative work.

This research has an experimental nature that comprises two independent variables (peer review and Moodle platform) and one dependent variable (EFL learners' writing performance). It involves comparing two groups on one outcome measure to test the above mentioned hypotheses regarding causation. Being interested in the effects of technology-based peer review on EFL students' writing performance, the researcher will randomly divide the population of the study into two groups. One of the groups, the control group, will receive writing instruction within the traditional method (teacher as central element of the learning teaching operation, and review of students' production being done by the teacher). The second group, the experimental group will receive peer review instruction being done via computers (i.e., writing assignments should be exchanged on due time using Moodle platform, and then students are instructed to revise and evaluate their peers' drafts using checklists). After receiving the instructions, both groups will be compared to see whether students' writing performance in the experimental group improved better than among students in the control group.

The study reported in this dissertation is intended to investigate the effects of Moodle-based peer review in EFL writing class in an urban university in southern Algeria, Laghouat. Participants are sixty-nine third LMD year students at the English department. Their average age is twenty. All are native speakers of Arabic and are supposed to graduate by the end of the academic year 2015/2016 after having submitted their training reports on the training period they are to go through in the different middle schools in Laghouat.

The peer review training will take place during writing sessions and will consist of three phases: In-class modeling: during this phase, each participant of the experimental group will have the opportunity to receive about 6 hours of in-class training on how to review and evaluate a peer's draft, using the checklists they will be provided with. The modeling can be demonstrated when students are about to perform paired peer review on their drafts of the essays and reports. The instructor first distributes to the students the checklists and a copy of an essay composed by any of the students. Then, she/he uses the think aloud method to demonstrate how to make comments by using a four-step procedure: Clarifying writers' intentions, identifying the source of problems, explaining the nature of problems, and making specific suggestions (Min, 2005).

In-class training: during this phase, each member of the experimental group is to be offered a training on the use of Moodle platform (how to access, how to submit assignments, how to view assignments submitted by other peers, how to review and evaluate assignments online and how to submit comments).

Data collection started at the beginning of the 2015-2016 academic year. Students first underwent a detailed writing pretest whose tasks focus on punctuation and capitalization, word order, use of tenses, subject verb agreement, use of coordinating and subordinating

conjunctions, use of prepositions, coherence, cohesion, word choice, organization, stated thesis statement and topic sentence, supporting ideas and concluding sentences.

Students then continued attending writing classes that focused on essay elaboration. After eight weeks, peer reviewing was introduced. Each session, one of the students' drafts are copied and given to their peers to be reviewed. The goal was to review at least five drafts in the class. The students then were to take their reviewed essays home and make any appropriate corrections needed and turn in the final copy the following day. On the peer review day, the student writers are also allowed to comment on the reviews they received from their peers.

Later, using peer review approach, students of the experimental group were given access to the Moodle platform with anonymous accounts. They were asked to anonymously write the assigned essays. The latter would be submitted to the group members through Moodle platform. Receivers would also anonymously review and evaluate the producers' writing works according to the checklists provided by their instructor. These reviewed drafts would anonymously be returned to their writers with the readers' comments. These comments were expected to be taken into account during the second draft. This period would end in a detailed writing post-test that focuses on the above mentioned criteria to see whether students' writing had improved.

As stated before, the work has an experimental nature in which a variety of research tools was used in gathering data. These consist of review of literature, EFL writing pre-test, Peer review training/instruction and EFL writing post-test. The collected data will be treated and analyzed using SPSS software.

In sum, this work remains as an attempt from the part of the researcher to shed light on the difficulties encountered by Algerian learners in the field of EFL writing and on the efficacy of the technology-supported peer review approach in improving these learners' writing ability.

In order to orient the reader to the concepts which are investigated in the present study, a brief discussion of these concepts is made. The first concept is "Moodle". It is an acronym for Modular Object Oriented Developmental Learning Environment and is a course management system (Course Management System - CMS) through the Internet, also known as a Learning Management System (LMS) or a Virtual Learning Environment (VLE). It is a free web application that educators can use to create effective online learning sites. The second key concept is "Peer review", a process by which something proposed (as for research or publication) is evaluated by a group. "Writing competence" includes a set of different abilities which are necessary for composing good texts. On the one hand writing can be seen as a process for which suitable work techniques must be available (for instance writing strategies, revision strategies, time and project planning for writing). On the other hand there are requirements the writing product has to meet and which the writers must adhere to (such as characteristics of certain and particularly academic texts, knowledge about language). "Blended learning" is another key concept, a term generally applied to the practice of using both online and in-person learning experiences when teaching students. In a blended-learning course, for example, students might attend a class taught by a teacher in a traditional classroom setting, while also independently completing online components of the course outside of the classroom. Next, "peer feedback" refers to a practice in language education where feedback is given by one student to another in online writing classes to provide students with more opportunities to learn from each other. After students finish a writing assignment, the instructor has two or more than two students work together to check

each other's work and give comments to the peer partner. Comments from peers are called as peer feedback. Peer feedback can be in the form of corrections, opinions, suggestions, ideas to each other. In our case, peer feedback is done online and anonymously. Another key concept is "E-learning environment". The latter refers to a technology-supported environment; for example a classroom in which a technological tool is used as a learning device. Finally, "E-learning" is defined as electronically mediated asynchronous and synchronous communication for the purposes of constructing and confirming knowledge. While "electronically" could easily be replaced with "online".

In short, the present study focuses on Moodle-based peer review that has been used with students and has been found to be effective and engaging. What is offered in this work expands the notion of what counts as effective writing instruction. The latter can be much more than simply asking students to write paragraphs at the end of a lesson. Process writing instruction can and should be effective, but it should also be engaging and creative, and tap into the various talents and gifts of all students.

This research has an experimental nature in which a variety of research materials has been used. These materials consist of a review of literature, a survey that measures students' awareness and use of writing strategies as well as their motivation to write in English, two writing performance tests and an interview. To find answers to the research questions and identify the effects of Moodle-based peer review instruction on students' performance and motivation to write, the population of this study comprises 69 third year English department students. Having gathered the data through questionnaires, SPSS (Statistical Practice Social Sciences), a computer program used for statistical analysis, is used to measure data. It is software used by researchers of social domains, mainly in descriptive and analytical methods,

to manage data and analyze statistics. To do so, T-tests are applied for analyzing and interpreting the data.

The present work comprises a general introduction and five chapters. The General Introduction presents the rationale for conducting the study, the scope of the study, its significance, aims as well as research methods. Chapters one, two and three provide a theoretical framework for the study, including definitions and types of writing, issues in EFL writing strategies, students' motivation to write in English and achievement. They also shed light on educational reforms led in Algeria and the adoption of innovations: the use of technology in the field of education, focusing on the use of Moodle platform in EFL writing. Chapter four reports the methodology used in the research including research questions, participants, instruments and the procedures for data collection and analysis. Chapter five reports and discusses the major findings. The work ends with a Conclusion that summarizes what is addressed in the study, points out the limitations, draws pedagogical implications and provides some suggestions for further study.

"Moodle-based Peer Review as a Tool to Enhance and Improve EFL Le	earners' Writing Performance''

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# CHAPTER ONE

# EDUCATIONAL REFORMS AND EFL TEACHING IN ALGERIA

#### 1.0 Introduction

In the context of this study, the goal of higher education in Algeria is to impart knowledge and skills to an increasing proportion of the population for future professional, academic and social leadership for the country. To place this study within the field of education and pedagogy, this chapter reviews the literature on the evolution of pedagogical theories from the lecturer style to the development of a blended learning environment. It starts by providing an overview about the current learning theories; it then sheds some light on the status and role of English in Algeria. The important role of learning English as a foreign language, with special focus on English composition teaching, is also discussed. Then a whole section of the chapter is devoted to the educational reforms that were led by both the Algerian Education Ministry and the Ministry of Higher Education and Scientific Research in Algeria. Then the chapter ends with an overview of the status of the writing skill within the secondary and tertiary educational syllabuses.

#### 1.1 Current Learning Theories

The transfer of focus, shifting from the teacher to the student, is the main characteristic of the 20th century education, with much emphasis on working in a collaborative learning environment. The emphasis of present research work is that an interactive learning environment may be supported through technological tools, namely Moodle platform.

The learners' role in developing their knowledge is emphasized by Jean Piaget, one of the most famous exponents of learning theory. In other words, individuals have an important role in acquiring knowledge, constructing concepts, and using knowledge in practice (Huitt, W., & Hummel, J. 2003).

Of interest to this study, Biggs (1987) relates a theory of learning to the interaction that takes place between a variety of elements, the person and the situation, the student's awareness of their own learning processes and their increasing ability to control them. Three primary suggestions were made by Constructivist learning, as epitomized by Savery and Duffy (1995). Among them is that the learner has a goal, a purpose, within a learning environment, so that both the purpose and environment influence understanding. Collaborative groups are important for this purpose. Learning was seen as a social phenomenon by Vygotsky (1978), where social interaction underlies cognitive development. Vygotsky (ibid) developed the zone of proximal development (ZPD<sup>1</sup>), which was defined as the difference between a student performing a task under guidance or support, and the ability to solve the problem independently. Vygotsky's contribution was learning defined as shared experiences in the socio-cultural context (Crawford, 1996), and thus is relevant to this study where students may interact online, within the electronic environment. Vygotsky's (ibid) theory is that learning comes from the infant's communication of its needs to interact in the social environment, and that the development of this ability leads to higher thinking skills. This was a factor in the change in pedagogy shifting focus from the teacher as the main source of information and knowledge to the students constructing their own understanding within a purely student centered setting. Thus, the teacher in this learning environment is merely a facilitator who facilitates the construction of knowledge.

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<sup>&</sup>lt;sup>1</sup> "the distance between the actual developmental level as determined by independent problem solving and the level of potential development as determined through problem solving under adult guidance, or in collaboration with more capable peers" (Vygotsky, 1978, p. 86).

To add rigor to the learning process, the Social Learning Theory<sup>2</sup> led by Bandura (1977) viewed learning as an act that takes place in a social environment, through observation and modelling, however, the theorist encompassed motivation, attention, and memory. Continuous interaction of the individual with behavioral, cognitive and environmental influences is used by Social learning theory. Among these influences are attention which decides the length of interest duration, retention of the acquired information and knowledge, reproduction, and motivation, in other words, practicing the information or behavior and the impetus to reproduce it in other settings. Social learning theory encompasses attention, memory, and motivation and is aligned to Vygotsky's Social Development Theory.

An effective learning environment that needs to be interactive is the key aspect of the development of learning theories. This is especially true in higher education, where learners are more motivated to generate new ideas (Kuh, 2008). Of interest to this study, blended learning designs can be developed in a way that enhances interactions and communications between learners and instructors; as well, among learners themselves.

#### 1.2 The Status and Role of English in Algeria

Many theorists such as Baker (2003) agree that English has been established as the worldwide language of all domains of nowadays the English language imposes itself in every single field of human beings' daily life. People used to define an illiterate as a person who neither reads nor writes, but today illiteracy refers with no exaggeration to the person who does not master English and the computing sciences. Thanks to the economic tendency of the country that

<sup>2</sup> One of the most influential learning theories, the Social Learning Theory (SLT), was formulated by Albert Bandura. It encompasses concepts of traditional learning theory and the operant conditioning of B.F. Skinner.

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the English language found its way to the Algerian people in the early 60's and 70's. This is stated clearly in the British Council Profile on ELT in Algeria 1975 (cited in Khelloufi, 1983:56): "Algeria's interests in the field of petroleum, natural gas, iron, steel,.... orientate her increasingly to the English speaking west..." Nevertheless and despite its importance, the English language remained and is still in a perpetual competition with French:

- > English has the status of a second foreign language.
- English is latterly introduced to the Algerian learners during their schooling in the 8th A. F (Année Fondamentale /Fundamental schooling) in the middle school compared to French which is inserted in the 3rd A.F in the primary school.
- French is part of the Algerian learners' daily life: in ordinary speeches, in media like newspapers or on TV, and even in the official speeches of the Algerian officials.
- English is restricted to the classroom use only as a school subject.

The fact that the use of the English language is restricted in use only in classrooms is systematically reflected on the kind of the Algerian learners' language proficiency that may vary between average and poor. Classroom exposure to English remains insufficient to master a foreign language and meet learners' communicative needs as explained by Mountford and Mackay (1978: 2):

When English as a foreign language is taught to children at the primary school and early secondary levels of education, it is generally taught with a general aim in mind – that is, it is regarded as a 'good thing' for them to learn a foreign language as a part of a broad education .There is usually, however, no immediate and specific requirement for such children to make use of the language in any communicative situation.

Because of this, syllabus designers and policy makers have led some educational reforms stressing the fact that all that is taught to primary and secondary level children is not communicative knowledge of the English language use, but knowledge of how the syntax and lexical rules of English operate (Mackay, 1978). Hence, students go to University lacking many aspects of the language. This lack affects negatively their performances like the communicative competence which is required in the utilitarian purposes. They encounter difficulties in communicating mainly when they travel abroad, look for a job or simply when they write correctly and effectively which is the concern of the present research. According to Brumfit (1979), the problem lies in the fact that students still struggle, show weaknesses and remain deficient in using the language for communicative purposes despite the fact that they have been exposed to this language for years. That is why, immediate reconsideration and urgent change must occur on both English language status, and the way it is regarded and taught by the Algerians.

#### 1.3 Education and Reform in Algeria

Most countries have been engaged in a series of reforms at all educational levels. Algeria is not an exception, and it is not new in a world of globalization. All over the world, educational reforms are aimed to respond to the needs dictated by the fast changes in the socio-economic world. In this context, USA and Canada serve as good examples of the countries that underwent important reforms right from the 1980's. According to Waks (2007), the publication of "A Nation at Risk" in 1983 paved the way for a series of educational reforms in the United States of America, and similar reforms followed in Canada and many other industrial countries.

As one might notice, the role of research and publication remains salient and an inevitable tool to make change. Waks (2007) in his article insisted on this aspect of change. Reform is generally linked to change. It implies improvement, betterment, amelioration, rectification, correction, change, modification, renovation, recovery. All these are a matter of repairing something we believe to be wrong, or has something wrong somewhere.

## 1.3.1 Reform and EFL Teaching at Middle and Secondary Schools

Algerian policy makers planned a reform of national education in 2002. The principal change in this reform, related to our research, was that English would be taught in the sixth year (middle school), two degrees earlier than in the past. This vast reform movement that was launched in July 2002 prepared the ground for an approach focusing on the learner in the learning process against a model led by teachers. This reflects Roegiers' (2006) educational mission that fosters values such as 'autonomy' and 'responsibility for learning' making learners actively implied in their learning process. Intentions vary considerably from one educational system to the other. Yet, as claimed by Perrenoud (2000), it seems obvious that the momentum behind reform of education is a desire to modernize the objectives of education in order to adapt them to contemporary reality and to provide an education that is adequate for learners. Holding this view, the ex-Minister of National Education Benbouzid, in his introduction to Xavier Roegiers' (2006: 7-8) L'Approche par Compétence dans l'Ecole Algérienne says: "Une réforme globale visant l'édification d'un système éducatif cohérent et performant s'impose donc aujourd'hui pour permettre à la société algérienne de faire face aux multiples défis du 21ème siècle" (A comprehensive reform to build a coherent and effective educational system is therefore necessary today to allow the Algerian society to face the multiple challenges of the 21st century.)

Moreover, Benbouzid claims that schools should develop the Algerian society in terms of knowledge and know-how. According to him, this reform is also sought to have the ambition to help move the society in its knowledge and expertise.

Roegiers (2006) pinpoints that two major challenges condition the reform of the Algerian school: internal challenges (défis d'ordre interne) and external challenges (défis d'ordre externe). In the first category, i.e internal challenges, we may cite enabling the Algerian school to vehicle the values of tolerance and dialogue and preparing the learners to exercise their citizenship in a democratic society. In other words, it consists of improving the efficiency of the educational system in accordance with the needs of today's Algeria. Internal factors also include the progressive restoration of the job market (Roegiers, 2006). As for the second category, it is characterized by the modernization of economy, the development of scientific and technological knowledge as well as the recourse to the new information and communication technologies and learning to use them in different sectors of life (ibid).

The Algerian Educational Reform is based on three principal pillars: teacher training, pedagogical reform and the general reorganization of the educational system. To put the educational policy into practice and to familiarize instructors with the innovative methods, an acceptable teacher training course is more than necessary. Within the perspective of the current reform, it emphasizes the valorization of teachers' status, the enhancement of their competencies and their mastery of the content to be taught. Pedagogical reform counts for many measures, including for instance the introduction of new syllabuses and course books in all school subjects. As regards the reorganization of the educational system, it restructures teaching via the generalization of the pre-school, the reduction of the duration of the primary cycle into five years

and the prolongation of that of the middle school level into four years (Ministère de l'Education Nationale, 2003).

## 1.3.2 Reform and New Teaching and Learning Approaches

Nowadays schools face enormous challenges. In response to a very complex society and a technology-based economy, schools are required to meet the new standards and educate students to higher academic standards than ever before. For that reason, teachers needn't only understand subject matter but also know about curriculum resources and technologies to connect their students with sources of information and knowledge that allow them to explore ideas, acquire and synthesize information, and frame and solve problems. And teachers need also to know about how to structure interactions among students, how to collaborate with other teachers, and how to work with parents to shape supportive experiences at school and home. In other words, teachers and learners have adopted new roles which require new visions, suitable strategies and adequate curricula on one hand. Thus schools in countries like Algeria have to adopt the new theories and innovations to meet the Academic standards.

## 1.3.2.1 The Communicative Language Teaching Approach

Within the Communicative Language Teaching approach <sup>3</sup>, learning a foreign language is assessed in terms of how well learners have developed their communicative competence, which can loosely be defined as their ability to apply knowledge of a language with adequate proficiency to communicate (Savignon, S. 2002). Under this broad definition, any teaching

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<sup>&</sup>lt;sup>3</sup> Communicative language teaching (CLT), or the communicative approach, is an <u>approach</u> to <u>language teaching</u> that emphasizes <u>interaction</u> as both the means and the ultimate goal of study.(definition by Wikipedia).

practice that helps students develop their communicative competence in an 'authentic' context is considered an acceptable and beneficial form of instruction.

The concept of communication is the process by which people assign and convey meaning in an attempt to create shared understanding. It is through communication that collaboration and cooperation occur. Communication is the articulation of sending a message, through different media whether it be verbal or nonverbal.

CLT makes use of real-life situations that generate communication. The teacher sets up a situation that students are likely to encounter in real life. Unlike the audio-lingual method of language teaching, which relies on repetition and drills, the communicative approach can leave students in suspense as to the outcome of a class exercise, which will vary according to their reactions and responses. The real-life simulations change from day to day. Students' motivation to learn comes from their desire to communicate in meaningful ways about meaningful topics. Berns (1984:5), an expert in the field of communicative language teaching writes:

Language is interaction; it is interpersonal activity and has a clear relationship with society. In this light language study has to look at the use (function) of language in context, both its linguistic context (what is uttered before and after a given piece of discourse) and its social, or situational, context (who is speaking, what their social roles are, why they have come together to speak).

Knowledge of grammatical rules is considered as essential to the mastery of a language. The teacher has to prepare an organized, balanced plan of teaching/learning procedures through which the learners will be enabled to spend some of their time concentrating on mastering one or more of the components of the target language on their way to acquiring it as a whole (Bouyakoub, 2011).

The stages for an effective communicative activity and several games which offer the students opportunities to use the language they are learning in non-threatening, enjoyable contexts should be taken into account. The teacher should have feedback for each activity that students are involved in. By testing the students (orally or in writing), teacher will find out if, how much, and how well the learner has acquired the new material. It is also important to depict the mistakes and deficiencies of their work.

Because of the increased responsibility to participate, students may feel that they gain confidence in using the target language in general. Students are more responsible managers of their own learning. In communicative classrooms teachers will find themselves talking less and listening more, becoming active facilitators of their students' learning. The teacher sets up the exercise, but because the students' performance is the goal, the teacher must step back and observe, sometimes acting as a monitor.

Thus, communicative language teaching often takes the form of pair and group work requiring negotiation and cooperation between learners, fluency-based activities that encourage learners to develop their confidence, role-plays in which students practice and develop language functions, as well as judicious use of grammar and pronunciation focused activities.

To sum up, the communicative approach is not just limited to oral skills. Reading and writing skills need to be developed to promote pupils' confidence in all four skill areas. By using elements encountered in a variety of ways (reading, summarizing, translating, discussion, debates) language is made more fluid and pupils' manipulation of language more fluent.

#### 1.3.2.2 Project-based Teaching

The research on Project-based Learning (PBL)<sup>4</sup> reports positive outcomes related to student learning in the areas of content knowledge, collaborative skills, engagement and motivation, and critical thinking and problem-solving skills. Thomas's (2000:3-4) five criteria to define PBL are:

- (a) "Projects are central, not peripheral to the curriculum";
- (b) "projects are focused on questions or problems that 'drive' students to encounter (and struggle with) the central concepts and principals of the discipline";
- (c) "projects involve students in a constructive investigation";
- (d) "projects are student-driven to some significant degree"; and
- (e) "projects are realistic, not school-like"

Collaboration is also included as a sixth criterion of PBL. Compared to traditional classes, students in PBL classes performed better on assessments of content knowledge (Hirvela, 1999). In sum, students taught in PBL classes emerged with useful, real-world content knowledge that they could apply to a variety of tasks (Thomas, 2000).

PBL also has resulted in high levels of student engagement (Belland, et al., 2006). For instance, in one study within an economics classroom, a PBL unit engaged the lowest and highest level students as well as those students who were least interested in economics at the start of the unit. Another study reported that PBL had a positive effect on student motivation to learn. According to some teachers, who reported using 37% of their overall instruction time on PBL, students' work ethic improved as well as their confidence and attitudes towards learning as a result of PBL (Tretten & Zachariou, 1995). In particular, one study of PBL showed a positive effect on low-ability students, who increased their use of critical-thinking skills including

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<sup>&</sup>lt;sup>4</sup> **Project-based learning (PBL)** is a <u>student-centered pedagogy</u> that involves a dynamic classroom approach in which students acquire a deeper knowledge through active exploration of real-world challenges and problems.

synthesizing, evaluating, predicting, and reflecting by 446% while high-ability students improved by 76% (Horan, et al., 1996).

In addition, PBL has been shown to benefit a variety of students in developing collaborative skills. For example, through PBL, students learned to understand multiple perspectives (Chanlin, 2008) and conflict resolution skills; and low-ability students demonstrated initiative, management, teamwork, and conscientiousness as they worked in groups (Horan, et al., 1996). Students also enjoyed PBL because it gave them opportunities to interact with their friends and make new friends through cooperative projects (Belland, et al., 2006).

In summary, research indicates that PBL:

- (a) has a positive effect on student content knowledge and the development of skills such as collaboration, critical thinking, and problem solving;
  - (b) benefits students by increasing their motivation and engagement; and
- (c) is challenging for teachers to implement, leading to the conclusion that teachers need support in order to plan and enact PBL effectively while students need support including help setting up and directing initial inquiry, organizing their time to complete tasks, and integrating technology into projects in meaningful ways (Brush & Saye, 2008).

# 1.3.2.3 Adopting Competency-Based Approach (CBA)<sup>5</sup>

Following the recommendations set by the National Commission for the Reform of Education, the Algerian Educational System has adopted the CBA to teach all school subjects including foreign languages. Unlike the traditional teacher-oriented teaching paradigms which

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<sup>&</sup>lt;sup>5</sup> **Competency-based learning** or **competency-based education and training** is an approach to teaching and learning more often used in learning concrete skills than abstract learning. (definition by wikipedia).

were directed at pouring knowledge into passive learners, CBA is learner-centered in that it regards learners as being responsible and active agents in their learning process. This approach reflects a shift from the teacher who is responsible for transmitting knowledge into passive learners towards the learner whose own interests and needs are brought to the fore. In addition, it aims to form autonomous individuals capable of coping with the changing world and to enable them to utilize the skills acquired in the school environment for solving real-life problems.

Regarding English, it is granted more prominence in that it is introduced in the first year of the Middle School level. As said previously, the recent reform resulted in designing new syllabuses and textbooks in all the disciplines including foreign languages such as the English language. Amongst the EFL syllabuses and textbooks, we find the ones conceived for Secondary Education whose objectives will be described in the following section.

## 1.4 General Objectives of Teaching English in the Secondary School

The importance of the English language is stressed by syllabus designers who justify the aim behind its introduction in secondary education. For them, English is the language of science and technology, and learning this language helps integrate harmoniously into modernity by fully taking part in the linguistic community which makes use of it for all types of interaction. This participation, based on the exchange of ideas and experiences, would allow the Algerian learners to have a better knowledge of themselves and of the other.

In addition to the acquisition of linguistic and communicative competences, transversal competencies like critical thinking, tolerance, openness to the world, and the respect of the self and of the other are also considered as crucial elements of CBA teaching (SE1 Syllabus). In sum, once the English language is mastered, the learners will have a vision of the world enabling them

to share knowledge, have access to science, technology and universal culture and become 'The Future Citizens".6

The Algerian Secondary School syllabuses are based on principal objectives which will consolidate the competencies acquired through the four main skills: listening, speaking, reading and writing. These objectives are worded in the syllabuses as follows:

- Provide the learners with the necessary linguistic tools (grammar, vocabulary, syntax, and pronunciation) which allow them follow with success studies in English at university or in a professional milieu.
- Allow the learners to understand the English language and use it in different communicative situations.
- Develop learners' intellectual and mental abilities like analysis, synthesis and evaluation through a series of exercises.
- Promote learners' strategies of learning and of self-evaluation to enable them expand and deepen their knowledge.
- Learn the rational use of oral and written texts in English in order to prepare the learners for their future professional lives (SE 2 and SE 3 syllabuses).
- Enable the learners to learn and use technological tools like the Internet which are of great relevance to their inquiry (ibid).

As for the approach, the authors of the three Secondary School syllabuses claim that nowadays, education should respond to learners' needs by creating a climate which favors autonomy and responsibility for their learning. In order to reach these aims and the

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<sup>&</sup>lt;sup>6</sup> A citizen who is capable to integrate with harmony into the process of globalization (SE2 Syllabus:07).

aforementioned general objectives, CBA should be adopted. Indeed, CBA is, in the designers' view, appropriate to attain the targeted objectives. This learner-oriented approach centers on a conception of learning which is both socio-constructivist and cognitivist in that it regards learning as a creative construction of knowledge through social interaction with other learners and offers ways which permit the attainment of cognitive objectives. Besides, the syllabuses require the implementation of this approach for the consolidation of the competencies acquired in the previous years of English study. These broad competencies are worded as follows: interacting orally in English, interpreting oral and written texts, and producing oral and written texts. In sum, the objectives of the three secondary school syllabuses are detailed in Table (1.1):

	What Learners are Expected to Know at the End of the Course
Secondary School	-The development of the three competencies of interaction, interpretation
•	
Syllabuses	and production.
	-Linguistic objectives
	-Methodological objectives
	-Cultural objectives
	-Socio-professional objectives
SE1 Syllabus	-By the end of the first year of the Secondary School, the learners will be
	able to write a paragraph, with the help of an oral or written text, which contains twelve sentences .
SE2 Syllabus	-In a situation of communication, the learners should produce a written production composed approximately of fifteen lines. The production maybe descriptive, argumentative, narrative, expository, etc.
SE3 Syllabus	-In a situation of communication, the learners should produce a written production of twenty lines .

Table (1.1): the objectives of the three secondary school syllabuses

#### 1.4.1 The Writing Skill within Algerian Secondary School EFL Textbooks

As far as the writing skill is concerned, the secondary school textbooks include a variety of writing activities intended to reflect real life tasks, such as writing simple paragraphs, reports,

brief articles, and formal and informal letters. In writing development rubric, the pupils will have to express opinions, give reasons, and present arguments under vocabulary and grammatical command. In other words, they will demonstrate their sense of organization, cohesion and coherence, and will draw on appropriate registers to communicate their main message; and the project outcome is the visible and assessable manifestation of the pupils' competencies, i.e. the end result of their command of language and of the skills and strategies they have acquired throughout the themes. During the years of secondary school, both the teaching objectives and pedagogical instructions aim at the learners to have more practice in all four skills, yet with extra emphasis on the writing skill because of the Baccalaureate exam. "At the end of the Third Secondary Year, the pupils are expected to move from skill getting to skill-using", (Benmoussat, 2013: 43).

## 1.4.2 The Writing Skill in the Examination Papers

The examination paper is in accordance with the principles of the competency-based approach, i.e., tests provide examinees with opportunities to learn and re-use while taking the test. The examination paper is made up of two parts: Part one is divided into text interpretation, text exploration and mastery of language. It contains tasks of vocabulary, morphology, grammar, discourse, and sound system. Part two exposes the examinees to a situation of integration designed according to a set of criteria and indications. A situation of integration requires authentic documents and well-formulated, comprehensible instructions rather than questions. The situation needs to be meaningful and motivating, close and adapted to the learners' level, in accordance with the target competence and supported by some tips (hints) to guide the learners.

Thus, a target situation integrates linguistic resources. The table below indicates criteria and indicators when assessing a situation of integration (see Table 1.2):

Criteria	Indicators
Relevance	Learner's production aligns with requirements of a situation:
	• Format: a letter / e-mail / invitation / instructions
	Objectives: to inform / to describe / to complain
	Targeted language: functional language and vocabulary
<b>Semantic Coherence</b>	Meaningful
	Logic in the information given
	Originality and development of ideas
	Organized / well-structured sentences
Syntactic Coherence	Correct use of grammar: tenses, word-order
and correct use of	Subject-verb agreement
linguistic elements	Spelling, capitalization and punctuation
Excellence	New ideas, varied vocabulary items, absence of repetitions and
(creativity –	redundancy, legible handwriting, neatness
vocabulary –wealth )	

Table (1.2): Assessing a Situation of Integration, Bac Exam Guide (2008:13)

# 1.5 Tertiary Education in the 21<sup>st</sup> Century

Coleman (1966) found in their study that there was a variety of elements that support learning, among which they enumerated physical elements, such as the educational infrastructure, that is, the classrooms, language laboratories, libraries and textbooks; which today would be supported by information and communications technologies.

Motivation in students was raised by Astin (1999), who stated that student involvement was based on the amount of physical and psychological energy that the student devotes to the academic experience. In this case, a highly involved student is one who expends considerable energy in studying, spending time on campus and actively participating in group activities, with frequent interaction with faculty members and other students. The underachiever and less successful students thus participate in these activities less than the average undergraduate. Astin

believed that higher education resources were maximized if student motivation and engagement were given primacy over subject matter and technique; thus all university policies and practices, administrative as well as academic, should be evaluated on the basis of encouraging student involvement. Further, university faculty success in student engagement contributes to the higher education experience for undergraduates.

These views were also held by Al-Harbi (2011) who noted the challenge for the Saudi Arabia Kingdom in accessing sufficient professional and infrastructure resources to educate the increasing numbers of students approaching the age for higher education. E-learning was an option which could radically broaden the number of undergraduates by increasing their access to university resources through ICT. The findings of Al Harbi's study of the attitudes of Saudi university undergraduates toward online learning are that its use is influenced by computer and online access, students' online experience, and perceived behavioral control by instructors. The issues raised by Al-Harbi (2011) reflect those of Ginsburg, who also questioned the efficacy of online learning. The researchers noted a global growth rate of 35.6 per cent for the e-learning market, however, there are factors affecting user satisfaction. The results of their study showed that the learner's computer anxiety, instructor's attitude toward e-Learning, e-Learning course flexibility, e-Learning course quality, perceived usefulness, perceived ease of use, and diversity in assessments are the critical factors affecting learners' perceived satisfaction (Allen, K. 2005).

In summary, the characteristics of higher education that inform this research are those of researchers following Coleman et al. (1966), who identified and assessed the elements of higher education; and the work of Astin (1999) in describing factors that engage students with their

studies. The literature thus describes the characteristics of higher education over time and points toward future trends and the challenges they represent.

#### 1.5.1 Higher Education Reform and the LMD System Implementation

The Algerian universities first adopted a system based on the French model which meant that the university faculties were autonomous even in designing the teaching curricula. The system resulted in duplication of academic offerings, and complete loss of credits by students changing programs (Ben Rabah, 1999). Some reforms designed to modernize the university system were introduced in 1971, and major reforms were introduced in 1988. Nevertheless, the universities still loosely resemble the French model, and French remains widely used for instructional purposes.

Like any other developing country, Algeria is facing the challenges of the new century with the hope to catch up with the demands of globalization and the technology-shaped society. In this process many governments all over the world are taking steps to implement the Bologna Process, and Algeria is no exception. Since 2004, it launched the LMD system (Licence, Master, and Doctorate) which is a consequence of this process as an attempt to reposition Higher Education in terms of globalization and competitiveness. To achieve this aim, tremendous changes have been promoted at different levels; architectural, organizational and pedagogical ones. These changes are of paramount importance since they are meant to affect both the teaching process and consequently learning and the teaching profession.

## 1.5.1.1 The LMD System and the English Language Teaching

Within this system, EFL academics are required to innovate some of their practices. They need to:

- develop the contents of their pedagogical programs instead of complying with the national program set by the Ministry of Higher Education and Scientific Research,
- adopt the learner-centered approach instead of the teacher-centered instruction.
- and provide their students with on-going assessment instead of a one-shot exam at the end
  of each semester.

According to the above stated requirements and from the official documents, a positive position of the system is fulfilled. The latter is exemplified in the huge focus laid on education, reform and learner autonomy that are highlighted through this system, the LMD.

Approaching the term « education » from its linguistic meaning, it means to give intellectual, moral and social instruction mainly in a university environment. Yet, originally, the term "education" (from Latin: e-ducere) and that means to lead out indicates properly: "leading out or drawing out the latent powers of an individual" (Cassel Encyclopedic Dictionary, 1904). This definition leads us towards the core of the discipline. It is accepted in the recent educational approaches that education has the individual as a subject. This individual is the most important factor of this discipline upon which all turn. This salient individual is the Student. Relying on the original definition we stated at the start, to educate is meant to sort out the student's hidden abilities. That is, the student should be seen as an individual with latent, implied, indirect, inferable, understood, unspoken, tacit, inherent, intrinsic, innate, natural, inferential capabilities referred to as power in the above definition. Our point here is that our teaching should or must be

based on this student as an individual, as a human who is believed to possess some prerequisites; he/she is able to do, able to achieve, able to think, able to change, and, hence, autonomous.

## 1.6 Learner Centeredness and Autonomy

Learner autonomy refers to a concept introduced by Henry Holec (1981). It is a seminal contribution to the field of foreign language teaching and is still a focal issue in language. In the late 90s and at the beginning of the new millennium there were numerous publications dedicated to the topic. Learner autonomy in language learning in the last twenty years has had significant influence on English learning. The educational systems today put a lot of emphasis on differentiation and catering to individual learners with different abilities and individual interests. Curricula make several references to giving learners choice and creativity in both input and output.

Learner centeredness and autonomy cater to all of this as they move the focus from teaching to learning. They allow learners to work on different tasks, not all doing the same thing at the same time. They accentuate self-assessment with emphasis on logbooks and written journals.

When implementing learner autonomy in the classroom teachers need to take a lot into consideration. In this section we will try to clarify the meaning of learner centeredness and autonomy in relation to the ESL/EFL classroom, and discuss the roles of teachers and learners in the autonomous classroom, and also the main characteristics of the autonomous classroom.

#### 1.6.1 Definition of Learner Centeredness

Student-centered learning is a broad teaching approach that encompasses replacing lectures with active learning, integrating self-paced learning programs and/or cooperative group

situations, ultimately holding the student responsible for his own advances in education. Student-centered learning environments have an advantage over the traditional teacher-centered, subject-centered environment in that they provide complimentary activities, interactive in nature, enabling individuals to address their own learning interests and needs and move forward into increasingly complex levels of content to further their understanding and appreciate subject matter.

#### 1.6.2 Features of Student-centered Approach

It is argued that a successful teacher is one who makes himself/herself progressively unnecessary; that's why the student-centered learning environment has the student need satisfaction as its primary focus whereas the subject-centered environment has the transmission of a body of knowledge as the primary focus (Clasen & Bowman, 1974).

Student-centered learning, when used properly, can change the face of education into a lifelong learning process in which the student seeks solutions to problems without complete dependency upon an instructor. The student learns to reason on his own to find a foundation for venturing out with successful experiences under his belt.

The educational system should change with the times as well as with the learner. Land & Hannafin state that "learning environments are rooted in psychological, pedagogical, technological, cultural, and pragmatic foundations" (1997:396). The psychological foundations of learning environments are based on how we think and learn as individuals. The methods, activities, and structures of the learning environment are the focus of pedagogical influences. Pedagogical and psychological foundations together give the basis for methods and strategies used and the ways in which the content is organized. Student-centered learning environments pull

from the problem-based contexts and exploration of pedagogical foundations. Technological foundations can show how available technology can be optimized to create environments where learning is the desired outcome. Cultural foundations play an important role in society because they affect the design of learning systems. As culture places an increasing importance on technology, it is reflected in the schools as computers become more prevalent and educational software is more available. Pragmatic foundations show the practical limitations --- for example, hardware/software availability, financial concerns that limit the infusion of innovations, and runtime requirements (Land & Hannafin, 1997).

The integration of all five foundations of learning environments is essential in the design of a Student-Centered Learning effective learning system. The more integrated the learning environments, the better the chance for a success in any setting for which the design is directed. For effective student-centered learning, the five foundations should be fully integrated. As teachers, we often have difficulty placing the student at the helm. In the nontraditional classroom, "turning things over to the students for periods of time does not signify that you are losing control" Felder & Brent (1996: 44). The instructor facilitates learning for the learner individually or in cooperative groups by posing problems, setting time limits, providing varying amounts of guidance, asking leading questions, choosing students to respond, or giving positive responses. The instructor also decides when the focus of discussion needs to be changed or the discussion ended.

Students can experience some or all of steps psychologists associate with trauma and grief when forced to take major responsibility for their own learning especially when they have been traditional students in a traditional classroom for the majority of their formal education (ibid).

With cooperative groups, some students will react negatively, resisting the change and the individual responsibility involved, griping about others not pulling their weight, and wasting time explaining to the slower learners in the group. The instructor who "perseveres, patiently and confidently, will reap the rewards in having students who learn more deeply and have better attitudes towards their subjects and themselves (Felder & Brent, 1996). Cooperative groups do provide exploration of opened problems requiring critical and often creative thinking. Groups also provide the opportunity for teamwork and social interaction. Directed environments focus on the basics as identified by the teacher and which are taught externally through practice and explicit activities.

## 1.7 Collaboration and Group Work

The sociocultural theory of mind emphasizes the role of interaction and peer collaboration in L2 development. From a sociocultural lens, learning is a socially situated activity. Higher cognitive functions appear first on the social, inter-mental plane, and only later on the psychological, intra-mental plane (Vygotsky, 1978). Learners, novices construct knowledge in collaboration with more capable individuals, experts. Researchers applying sociocultural theory to the study of L2 learning maintain that learners can have a positive impact on each other's development because they can act as both novices and experts (e.g. Storch, 2004). Because no two learners have the same strengths and weaknesses, when working together, they can provide scaffolded assistance to each other and, by pooling their different resources, achieve a level of performance that is beyond their individual level of competence (Ohta, 2001). The collaborative dialogue that occurs in LREs, as learners collaborate to solve grammatical and lexical difficulties, constitutes an example of languaging (Watanabe & Swain, 2007).

In writing classes, in recent years, a number of studies have called attention to the benefits of collaborative writing tasks, which require learners to work in pairs throughout the entire writing process (e.g., Storch, 2004, Addisson, J., & McGee, S.J., 2010). Research from a sociocultural perspective suggests that collaborative writing activities push learners to reflect on their language use and work together in the solution of their language-related problems (Watanabe & Swain, 2007). By pooling their linguistic resources to solve the problems encountered, learners engage in language-mediated cognitive activities that are thought to facilitate the co-construction of language knowledge and a higher level of performance (Beauvais & Passerault, 2011).

#### 1.8 Technology-shaped Learning Environment

With the advent of technology, the learning environment became even more powerful. The goal of an open-ended learning environment is "to immerse learners in rich experiences, using various tools, resources, and activities with which to augment or extend thinking" (Land & Hannafin, 1997: 97). Student-centered learning and instructional technology seem to fit together well as one approach to enhanced learning. The computer-enhanced environment supports the learning of self-regulation skills<sup>7</sup>, active learning, and individual construction of knowledge so that individuals assume a greater responsibility for their own learning.

The World Wide Web provides a rapid access to information, but learning is self-directed. Computer-based micro-worlds give the learner a link between abstract concepts and understanding based on experience, providing artificial environments for exploration. The

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<sup>&</sup>lt;sup>7</sup> **Self-regulation** is the ability to monitor and control our own behavior, emotions, or thoughts, altering them in accordance with the demands of the situation. It includes the abilities to inhibit first responses, to resist interference from irrelevant stimulation, and to persist on relevant tasks even when we don't enjoy them.

computer-enhanced environment also combats rote memory and disassociation of knowledge. Instead, the learner understands through the refinement of experience and exploration. As in any learning environment, the student needs a facilitator who identifies and provides access to resources, creates problem contexts, refines and extends those contexts, and provides a human resource. The learners make, or are guided to make, effective choices through student-centered learning. Over time, technology leads the learner to understand and surpass the benchmarks previously achieved. The learner can "make sense" out of what they know, develop insight into the "why" behind experiences, create a deeper understanding of thorough exploration, and establish an anchor on which further information can be added. Approaching the learning process as a developer of critical thinking and problem solving skills through the idea of student-centered learning would enable the student to experience success as a self-directed, life-long learner --- the type of worker that today's job market requires.

## 1.8.1 ICT Usage in the field of Education

The majority of countries have integrated ICT into their societies to some degree. In a national report, Warschauer and Liaw (2011) note that ICT has not yet been fully accepted in education and research findings on the impact of technology in education are mixed. Nevertheless, the adoption of ICT throughout the world is accelerating. In relation to Algeria, the International Telecommunications Union (2011) reports that the growth of internet usage has surged from less than one per cent early in the decade to currently 38 per cent.

Researchers and educators who have experienced blended learning delivery, generally find that effective learning is promoted through greater flexibility that allows the use of varied learning styles (Bersin, 2004). Of primary importance, interaction and communication between

students and their instructors are promoted through blended learning with its mix of online and lecture attendances (Graham, 2006). Of interest to this study, course design and technology availability contribute to successful implementation, and student characteristics in access to ICT, competency, prior experience with online learning and attitudes toward online discussions are important issues. Knight (2000) advocated for an interactive online approach to raise student interest, and that it is important that students understand and appreciate the reason for online discussions. To promote an innovative approach to lecture attendance, Hewett (2000) posited a new learning environment, the interactive lecture where students use interactive hand-held devices to access the lecturer's material and ask questions. Podcasting is useful for past lecture records, additional material, and for students to generate their own podcasts. Underlying attitudes of those using ICT may be competitiveness rather than cooperation, where cooperation rather than competition is often required for workplace effectiveness.

#### 1.8.1.1 ICT as a Pedagogical Tool

For ICT usage in the field of education, there was excessive enthusiasm and hope that computers would revolutionize teaching and learning (Maddux et al., 2008). During the early 1990s, technology was conceived as an end in itself, which resulted in computers being distributed to schools with little thought given to their best use. However, since the late 1990s, there has been another shift, which followed the realization that technology cannot revolutionize education by itself. The focus then switched to computers as pedagogical tools which can contribute to improving teaching and learning (OECD, 1987). At that point, teachers' role gained extra attention, with numerous studies exploring the role of teachers in the process of integrating ICT into education (Al-Bataineh et al., 2008).

Three main rationales for integrating ICT across educational systems have been identified: social, vocational, and pedagogical (Subhi,1999). The rationale that informs the present study is the pedagogical one which emphasizes the role of ICT in improving and enhancing teaching and learning. On the one hand, this is concerned with the type and levels of skills that are regarded as essential for contemporary students to develop during their schooling (ibid). On the other, it stems from the work of scholars such as Vygotsky and Dewey, whose works have stimulated a range of educational theorists who wish to change schooling from that place where 'knowledge' is 'transmitted' to a place where students become active and dynamic participants in learning. A wide range of skills is required for a true literate and active learner to participate effectively in the digital age. Now, additional skills, such as team work, collaboration, communication, and ICT proficiency are coming to be considered essential. Fullan (1993) asserts the "moral purpose" of education as its potential for making a difference in the lives of students and for helping to produce citizens who can "live and work productively in increasingly dynamically complex societies" (Fullan, 1993: 14). The pervasive role of ICT makes students' ICT proficiency a necessity for them to be able to compete in the information age.

# 1.8.2 Educational Reform and the Adoption of Innovations

Theoretically, "the purpose of educational change presumably is to help schools accomplish their goals more effectively by replacing some structures, programs and/or practices with better ones" (Fullan, 1991: 15). That is, we seek educational reform because of dissatisfaction with the status inadequacy with our current situation. Educational reform is sought when we feel that something is not right, others are moving ahead, or we are standing still, and

Moral purpose: Whole school vision and values or community values.

therefore we act in order to improve our situation. Consequently, as we often do not know what we want, the what and how questions must be the core of any change (Fullan, 1991).

According to Fullan (1991), change is not needed if there is no need for change. It requires time to be seen as an integral part of the system. In addition, change is seen to be a long process of implementation and modification to ensure maximum suitable condition for the new innovation to work properly. Therefore, educational change should be seen as a process rather than an event.

#### **1.8.2.1 ICT Diffusion across Education Systems**

As noted earlier, there has been increasing demand for educational systems to undertake changes that embrace ICT in order to stay abreast of the emerging needs of the knowledge-based society. Hall and Hord (1987) discuss a major IT-related diffusion theory: adopter-based theory. The latter focuses on the human, social and interpersonal aspects of the diffusion and assumes that it is these factors which dominate in determining the success of the diffusion. Therefore, an educational change has to be fully implemented in order to achieve its objectives (Fullan, 1991)

#### 1.8.2.1.1 ICT integration

For the well-implementation of ICT in the field of education, Rogers (2003) stressed the implementation stage that consists of three stages: redefining, clarifying, and routinizing. Obviously, Rogers' and other models underline the importance of the implementation stage. When implemented, the innovation is re-invented to meet the organization's needs.

## 1.8.2.2 Teacher adoption of ICT

Teachers' capacities to deal with educational changes, to learn from them and to help students learn through them are crucial for the development of societies, which makes teachers hold a key role in the improvement of students, and eventually the larger societies (Fullan, 1991). Teachers are the primary agents for school change and the final arbiters of classroom practice (Polatajko et al., 2007). Teachers are central to the integration of ICT across educational systems and they do not operate only as passive accepters of plans and reforms created at the upper levels of educational systems (Chen, Chao-Hsiu, 2008). Although teachers may have little choice over whether or not to use ICT, they retain a fundamental role in deciding how and when to use ICT in the classroom. Therefore, any attempt to coerce teachers into implementing plans against their own beliefs might stimulate a negative response.

Veen (1993) asserts that teachers' beliefs about content and the pedagogy, along with their overall competence, far overweigh any other factors in respect of their adoption of ICT, including technical support provided by schools, and principals' support of ICT integration. Other studies have confirmed that such teacher factors as competence, attitude and time, are of a greater significance than factors associated with hardware.

# 1.8.2.3 New pedagogical models

According to the European Language Network, ICC (2015), the digital era imposes a redefinition of traditional pedagogical models, the roles of teachers and learners. According to them, new organizational and pedagogical models need to be exploited by teachers so that they can offer a cooperative, collaborative and life-long type of learning to the citizenship of the future. It is argued that the utilization of ICT learning settings and tools in educational processes,

evidently leads to radical changes both in the role of teachers and learners and to the emergence of new teaching and learning environments and methodologies (e-Learning, Web-based Learning, Open and Distance Learning) as well as new training modalities (on-line training, on-site training, Blended-Learning, Instructor led Learning/Training, Classroom Training -C-training-...) Finally new virtual training settings aimed at facilitating tools and resources to favor communication and interaction and distributing teaching materials through the web will emerge in order to encourage and promote collaboration and co-operation among the participants in teaching and learning processes (Kate Grenville, 2001).

#### 1.8.2.3.1 The Teacher's Role

The impact of the Internet in education in the recent years fosters the vision of an open, global and flexible learning, as authors such as Colls state (2003), leading to radical shifts in the teacher's role and competencies. In the framework of this educational landscape, the role of the teacher is that of acting as guide and instrument to assure a comprehensive learning process via the Internet, managing the student's learning process by creating - at the same time- new instructional models set in newly-created virtual environments. Lo (2007) understands knowledge manager as the person who is able to manage the student's skills, abilities and knowledge, motivating and taking benefit of the student's both individual and collective learning possibilities. Thus, the teacher's role is multiplied and shifts from being a single transmitter of knowledge to become facilitator and guide of the learning process, integrator of new ICT media, researcher and designer of suitable learning scenarios, collaborator (with other teachers and students), orchestrator, learner and evaluator. The ICC report (2002), especially devoted to the role of teachers of foreign languages, determines the skills and competencies a teacher has to

master in order to integrate ICT in a successful way. Thus, the report mentions the acquisition of technical, organizational, conceptual skills together with the new literacies: technical, scientific, digital, critical, linguistic, cultural and mediation literacies.

Similarly, referring to the role and function of teachers who develop their activities in ICT-based settings, Lufti, Gisbert and Fandos (2001:70) point out "five main functions a teacher should compile: information consultant, group collaborator, facilitator, critical generator of knowledge and finally, academic supervisor." The authors add that the teacher's profile is shaped in three dimensions: cognitive-reflexive, active-creative and affective-communicative. Thus, teachers are regarded as assessors and guides of the autonomous learning process, resource facilitators, designers of new technology-rich learning environments, adapters of different materials, producers of new didactic materials in ICT-based settings, evaluators of the different processes in which these environments and resources are involved and finally they will have to be able to acquire a professional viewpoint on ICT life-long learning.

#### 1.8.2.3.2 The Learner's Role

The learners, citizens of the 21<sup>st</sup>century, have to be given access to didactic and technical strategies so that they can become competent users of new tools and resources. They are autonomous and responsible for their learning. Moreover, they not only have to acquire skill and ability to cope with technological demands, but also they have to acquire the capacity to use them effectively at technical, rational and critical levels. Thus, the great challenges a teacher would have to face regarding the student's instruction would be: teach to search, teach to understand, teach to use a critical thinking and teach to communicate, putting emphasis upon the different educational needs and qualities of the student. Cabero (1998:5) puts it straight: "the final goal is

to enable learners to manage themselves in the society of the future, which -as it seems- will be the society of learning, and it will be a life-long learning. Just like the teacher, the learner definitely has to adjust to a new role in the learning process."

S/he must take on new responsibilities, often working without any supervision whatsoever. According to Cabero (Cabero, 1998), to succeed in technology-rich environments, learners have to develop certain key abilities and skills. Among these, the following are highlighted:

- adaptability to an environment which is in constant change
- work in team in a collaborative form
- use creativity to solve problems
- lead new initiatives and be independent
- identify problems and come up with solutions
- gather and organize facts
- carry out systematic comparisons
- identify and develop alternative solutions
- and solve problems in an independent way.

The ICC report establishes many of the new settings' advantages. The learners have the possibilities to publish and distribute their own productions for a wider audience (ICC, 2002). Activities will encourage learners to become inquisitive, rather than becoming solely passive recipients of knowledge, thus furthering the idea of the learner as an active participant in the learning process (ICC, 2002: 14). Set in new technological environments students are given the possibility to work in an autonomous way, becoming more conscious of their own learning process and of the knowledge they acquire, thus becoming more aware of the contents and

objectives to be achieved. The inclusion of ICT into the English classroom favors, above all, communication: "Learning on-line is different from learning off-line in another important way: there is much more learning and much less teaching (...) at least there is much less teaching as it is typically done in off-line settings" as stated by Peterson and Facemyer (1996:55).

## 1.9 Instructional modalities in technological environments

The traditional teaching and learning methods together with the most recurrent means of communication have been substituted by other modalities that facilitate interaction and provide at the same time other communication strategies, basically due to two key factors: time and space flexibility and pluralization of learning spaces. Cabero(2001) and other authors support the importance of the apparition of these new learning scenarios for amore participative and extended communication, and make us aware of this emergence of new learning scenarios that allow both individual learning together with collaborative group work. According to most innovating streamlines, some authors coincide in pointing out the effectiveness of using the Net when the teaching/learning processes follow up a clearly stated model based upon research, thus, learners are able to learn by means of a reality discovery process at the time that investigation is enhanced. Aguaded (2003) places within this context other factors: significative learning, content globalization, resource diversification, organizational flexibility and curricular adaptation to student's needs.

The need to include ICT-based learning methodologies is determined by international organizations which claim for their usefulness. In 2001, the European Commission launched the E-Learning Initiative and Action Plan to promote the adaptation of the European Union's education and training systems to the Knowledge Society, through the effective and relevant use

of information and communication technologies and the Internet for learning. This action Plan defines E-learning as "the use of new multimedia technologies and the Internet to improve the quality of learning by facilitating access to resources and services a s well as remote exchanges and collaboration" (Brussels, 2001:172). Two of the main components of the action plan to promote the development of E-learning are teacher training and the establishment of co-operation and interconnection strategies among the members of the educational context. Another of the plan's main points is the aim at engaging all the participants in training processes in acknowledging the importance and potential of e-learning to develop a lifelong and life-wide learning. The new instructional models to which we have referred suggest new perspectives to teaching and learning processes. They are flexible models with different communication systems and distribution of learning materials in which information can be shared by all participants. Among the different initiatives meant to explore all the educational possibilities in the Net, Webbased Learning emerges as one of the most outstanding and recurrent training and learning methodologies. However, within this category, different modalities -such as virtual, distance, open, on-site learning- and methodologies overlap as Mir, Reparaz and Sobrino (2003) agree. According to the American Society for Training and Development, we understand Web-Based Learning/Training as " ...the delivery of educational content via a web browser over the public Internet, a private Internet, or an extranet. Web-based Training often provides links to other teaching resources such as references, email, bulletin boards, and discussion groups. WBT may also include a facilitator who can provide course guidelines, manage discussion boards, deliver lectures and so forth. When used with a facilitator, WBT offers some advantages of instructor-led training while also retaining the advantages of computer-based training" (ASTD, 2015).

According to Mir, Reparaz and Sobrino (2003:24), there coexist three types of teaching and learning approaches: "on-site learning, traditional distance learning and on-line or virtual learning."

- a) On-site learning which refers to traditional classroom training in which an instructor teaches a course to a room of learners.
- b) traditional distance learning based on communication not necessarily computermediated and

c) on-line or virtual learning which complements both previous systems giving way to mix systems. The authors point out that the gap between on-site and virtual learning settings does not necessarily have to be total but depending on the knowledge, the students and the educational training materials, due to this thesis typology, we will refer to blended learning as a mixture of on-site and virtual methodological approaches. Otherwise, it is concluded that:

"learning in virtuality -that is without temporal and spatial constraints- leads to a student-centered methodology set in a virtual learning environment which is described by flexibility and interaction, and a connection to a community and the access to on-line resources and materials", Mir, Reparaz and Sobrino (2003: 27).

#### 1.9.1 On-site training

According to the American Society for Training and Development, on-site learning or training usually refers to traditional classroom training, in which an instructor teaches a course to a room of learners. The term is used synonymously with instructor-led training (ILT) and classroom training (c-learning).

## 1.9.2 Distance Learning

Garcia Aretio (2001: 254) defines Distance Learning as "that learning which is based upon a mediated didactic dialogue between the teacher and the student, who, in turn is placed in a

different space and who learns in an independent and/or collaborative form". This author accounts for the following traits as distinctive of Distance Learning:

- Permanent separation teacher/trainer and student under time and space constraints.
- The student/learner controls time, space, study pace, activities, evaluation timing and educational itineraries...
- Communication may be student/teacher, teacher/student, student/student and teacher/teacher through different use of resources.
- The support of an institution which plans, designs and produces materials and carries out tasks of supervision and motivation of teaching/learning processes by means of peers.

So much literature has been written when trying to account for a successful definition of Distance Learning. Garcia (2001) developed a study in which eighteen specialists in the educational field were asked about the main traits that Distance Education compiled and they converged in stating the following traits as inherent to distance learning processes:

- Separation (physical student/teacher)
- Use of technological methods
- Peer revision by the teacher
- Enhanced autonomous learning

The modality of Distance Learning has viewed different phases and generation of development in the last 150 years and has been object of study by many authors (eg: Harasim, 2000). Due to the development of electronic media, the ways of teaching and learning as they have always been understood have undergone various shifts and transformations. (Garrison, 2003) describes three basic generations of technological innovation throughout history, basically

known as Correspondence, Multimedia and Telematic; however, other authors such as Nation (2008) and Garcia Aretio (2001) account for a fourth category or generation which is communication that takes place through the Internet, which is also known as Web-based learning. According to the opinions of these authors, the different periods encompassed important changes and are clearly defined by their traits. Learning by correspondence, which was born at the end of the nineteenth century, included easy texts which were not very suitable for self-study. Texts reproduced in traditional classes and didn't include didactic specifications. As time went on they started to include study guides, complementary exercises and evaluation worksheets.

Distance multimedia teaching emerged during the 60's period with the creation of Open University in 1969 and started to incorporate audio and video media to written texts. The telephone was firstly used to connect students to their teachers although interactivity was not yet enhanced. The telematic period saw the light during the 80's and integrated telecommunications together with other educational media through computers. The use of personal computers became widespread and Computer-assisted Learning favored actions which included flexible programs, radio and television educational resources and audio and videoconferencing. Finally, the Webbased learning model, which uses interactive multimedia systems and computer-mediated communication dates back to the 90's and its main trait is that education is conducted by means of networks and multimedia workstations which support systems relaying in the Internet by means of synchronous and asynchronous communications. The greatest achievement of this phase is the quickness and constant feed-back and interaction which take part in the teaching and learning process.

## 1.9.3 Blended Learning

Basically described as "the learning which combines face-to-face with virtual teaching" (Coaten, 2003, Marsh, 2003) Blended Learning emerges as one of the most widespread teaching modalities used nowadays in the educational field, mainly by Universities and Higher Education Institutions. According to Valiathan (2002) the term blended learning is used to describe a solution that combines several different delivery methods, such as collaboration software, Webbased courses, EPSS, and knowledge management practices. Blended learning, in accordance to this author, is also used to describe learning that mixes various event-based activities, including face-to-face classrooms, live e-learning, and self-paced learning.

In the recent years, many authors have accounted for experiences in which Blended learning was central in teaching and learning processes and have tried to define it and to provide some inherent traits to this modality. Adell (1997) in relation to this modality accounted for a new concept which combines synchronous and asynchronous communication as a reaction to traditional concepts of distance education, which are mainly passive and lack interaction among participants in teaching and learning processes. Thus, the "virtual classroom" provides different elements which enhance communication above all: spaces for classes, libraries, teacher's office to provide peer attention, seminar for group gathering, space for co-operative work and even a coffee place.

Brodsky (2003:65) states that Blended learning is not a new concept and goes on "...for many years we have been combining magisterial classes with exercises, case studies, role-

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<sup>&</sup>lt;sup>9</sup> A virtual classroom is an online learning environment. The environment can be web-based and accessed through a <u>portal</u> or software-based and require a downloadable <u>executable</u> file.

playing, video and audio-recordings and assessment". Salinas (1999)coined the term "flexible learning" to refer to the type of learning taking place at the Universitat de les Illes Balears known as Campus Extens in which virtual systems such as the Web and tools as videoconferencing are being used in combination with on-site training. Other authors have used the term "semi-presencial" to account for the same combination of on-site and on-line learning.

Gisbert (2001:254) stated that Blended learning "is understood under technological environments in which image and sound transmissions play a definite role together with the definition of common spaces in the net which will account for effectiveness once group training has been put into practice". In order to succeed in Blended training contexts the following aspects will have to be borne in mind if success is going to be expected:

- Communicability
- Easiness in the use of the environment
- Flexibility and adequacy between the objectives of the training activities and the needs of teachers and learners.
- Integration. Ability to integrate different tools in the same communicative process
- Re-usability of materials and environments in different training instances
- Collaboration: presence of collaborative environments to encourage the processes of design, development and evaluation of training actions.
- Management: Usage of tools to manage the training process
- Evaluation processes to contribute to enhance quality standards of training processes.

The assertion of the importance of the integration of ICT (Moodle platform) in the renewal of traditional teaching and learning systems, the use of online peer review for writing

assignments via web together with the use of technological tools and resources based upon group work for EFL learners forms the departing point of this doctoral thesis.

#### 1.10 Conclusion

Education is a key to any nation's development and for it to play this role, education reforms should be inclusive, clearly planned, protected from political dictates, owned by stakeholders, adequately financed, subjected to periodic technical consultations, full implementation of the commission's recommendations to achieve innovation. Education reform is for innovation especially the recent education reforms throughout the world, are intended for realizing the future vision.

In this respect, Algeria, like most countries of the world, has gone through a series of actions in the policy of education, reaching the state of an open country in the twenty-first century. When the winds of change blew over the Algerian educational system, it had to adopt a modernization policy to keep pace with time, with the hope to catch up with the demands of globalization and to satisfy the new generation learners' academic needs. Rita Dunn (2009) argues that in case the child is not learning the way teachers are teaching, then they have to teach in the way the child learns. In this respect, Algeria like most developing countries adopted the current learning theories and encouraged academics and lecturers to exploit technology to the maximum in the field of education.

• 1	'Moodle-based Peer Review a	a Tool to l	Enhance (	and Improve	EFL Learners'	Writing Performance	?"
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# CHAPTER TWO

TEACHING WRITING TO EFL LEARNERS WITHIN A TECHNOLOGY-SHAPED ENVIRONMENT

"Moodle-based Peer Review as a Tool to Enhance and Improve EFL Learners' Writing Performance"

## 2.0 Introduction

The importance of writing is emphasized because it plays a vital role in people's social, cultural, professional and academic lives. That's why it is regarded as a central skill in the world of Applied Linguistics and is still a subject matter of great debate and research. However, a great number of students in different academic settings find it a cognitively complicated skill. Because of the complexity of this skill, it seems very difficult for learners to master all features of writing; and there they do not produce acceptable texts: paragraphs and essays. Although learners have dealt with the writing skill in the different activities for a relatively long period, between eight and ten years, they still make mistakes and produce very poor pieces of writing with inappropriate use of language. In order to overcome the pitfalls they encounter when writing, we believe that our students need to be provided with more efficient writing strategies.

We strongly believe that the mastery of writing requires an understanding of how the writing process works, by emphasizing not only the product (output), but also the different stages, the learner goes through (input). So, teachers should help students to identify and implement successful strategies for writing in English, taking into account that writing is no more seen as a linear process. Besides, teachers nowadays need to be creative and innovate in thinking of new settings and environments that may suit learners' needs and interests and will consequently result in enhancing and improving the writing performance among these learners who struggle with this crucial skill.

## 2.1 Definition of "Writing"

Generally speaking, writing is about words represented by symbols which are written down for communication reasons (Encarta Dictionary, 1999). Writing can also be regarded from another angle as the activity through which such a piece of written language is produced. So, writing is not as simple as it seems to be. "But writing is clearly much than the production of graphic symbols, just as speech is more than the production of sounds". Byrne (1988:1). In other words, the graphic symbols have to be organized in certain ways and conventions to form words. These words, in turn, have to be arranged to form sentences. We produce a sequence of sentences arranged in a particular order and linked together in certain manners.

In line with this, White (1987:3) argues that:

"Writing is far from being a simple matter of transcribing language into written symbols: it is a thinking process in its own right. It demands conscious intellectual effort which usually has to be sustained over a considerable effort of time."

In Oxford Advanced Learner's Dictionary (2010), writing is defined as "the activity of writing or the skill of producing linear sequences of graphemes in time". In addition, it is viewed as a graphic system used for communication as defined in the Cambridge Encyclopedia of the English Language. In Crystal (1995:257), it is stated that: "Writing is a way of communication which uses a system of visual marks made on some kind of surface. It is one kind of graphic expression."

Based on the above stated definitions, it follows that writing is described as a mechanical activity neglecting the mental processes in which the writer is engaged.

As a matter of fact, this cognitive aspect, where writing is not specifically viewed as making letters or other symbols on paper but as elaborating cognitive processes which are usually made up of different stages such as: generating ideas, planning, drafting, editing, writing, evaluating and re-writing is extremely emphasized nowadays specifically in the educational context. In this situation, Flower and Hayes (1981: 366) pointed out: "Writing is best understood as a set of distinctive thinking processes which writers orchestrate or organize during the act of composing." In this setting the term "writing" is usually used synonymously with the term "composing".

Writing is described as a productive skill of language in the written mode. It becomes the most difficult skill for many learners even in their native language. Writing includes not only the graphic representation of speech, but also the expression and organization of ideas according to the conventions of the language. These conventions concern grammar, vocabulary, handwriting, spelling and punctuation (Harmer, 2001).

Writing is thus a creative process which helps learners to describe facts, express ideas and impart knowledge to an unseen audience as stated in Badger and White (2000:157): "Writing involves knowledge about language, knowledge of the context in which writing happens and especially the purpose and skills in using language."

To summarize the definitions mentioned previously, one may say that writing requires from the writer the mastery of conventional writing mechanics and of organizational devices to write effectively. It is then a creative as well as a discovery process as it includes discovering ideas and ways of organizing them to convey a message to the reader (White, 1987). The importance of the

writing activity stems from the fact that it makes thoughts appear on a piece of paper and permits the revision and restatement of these thoughts as explained in Harris (1990: 12): "It is almost as if the act of writing makes thought visible and tangible; this in turn, provides the opportunity for revision and refinement because the thoughts are there on the page to be worked on."

In short, one may say that it is very important to give greater attention and concern to the development and the social significance of the writing skill as pointed out in Hamzaoui (2006:12):

"The social significance of writing has become increasingly important at all levels of education: from elementary classes where demonstration of writing ability is part of minimum competency exams, to university level where writing is an exit criterion for graduation."

It is agreed among scholars that the most widely quoted definition of writing was given by Aristotle who discusses how the linguistic entities such as nouns and verbs relate to ideas and to things of the material world. He explains:

"Words spoken are just symbols of affections or impressions of the soul; written words are symbols of words spoken. And just as letters are not the same for all men, sounds are not the same either, although the affections directly expressed by these indications are the same for everyone, as are the things of which these impressions are images." (1938: 115)

In Aristotle's definition, the main element is that it determines the function of writing as forming signs for other signs as their referents. Writing is not only preceded by, but also subordinate to, vocal speech.

In his celebrated essay 'Carving of the Literary Dragon' writer and philosopher Liu Hsieh (465–522) states that when the mind is at work, speech is uttered; and when speech is uttered, writing is produced.

In fact this definition shares a number of elements with Aristotle's. A mind at work is what Aristotle calls 'affections of the soul'. It produces speech that in turn generates writing.

Now based on the natural order hypothesis, writing is generally regarded to be the language skill acquired last, but nevertheless it has the same importance as the rest. The skill of writing is more important in academic settings where most ESL teaching occurs. However, many researchers and scholars note that despite writing being a very important form of expression and communication, teaching it tends to be a much neglected part of the language programme in both first and foreign languages (Badger & White, 2000).

Many researchers have also described writing as a 'complicated cognitive task', since it is an activity that requires careful thought, discipline, and concentration, and it is not just a simple direct production of what the brain knows or can do at a particular moment, (Widdowson, 1983). Writing thus seems to be a challenging task, and many researchers such as Widdowson assume that most of us seem to have difficulty in setting our thoughts down on paper.

This difficulty becomes greater if English is not the writer's first language, consequently learning to write in English when it is a writer's second or a third language presents its own extra problems. Hopkins (1989) states that for most non-native learners, writing is considered to be the most difficult skill to learn out of the four skills. Besides, the task of writing in a second language

is especially severe when students are supposed to produce a high-quality outcome, as is the case in academic settings (McDonough & Shaw, 2003).

From a pedagogical perspective, many teaching methods have considerable results in developing students' skills in writing. For instance, Villamil (1996) mentioned that instruction has an effect on how learners write, both in terms of written output, writing behaviors, and attitudes to writing. Numerous approaches have been adopted to teach writing in ESL/EFL classes. In Algeria, as in many other places in the world, the dominant approaches used in different teaching organizations are the product, process, and genre approaches. These approaches have obvious local variations in the way implemented in the West, and with more reliance on 'traditional' ways of teaching, as discussed in later sections (Bersamina, 2009). Descriptions of writing approaches, their advantages and disadvantages, and the role of feedback in relation to different writing approaches will be included.

## 2.2 Teaching Writing to ESL / EFL Students

It has already been shown that learning to write in English as a foreign or even as a second language can be quite different from writing as a native speaker. In fact, the literature of ESL writing, as Ferris and Hedgcock (2005) note, draws attention to various and important differences between L1 and L2 teaching contexts, which can generally be associated with the distinctive social and pedagogical characteristics of each, in addition to differences in linguistic competence and literacy skills of the students. For example, Leki and Carson (1997) think that ESL writers experience writing differently from their L1 counterparts. In fact, most non-native students (NNS), according to Hinkel (2004), face a great deal of difficulty, and even advanced and well trained NNS students exhibit many problems and deficits. Hinkel states that teaching ESL writing

to NNS college- and university-level students is usually academically bound. If NNS students succeed in getting good grades and achieving their educational objectives, the accuracy of their L2 writing needs to be approximate to NS students at a similar academic level.

To give a clearer and more accurate idea about this difference, Johns (2003) noticed that many NNS students after years of ESL training often cannot recognize and appropriately make use of the conventions and features of academic written prose. Therefore, they usually start producing vague and confusing, rhetorically unstructured, and overly-personal written texts. From an academic point of view, Thompson (1999), whose study in addition to that of Dudley-Evan (1997) was described by Paltridge (2002) as the only ones that looked at academic writing at a doctoral level, highlights this issue of increased number of international students who are expected to write theses in English. Thompson (1999) therefore calls for more work to be done to establish the characteristics of the genre they are required to write.

Similarly, Ferris (2005) carried out a research which found that L2 students are especially concerned about their surface-level errors rather than more global issues such as logic, rhetoric and ideas. This particular finding goes along with the widely held belief that responding to L2 students' writing has been of great importance in teaching writing, and is well considered by both writing teachers and pedagogy theorists alike. In order to explain why NNS students might focus more on local issues, Hinkel (2004) mentions that the writing of these students lacks basic sentence-level features such as the proper use of hedging, pronouns, modal verbs, active and passive voice, balanced generalizations and exemplifications. Hinkel therefore thinks that NNS are more concerned about these errors than their NS counterparts which in practice means they focus more on grammatical errors than wider global issues. As a possible negative outcome of

this view of NNS students lacking overall language proficiency, especially writing skills, many NNS students may experience frustration and alienation, which compounds their existing problems. keeping this in mind, Ferris (2005) explains giving grammar feedback to such students as 'indispensable,' counter to recommendations carried out by Truscott (2007), who went further and completely outlawed this type of feedback. Hyland (1998) takes a similar stance to Ferris, as they argue that providing written feedback to language students is one of the ESL writing teacher's most important practices. ESL student participants in Hyland and Hyland's study were reported to overwhelmingly desire the correction of their linguistic and logical errors, and they added that it is teacher's responsibility to provide such feedback, in other words, teachers should equally focus on both types of errors. Ferris (2005) gives a possible explanation of such attitudes, noting that L2 writers are constantly aware of their linguistic limitations, and thus are more likely to focus on word- or sentence-level accuracy, instead of more global issues. The very notion of L2 students' preference of form feedback is further supported by Ellis et al. (2008) and others, who report that foreign language students exhibit positive attitudes to feedback that are distinctly form-focused. The previously mentioned studies, moreover, report that most ESL students value and expect feedback concerning their linguistic errors. Hyland (2003: 178) clearly expresses this particular idea:

"Teacher-written response continues to play a central role in most L2 writing classes. Many teachers do not feel that they have done justice to students' efforts until they have written substantial comments on their papers, justifying the grade they have given and providing a reader reaction. Similarly, many students see their teacher's feedback as crucial to their improvement as writers."

For example, when reacting to the strong views against giving grammar feedback, especially those stated by Truscott (2007), Ferris and Hedgcock (2005) note that given the strong

preferences that L2 writers have expressed for receiving grammar feedback, its complete absence may actually be upsetting and demotivating. As for ESL writing teachers' position, recent research (Hyland, 2003) also shows that teachers are very much concerned with students' surface-level errors themselves. This focus on linguistic accuracy probably originated from L2 students' linguistic incompetence. Another description for teachers' attitudes is given by Hyland (2003) and Zamel (1985), the latter of whom notes that ESL writing teachers perceive themselves more as language teachers, rather than writing teachers. Similarly, Kepner (1991) refers to the traditional view of achievement in L2 writing as mastery of the discrete surface skills that are required for the production of an accurately-written document. Briefly, there is plenty of research evidence showing that ESL students crave surface-level correction, and believe in its effectiveness (Lee, 1997). ESL students usually prefer content feedback on early drafts, and form feedback on later ones, a proposition that copes with the relatively contemporary 'process approach' of writing (Ferris and Hedgcock, 2005).

We may conclude that previous research findings clearly show that ESL students want, appreciate, and apply the corrections they get from their teachers (Zamel, 1985, Ferris & Hedgcock, 2005). In short, ESL teachers feel obliged to correct writing errors, and students want them to do so. Furthermore, as L1 student writers usually have significantly less limitations in their linguistic competence, NS writers can focus on more theoretical, notional, abstract ideas. This is, on the contrary, not the case with NNS learners, who are still struggling with their lower-language proficiency, and concerns regarding linguistic errors therefore still occupy prominent status, as compared to their NS counterparts (Radecki & Swales, 1988).

## 2.3 Stages of the Writing Process

Learning to write is similar to learning to read. Both follow a sequential process. Writing necessitates and combines more basic skills than any other subject area. Taking into consideration the developmental stages of children, educators teach writing through different steps that build on a child's learning experiences. Children are natural-born writers in that they are more enthusiastic and willing to write their ideas on paper. Even at early developmental stages, they are becoming writers. Parents and other caregivers encourage the excitement of writing in their child by being interested and involved with the writing process their child uses in school. The writing process begins in the early grades by exposing learners to different quality books read aloud. Children see and hear the ways that authors use language to produce and tell a story. They, in turn, use these books they hear and read as good examples for their own writing.

Teachers frequently teach writing to the whole class at one time. When children start watching and listening, the teacher models the writing lesson and encourages the children to add their ideas that they have heard in lectures or read in books as well. Sometimes writing instruction may happen in small groups with a teacher or teaching assistant. Small group instruction helps children who may need extra attention develop strategies needed to become independent writers. Most teachers use a writing process. According to Donald M. Murray (1992), it is the process of discovery through language, the process of what we know and how we feel about what we know through language. It is the process of using language to learn about our world, to evaluate what we learn about our world, and to communicate what we learn about our world. Instead of teaching our students a finished product, we should teach them an unfinished product, and glory in its unfinishedness. Thus, we work with language in action and share with

students the continual excitement of choosing a word instead of another. To this end, we quote Sharples who argues that:

"Being a writer is, above all, having control over how you write and trust in your ability to make progress. If you try to walk with your eyes closed you find that the first few steps are easy, but after about ten paces you begin to slow down, to tread carefully, sensing the terrain and feeling for obstacles. You lose faith in your ability to continue. Open your eyes again and the terrain guides you onward." (1999: 128).

Apprehension of writing can be overcome by gaining clearer awareness of the 'terrain': understanding more about both the craft and process of writing. Witte and Cherry (1986) argued that perhaps the most exciting development in the field of composition studies in the United States during the past two decades has been the rediscovery of process in writing. In the ESL/EFL field as well, process has been advocated by many writing specialists (White & Arndt, 1991), and has been criticized by others (Casanave, 2004).

The principal pillar in process pedagogy is that students should become aware that writing by its nature is a process, so that even easily understood messages, which seem closest to the idea of writing as just encoding graphically words already in the mind, are the result of a writing process that includes choosing vocabulary, considering audience, and judging format. Consiquently business students must study how to take telephone messages, and L2 students have to learn the conventions for filling out forms. Students who are aware of writing processes can then choose the process that suits their writing style and the particular writing task they face.

The second pillar of process writing pedagogies is "intervention", Emig's (1971: 128) term for teaching of this type. Flower and Hayes, working from a cognitive perspective, see writing as a:

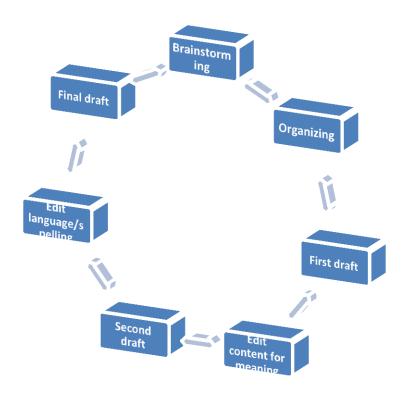
"...complex problem-solving process. This viewpoint provides a useful orientation to writing instruction. It could enable teachers to intervene at points in the writing process that could do writers the most good- as they are actually engaged in the act of writing. Thus, teachers could help writers to write, not just learn to repair the damage." (1981:55)

Putting it differently, process writing is a pedagogy in which the teacher is involved with the student during the writing process. In Zamel's words, "Intervening throughout the process sets up a dynamic relationship which offers writers the opportunity to tell their readers what they mean to say before these writers are told what they ought to have done" (1983, 182). As Liebman-Kleine says: "If processes differ, then the role of process teachers is not to impose a process, but to perceive their students' differences and then assess each one's particular needs" (1987: 105).

Process writing teachers use procedures designed to help students think through and organize their ideas before writing and to rethink and revise their initial drafts (Applebee, 1986). These include brainstorming, freewriting, journal writing, small-group activities, teacher/student conferences, peer critiquing, revising, editing only the final draft, and some form of publishing (ibid). As this list suggests, intervention is not just the teacher's prerogative. Peer review and related procedures encourage intervention by classmates; the goal is for students to internalize this intervention as they write and revise. In the end, a process writing pedagogy is an attitude more than a program; activities will vary with the type of writing, the writer's preferences, and other factors.

Cora Lindsay and Paul Knight (2006) are among the scholars who argue that people write for different reasons, to ask questions, request or offer something, to entertain, to keep a record, to organize one's thoughts, as part of the assessment process, and so on. Students might write longer texts as part of their studies, for a composition, a short story or even an examination. When people write they should take into consideration the reader, their relationship with him/her. They then need to adjust the content accordingly by using either formal or informal language and the appropriate layout and conventions.

We can break down the writing process into three main stages. Figure 2.1 shows how we might produce a longer text such as an essay (Figure 2.1).



*Figure 2.1: The writing process* 

It's noticeable that the arrows that link the different stages of the writing process go in both directions. This is because the writing and rewriting don't occur at a straight line. The writer may go forward as well as backward while processing (Cora Lindsay and Paul Knight, 2006).

## 2.3.1 Pre-writing

Pre-writing is everything writers do before they begin to draft the paper. Pre-writing process may take 85% of the writer's time. It includes awareness of his world from which his subject is born. During this stage, the writer focuses on that subject, spots an audience, and chooses a way and a form which may carry his subject to his audience. Pre-writing may include research and daydreaming, note-making, and outlining, title-writing and lead-writing (Donald M. Murray, 1992). In fact, this phase is all about planning which is not a single phase but a thinking activity to which writers return again and again during composing. Moreover, these writers have different strategies for getting into writing. Some write notes, lists or diagrams while others write nothing until they start the essay (Zamel, 1983).

During this first step of the writing process, students will generate ideas and put their thoughts in order. Researchers such as Matsuhashi (1985) have found that as writing tasks become more complex and as more abstract thought is required, experienced writers do require more time to plan their writing, too. Examples of prewriting include anything from a sentence or two describing a project's organization to an extensive outline with references to where you will place notes.

## 2.3.2 Writing / Drafting

During this stage students are asked to produce and write their first draft. It is the fastest part of the process and scariest for writers. While drafting, students write without major attention to punctuation, grammar, or neatness. Some teachers may refer to this as a rough draft. The aim of the rough draft is to help students to go through writing with more confidence and without the distraction or fear of making mistakes in grammar, capitalization, punctuation, or paragraph structure.

Each use of the writing process is likely to take most students a similar amount of time, although the steps on which they spend their time may vary. For example, Gareth Sundem (2010: 53) states:

"if students spend time on their prewriting, they will gain it back while drafting; if they rush through the prewrite, they may take longer to draft. This is to be expected. Some students will fly through the planning stage of their writing, giving it the minimum required effort and nimbly inserting ideas on the fly as they draft. Others will agonize over their prewrite and view the draft as "filling in the blanks" of an organized outline."

While drafting, teachers are required to encourage students to revise as little as possible, but if they have additional good ideas, they can brainstorm, organize, and revise to a degree. Dahl and Farnan (1998) describe the various paths students take through the writing process as, "... not a straight superhighway from idea to finished text [but] more like a twisting mountain road with a lot of switchbacks" (p. 8).

As far as teachers' role is concerned, while students are drafting, the teacher will be giving individual and small group help as needed just for encouragement and not at the expense of breaking a student's concentration. As a motivational tool, the teacher may ask struggling

students to share anything they manage to get down. By making them feel successful, he/she has helped them take a leap toward actual success.

## 2.3.3 Revising

Student writers use the suggestions provided by classmates to make additions or clarify details. They try to improve their writing on their own. The teacher steps in at this stage and gives feedback. Revising is frequently neglected in the writing process. Students often feel that they have already written the paper, and they see any extra work, such as revising, as just that—extra work. But in revising lies the greatest potential for learning. While revising, students learn techniques to make their writing better—techniques they can apply the next time they draft. Students will see "before" and "after" versions, and by comparing the two, they will demonstrate to themselves the specific elements that make for a better piece of writing (Adams, 2003). In this multistep process, it is effective for students to first revise their own work and then get comments from a peer or adult.

Generally, students have three choices for presenting revision. They may mark directly on their draft, they may recopy onto a new page as they go, or they may first mark on their draft and then recopy it for legibility. Also, before asking students to revise their work, we need to teach them the common revision/proofreading marks. The most important points are showing students how to add and delete material. Not only will students be marking their own work, but they will eventually be revising others' work. But teachers have to be aware of the fact that (Berg, 1999:227): "Children tend to overestimate their own and others' comprehension of text, and thus, they do not identify specific areas of text that could benefit from revision" (p.227)

A final worth mentioning point is that teachers need to distinguish between revising and proofreading. Revising is for content, while proofreading (editing) is for conventions (Reed, 1995). As long as the conventions used in a draft allow the material to be readable, students will revise only for content in this step, rather than proofreading for spelling and grammar, which they will do while editing. To reinforce this important distinction, teachers may ask students to use a different color pencil for revision than for editing.

## 2.3.4 Peer Editing and Revising

Peers or classmates produce their rough drafts and make proposals to each other for improvement. Students can share gathered information and ask each other questions about their topic. At this stage students can share their creative work with peers for constructive feedback and then use this feedback to revise and improve their work. They often look for better words to express ideas and discuss among themselves how to make the writing clearer.

Additionally, an author may have the intended cadence of a sentence in his/her mind, but through peer revision may find that, without proper punctuation, the sentence is difficult to read. In both cases, the audience is the best barometer of success. Also, through working to revise someone else's writing, students will collaboratively learn techniques they can use in their own writing (Hillocks, 1995). Teachers need to keep in mind that students will need both revision skills and tact in order to successfully peer-edit another student's writing.

Many adults' initial reaction to their student's writing is to correct it. In this step, teachers should encourage students to look at the content of the piece rather than the conventions. Unless a student is significantly below grade level in his/her mastery of conventions, then proofreading is saved for later. Once a student has peer comments on how to improve his/her writing, he/she

will choose which suggestions to incorporate in their draft. Simply knowing what they "could have done" is not enough. Students need encouragement to actually use these revision comments to improve their writing (Hillcoks, 1995).

#### 2.3.5 Final Draft

Children produce a copy of their writing with all corrections made from the editing stage and then discuss this final draft with the teacher to check the format and presentation and ensure that it is free from errors. The teacher offers the last suggestions for improvement at this point.

As stated previously, many people believe, mistakenly, that writing should flow in an easy, straight line from the writer's head onto the paper. But writing is rarely an easy, one-step journey in which a finished paper comes out in a first draft. The truth is that writing is a process of discovery that includes a series of stages, and those stages are very often a zigzag journey. Look at the following illustrations of the writing process in Figure (2.2):

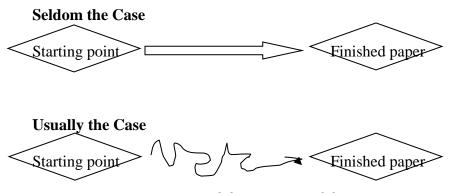


Figure 2.2 Two cases of the writing process

Johns A. (1986:21) argues that:

"The point is that writing is often a process of exploration and continuing discovery. As we write, we may suddenly switch direction or double back. We may be working on a topic sentence and realize that it could be our concluding thought. Or we may be developing a supporting idea and then decide that it should be the main point of our paper."

It is worth noting that it is important to remember that writers frequently do not know their exact destination as they begin to write. Very often they discover the direction and shape of a paper during the process of writing. In other words, this process involves several steps to guide learners from the beginning of writing to creating a finished piece. Teachers use these steps to provide structure and continuity in all forms of writing.

In short, the writing process comprises the mechanics by which writers create final products. It is the method all writers use to generate ideas, choose and organize these ideas, write and revise their pieces, and format them for publication. In terms of instruction, it represents a holistic approach, encouraging creation of an entire product, rather than working on pieces of this process and only infrequently putting it all together. Writing process instruction encourages student writers to discover for themselves the mechanics of composition. Many authors point out that over the past two decades there has been a significant shift from a focus only on the products of writing to studying the processes associated with how writers write.

#### 2.4 Student-Centered Instruction

A variety of phrases have been coined to describe a critical shift in mission and purpose of higher education. Kehagia (2005) expressed the change as a move from an Instruction Paradigm in which universities delivered instruction to transfer knowledge from faculty to students, to a Learning Paradigm in which universities produce learning through student discovery and construction of knowledge. El-Koumy (2004) used the phrase learning-centered assessment to emphasize transition in the focus of instruction and assessment from teaching to learning. The

following description of student-centered instruction provides another starting point for conversations about student-centered learning:

"Student-centered instruction [SCI] is an instructional approach in which students influence the content, activities, materials, and pace of learning. This learning model places the student (learner) in the center of the learning process. The instructor provides students with opportunities to learn independently and from one another and coaches them in the skills they need to do so effectively." (Collins & O'Brien, 2003:97).

The SCI approach includes such techniques as substituting active learning experiences for lectures, assigning open-ended problems and problems requiring critical or creative thinking that cannot be solved by following text examples, involving students in simulations and role plays, and using self-paced and/or cooperative (team-based) learning. Properly implemented SCI can lead to increased motivation to learn, greater retention of knowledge, deeper understanding, and more positive attitudes towards the subject being taught (ibid).

Student-centered learning has been a topic of discussion within many research centers and organizations. It can also be seen from the perspective of an influential report from the National Research Council (1999) that synthesized research on learning and suggested organizing learning environments around four central points: knowledge-centered, learner-centered, assessment-centered, and community-centered. Knowledge-centered learning approaches grow out of the research on beginners and experts that has revealed that experts have organized their knowledge very differently than beginners. So knowledge-centered learning stresses learners developing their knowledge to facilitate transfer of their learning to new contexts and application of their learning to open-ended challenges such as problem-solving, critical thinking, and design. In a learner-centered learning environment, McCombs and Whistler (1997:67) state that: "...learners

are treated as co-creators in the learning process, as individuals with ideas and issues that deserve attention and consideration."

Learner-centered learning environments recognize that the prior knowledge from previous courses significantly influence students' achievement. Therefore students' prior knowledge should be taken into consideration. Assessment-centered learning environments provide opportunities for feedback and improvement throughout the learning process leading to evaluation and judgment at the end of the learning process. Assessment for feedback and improvement is known as formative assessment whereas assessment for conclusive evaluation and judgment is known as summative assessment. Nicol and Macfarlane-Dick (2006) argue that formative assessment can promote the development of capacities and attitudes used in long-term learning. Assessment-centered learning environments also emphasize congruence between learning goals and what is assessed (National Research Council, 1999).

Finally, community-centered environments recognize that individual learners take many cues and insights from learners around them, so that community-centered learning environments facilitate purposeful interactions among learners to promote and sustain learning. For the purposes of this research, learning environments are student-centered to the degree to which they are concurrently knowledge-centered, learner-centered, assessment-centered, and community-centered. Many different faculty members have developed and used approaches to teaching that fit the criteria for student-centered learning. Many of these developers have created original names for their approaches. As a result, there is a broad spectrum of named approaches (Table2.1).

Active Learning	Bonwell & Eison	1991
Collaborative Learning	Bruffee	1984
Inquiry-based Learning		
Cooperative Learning	Johnson, Johnson, & Smith	1991
Problem-based Learning		
Peer Led Team Learning	Tien, Roth, & Kampmeier	2001
Team-based Learning	Michaelson, Knight, & Fink	2004
Peer Instruction	Mazur	1997
Inquiry Guided Learning		
Just-in-Time Teaching		
Small Group Learning		
Project-based Learning		
Question-directed		
Instruction		

*Table (2.1): Broad spectrum of named approaches* 

In short, results from a growing number of studies indicate that student-centered learning approaches lead to improvements in student performance. For more details on these studies the Center for Teaching Excellence at Texas A & M University is compiling a bibliography of papers that shows student-centered learning approaches lead to measurable improvements. Some of the papers are meta-analyses that synthesize outcomes from many individual studies. These outcomes confirm positive effects of student-centered learning approaches to teaching on academic performance, attitudes toward learning, and persistence in programs. Considering the growing evidence on the effectiveness of student-centered learning approaches, Handelsman et al (2004:7-8), in an article in Science, stated: "There is mounting evidence that supplementing or replacing lectures with active learning strategies and engaging students in discovery and scientific process improves learning and knowledge retention"

## 2.5 New Technologies in the Writing Classroom

Writing is still an important act and a necessary tool for learning and social participation. Skill in writing is still crucial inside and outside of our schools. Writing is still recognized as a

socially situated act of great complexity. And writing is still considered by many students as a hard work. However, today's social networking and collaborative writing technologies have taken hold, if not always in our schools, certainly among our students. Bandwidth has increased in many locations, along with wireless access. Spaces and devices for creating, sharing, and distributing writing have become more robust and more accessible. Not only does writing matter, but digital writing also matters.

Numerous reports and policy statements document this shift in our thinking about education and writing, including the National Commission on Writing report: The Neglected "R". 10

In just a short period of time, with the advent of what have been variously called "Web 2.0," "read/write Web," and "cloud computing" technologies—technology integration is no longer seen as a challenge ahead, but a challenge that we face daily in our classrooms. Although all reports, among them the one stated above, document the changing context for writing and the need for students to harness twenty-first-century information and communication tools for writing, each of these reports also notes one constant: writing matters. And if writing matters, so do the roles that teachers and schools play in teaching writing and supporting literacy (Danielle Nicole DeVoss, 2010).

<sup>10</sup> The Need for a Writing Revolution (2003). Report by The National Commission on Writing in

America's Schools and Colleges. April, 2003.

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## 2.5.1 Learning to Write In a Digital World

Technology has had a massive impact in L2 classrooms over the last decade or so and writing instruction now makes considerable use of computer technologies (Kern, 2000). Some teachers have welcomed these developments enthusiastically, seeing the integration of new technology-based pedagogies as a means of developing instruction, improving students' writing skills, and facilitating collaboration and interaction both within and beyond the classroom. Others have been more cautious, regarding this expansion as another manifestation of the escalating corporatization of education or as a threat to the essentially human interactions on which teaching is based.

The main reason for the shift is the networked computer and its related devices. Many current educators will remember the introduction of computerized word processing into the writing process. This technological device provided important benefits for writers that teachers quickly integrated into their practices. Word processing and desktop publishing allowed writers to create texts that were much more polished in design and able to integrate image and graphic elements with ease, but it did not fundamentally shift the modes of distribution (Ware, 2006). Today, however, most computers are connected to the Internet and, increasingly, people can connect via mobile phones as well. These devices have become tools for writing; publishing; distributing; collaborating; interacting; and remixing and mashing together image, word, sound, motion, and more into something that goes far beyond our original vision of what they could do. It is something more properly thought of as a whole new ecology with a wide range of practices. The new technology-shaped writing is not simply a matter of learning about and integrating new digital tools into an unchanged repertoire of writing processes, practices, skills, and habits of

mind. It is about the dramatic changes in the ecology of writing and communication and, indeed, what it means to write: to create and compose and share.

Computer technologies have changed the processes, products, and contexts for writing in dramatic ways. Equipping students to write in only one mode—traditionally, black ink on white paper in scripted genres—will not serve students in their higher education experiences or in the workplaces of the future. Equipping students to work across and within contemporary networked spaces, and to write in a range of genres and a diversity of modes to audiences local and widespread, will serve students in their higher education experiences and in the workplaces of the future. Teachers of writing are central in the work of reimagining literacy in the digital age—and such reimagining must become central to them (Ferris and Hedgecock, 2005).

## 2.5.2 Asynchronous<sup>11</sup> Writing Environments

Time-delayed communication using networked computers includes email, news groups, and conferencing software. Its main advantage for EFL writing teachers is that the non-synchronicity of the communication means that a text can be composed and edited prior to transmission at a more leisurely pace, rather than being co-constructed by participants. This tends to mean more reflective and considered responses with greater participation from less proficient students. Thus, responses are typically more thoughtful; more carefully edited, and more closely reflect conventions of written communication.

<sup>11</sup> **Asynchronous learning** is a general term used to describe forms of education, instruction, and learning that do not occur in the same place or at the same time. The term is most commonly applied to various forms of digital and online learning in which students learn from instruction—such as prerecorded video lessons or game-based learning tasks that students complete on their own—that is not being delivered in person or in real time. Yet asynchronous learning may also encompass a wide variety of instructional interactions, including email exchanges between

teachers, online discussion boards, and course-management systems that organize instructional materials and

correspondence, among many other possible variations.

Email is probably to be familiar to many students as text files that can be read, saved, edited, and forwarded to other users. It is a useful tool for writing instruction as it allows teachers to set up classroom interaction and long-distance exchanges, encouraging students to focus on fluency and meaning while writing for a real audience and purpose. Within a single class, most information gap tasks can be accomplished by email, encouraging written accuracy and clarity of expression. Moreover, the fact that writers can respond to parts of an email, delete unnecessary parts, and then send it on to another student allows question-answer sessions or serial stories to be developed. A slightly more ambitious use is to establish and encourage discussion groups, putting all group members into a collective team so that students can send an email message to their classmates simultaneously, discussing ideas, exchanging vocabulary lists, passing on useful Websites, and so on. The creation of such online learning communities can also encourage collaboration and a sense of what it means to write for an unknown audience beyond the classroom (Sandra Fotos, Charles Browne, 2004). As a result, a growing number of teachers now use different types of software for class projects with great success.

#### 2.5.3 CALL Resources for Writing

In addition to CMC (Computer Mediated Communication) there are numerous CALL (Computer Assisted Language Learning) programs which support EFL writing instruction. Again, these vary enormously in their appearance, their effectiveness, and the teaching philosophies that underlie them, and care needs to be taken when selecting resources for learners.

There are various software programs that exclusively address writing. These programs provide interesting variations on scaffolding tasks (Ferris and Hedgecock, 2005). Although they need to be carefully integrated to ensure their relevance to particular genres and purposes, these

tasks often provide more entertaining ways of building language competence than those found in textbooks. They also help students learn and practice at their own pace and receive instant feedback on their understanding of words or grammar rules.

For many e-learning scholars, among them Del Marie Rysavy (1990), CALL programs offer students a more different learning experience than either computer-mediated communication or the Internet. Language learning and writing software represent motivating multimedia environments for studying finite language areas at the student's pace and with control over the directions they take, the material they focus on, and the time they devote to it. In essence, however, these are tutors in another guise, digital textbooks with many of the same advantages and disadvantages. Also like traditional paper materials, their effectiveness in writing classes ultimately depends on the teacher's ability to use them in ways that respond to students' proficiencies, interests, and target needs (Weller et al., 2005).

#### 2.6 Online versus Real Classroom

The computer-equipped classroom, where students and instructors meet face-to-face (F2F), is physically and psychologically different to the virtual classroom. A number of authors believe that these differences must be considered for successful CMC outcomes (Porter et al., 2003). One area to consider is task type. An empirical study by Jones, Garralda, Li and Lock (2006) found that F2F was best for joint decision-making, and concluded that successful task achievement depended on choosing the right medium for the right task. Similarly it was found that F2F was better – and also preferred by students – for discussing and responding to ideas, whereas CMC was better for information-sharing. Others have found that CMC appears best for simple concrete tasks (Hewett, 2000).

CMC tasks also need to be structured. Panos V. & John (2010) reported that knowledge construction was significantly better within a structured as opposed to an unstructured CMC environment and led to higher levels of critical thinking. Mason and Bacsich (1998), summarizing their many years of running UK Open University courses, go a step further and emphasize that: "...on-line contributions must be posted within a heavily structured environment". (P. 76)

To sum up, students are more likely to participate on-line, if there is a course goal driving participation. In short, CMC looks more appropriate to giving and storing information, and F2F for responding to or discussing information. As these tasks are complementary, the most favourable solution would appear to use both CMC and F2F. This pedagogic combination of the virtual and the real classroom is called blended learning and is advocated by an increasing number of authors (e.g. Breuch, 2004, Lee, 2004).

Lee's (2003, 2008, 2008b) study further investigated students' writing process on online classrooms, and explored students and teachers' perceptions and attitudes towards the use of such tools. The results showed that the students perceived the technology-shaped writing environment is as beneficial in boosting writing motivation, increasing group interactions, and extending the audience for students' writing. Based on the study of Lee (ibid), another study led by Al-Hazmi (2006) investigated students' and teacher's perceptions and attitudes towards the online writing classroom again. The results showed that the students perceived it as effective in facilitating their motivation to write, heightening group interactions, and expanding their reading audience. The

findings also indicated that the computer-based learning environment was easy to use, and had more technological advantages than disadvantages.

## 2.6.1 Working in Online Workshops

Collaborative writing activities can be described as activities that require learners to work in pairs or small groups and produce one jointly written text (Swain, 2000). Learners work together throughout the entire writing process, sharing authorship and responsibility for the final work. The joint ownership of the final text is, according to Storch (2004), the defining trait of collaborative writing. Swain (2000) states that in the L2 classroom, collaborative writing activities may be helpful to learning because they: "...encourage students to reflect on language form while still being oriented to meaning making" (p. 112).

The shared writing activity, the need to agree not only on what to say but also on how to say it, pushes learners to talk about language, to discuss their language use, and to collaborate in the solution of their language-related problems. Collaborative writing activities thus give an opportunity for collaborative dialog. It is a dialog in which learners are involved in joint problem-solving activity (Swain, 2000). It constitutes a form of languaging, described by Swain as: "the process of making meaning and shaping knowledge and experience through language". (2000:89)

In collaborative dialog, learners collaborate in knowledge-building activities, such as correcting themselves or others. They use language as a means to co-construct new language knowledge. By pooling their individual resources, they are able to scaffold each other and achieve a level of performance that is beyond their individual level of competence (Donato, 1994,

Ohta, 2001, Swain, 2000). From a sociocultural perspective (Crawford, 1996), these socially situated processes and the knowledge they generate can be internalized by the learner and transformed into individual mental functioning. On this basis, Swain (2000: 97) claims that collaborative dialog is language learning in progress, "language use mediating language learning".

Research on L2 interaction has operationalized the concept of collaborative dialog through language-related episodes (LREs), defined as: "any part of dialog where the students talk about the language they are producing, question their language use, or correct themselves or others" (Swain and Lapkin, 1998: 326).

This research has shown that collaborative writing activities, including dictogloss, jigsaw, and composition activities, promote LREs, in which L2 learners collaborate to build knowledge about grammar, vocabulary, and mechanics (Swain, 1998, Swain and Lapkin, 2002). Using tailor-made posttests to trace learners' independent use of the language discussed in these LREs, evidence has shown that learners tend to retain the knowledge co-constructed in collaboration with their peers (ibid). These findings indicate that, by promoting LREs, collaborative writing tasks facilitate L2 learning.

Preceding research comparing collaborative and individual tasks also supports the use of collaborative writing activities in the L2 classroom. In a series of related studies carried out in English as a second language context, Storch compared the performance of the same writing tasks by learners working in pairs and individually. Learners working collaboratively accomplished the activities more competently, producing shorter but grammatically more

accurate texts. In an English as a foreign language context, it was found that work with collaborative writing activities over a prolonged period of time may have a positive effect on learners' writing skills, although this effect may differ from one area to another (Storch, 2002).

Most of the above-mentioned studies considered collaborative writing tasks as tasks completed in pairs and therefore documented the benefits of collaboration only between two learners. However, recent research comparing individual, pair, and small group writing activities has found that learners working in small groups may actually create more L2 learning opportunities not only than those working individually, but also than those working in pairs. It is argued that while completing the same writing tasks in Spanish, learners writing in groups of four produced more LREs than learners writing in pairs and were also significantly more successful at solving them. Small groups were able to find a correct solution to a higher percentage of their LREs because they shared more linguistic resources, since up to four different learners could pool their individual knowledge to solve the language-related problems encountered. This collaboration had a positive impact on the linguistic accuracy of the texts produced (Blaye et al., 1991), as well as the acquisition of L2 vocabulary knowledge.

## 2.6.1.1 Teacher's Roles in Online Group Works

The teacher has to undergo enough training and adopt the new roles of a tutor or e-moderator. The latter has an opportunity to influence the course of a learning group event in deciding about group size, group membership, life-span and the physical conditions or virtual environment in which the group members interact. In virtual environments some technical help may be necessary.

In writing groups where groups work mainly online, we expect to see most of the usual behaviors occurring, though some may manifest themselves slightly differently. E-moderators can use their usual understanding of groups and the behaviors of individuals within them to interpret what is happening (Light and Littleton, 1994).

Online groups need good design of their tasks, good facilitation and support. Therefore, we need to design for the processes that face-to-face groups go through. In addition it is even more important in virtual groups to make members aware of ways of achieving successful team formation and allocation of roles and responsibilities, since these are unlikely to merely 'emerge'. If you are working with groups used to mainly face-to-face communication, it may be helpful to encourage them to think about the similarities and differences.

In an Online course, it's the teacher's duty to organize and set up groups. The number of participants in each group has a profound influence on the kind of interaction that can be attained. The smaller the size, the greater is the likelihood of trust, close relationships and consonance of aims among members; these advantages may however be offset by the lack of variety, and the greater probability of a 'poor mix'. In the larger group, although a better mix and a more favorable student/staff ratio may be achieved, a sense of competition and a greater differentiation of role might be expected to happen. Not only does the opportunity for each member to contribute diminish in inverse ratio to the number of people in the group, but the discrepancy in level of participation between high contributors and low contributors is disproportionately greater. There are there quite important differences too in the style, frequency and length of written contributions, not to speak of non-verbal behavior, in groups of three to six compared with those of 12 to 15 students.

In online groups we consider that up to 15 people are a viable number for one e-moderator to handle. Many processes can of course be divided into smaller groups, such as groups of five, with an online plenary (Pol et al., 2008).

Underperformance, and even withdrawal and failure, can result from students' unwillingness to admit inadequacies to instructors, and some students prefer to turn for support to groups staffed by their peers. Peer Assisted Learning (PAL, also known as Supplemental Instruction) has been increasingly favoued in recent years as an organized form of face-to-face peer tutoring. There are now online groups offering peer support in the context of peer tutoring. In this, a specific role is taken by trained students for online support, a group member who has received special training in such a role (Min, 2005). The aims of student-led support groups are to help students develop their recognition of competent performance, improve their study skills, enhance their understanding of the subject content of their course and prepare better for assignments and exams.

The motivation to learn and to succeed is a complex issue to do with students' self-regard, compared with others and untested assumptions about their own abilities, but poor motivation and self-doubt can be reinforced by the mismatches in course delivery. PAL aims to enable the doubts and problems of students to be expressed openly and to establish a safe environment of cooperative learning and mutual support, a value designed to transfer to the students' other learning activities. Patterns and rules for PAL vary considerably in different institutions, although attendance is usually voluntary; the sessions may be timetabled and supported by the related member of staff or course contact.

At Bournemouth University a one-hour PAL classes are scheduled each week, where students work together as a group on course material or on another subject matter agreed by the group. The PAL leaders are prepared for their role during an intensive, two-day initial training course with follow-up training sessions. They have available to them extensive training materials and resources to use in their PAL sessions. They are specifically encouraged to use activities like those that focus on eliciting problems and misunderstandings (Charles, 1990).

Face-to-face PAL 'leaders' are usually second students who have just finished the first year of the training, and are thus uniquely placed to help the new first-year students. They are often considered as 'experts' in surviving the first year, receive training in how to run PAL sessions effectively, and manage group discussion. The emphasis is on everyone in the group working cooperatively to develop their understanding of course topics and improve their study skills and habits. PAL is not specifically aimed at weak students – everyone can benefit because it is intended to help students understand the more difficult subject topics on their course. The sessions are interactive and demand of the leader a range of organizational skills in setting and handling group processes. PAL leaders are therefore able to benefit not only by reinforcing their own knowledge foundations but in the range of leadership, group and management skills they develop. Further, PAL may be seen as a scheme which is learner-centered, clearly embedded in the system, and which promotes reliability, openness and collaboration across boundaries.

DiGiovanni (2001) compares peer learning interactions in face-to-face and online situations and argues that the skills necessary for building effective online discourse need to be recognized, even assessed. Online interactions are likely to be more peer-oriented so one of the trained participants can take on a focus of 'interactive process management' by initiating discussion and

topics, setting the agenda, setting norms, offering recognition to contributors, prompting responses, comparing and contrasting, in order to identify agreement and disagreement.

#### 2.7 Written Response as an Assessment Tool

Assessment, if well designed, plays a major role in how students learn, their motivation to learn and how teachers teach. It promotes learning and student engagement in their learning. Feedback is a key element. In addition, assessment offers information about student performance that can be used to support learning and to modify teaching. Using assessment information in this way can improve the quality of teaching and learning results. While early formative assessment discourse focused on the role of teachers in gathering information and using it to inform their teaching, more recently there has been a re-conceptualization. Formative assessment has been reframed as a social, collaborative activity, aligned more with learning (Gardner, 2006). The emphasis has shifted to the teacher and the students, working in partnership to improve student learning.

To make assessment for learning meaningful teachers are expected to help their writers understand what the goals of learning are and provide opportunities for them to have feedback on progress towards their goals. The learners' understanding of the quality performance aimed for, what success in a task looks like, and what they might do to achieve it is directly related to the instruction and feedback received. Effective feedback not only helps learners to evaluate where they are but offers them an indication of where to proceed next and how best to accomplish this forward movement. Writers need response in the form of feedback not only for monitoring their progress and moving forward but also as a means of discovering their readers' needs (Black & Wiliam, 1998).

#### 2.7.1 Feedback in the ESL/EFL Classroom

According to Kepner (1991), the term "feedback" in its broad context (as generally used in the ESL/EFL literature) could be defined as: "...any procedure used to inform a learner whether an instructional response is right or wrong." (p155)

However, since writing is viewed by Asiri (1997) as a creative activity, it is not enough to confine the feedback merely to informing the writer that his or her responses are right or wrong. Thus, for the purpose of this research, Freedman's comprehensive definition will be adopted, which includes different aspects of feedback (i.e. teacher feedback, conferencing, and peer feedback). She notes that feedback on students' writing:

"...includes all reactions to writing, formal or informal, written or oral, from teacher or peer, to a draft or a final version. It can also occur in reaction to talking about intended pieces of writing, the talk being considered a writing act. It can be explicit or less explicit." (Freedman, 1987: 5)

This study examines the efficacy of feedback in teaching writing: focusing on peer feedback as it is still considered a novel concept in most EFL educational contexts.

#### 2.7.1.1 The Significance of Feedback

Many researchers and experts have acknowledged and focused attention on the importance of feedback. They recognize its significant role in increasing learners' achievements, and its central role in writing development. Many studies such as Ferris (2001) and Ashwell (2000) argue that feedback is beneficial for both beginners and expert writers, since it makes them evaluate their writing and observe possible points of weaknesses. These studies then contend that feedback helps students by creating the motive for doing something different in the next draft;

thoughtful comments create the motive for revising. Without comments from their teachers or their peers, student writers would revise in a piecemeal way, and without comments from readers, students assume that their writing has communicated the intended meaning, and thus see no need for revising the substance of their text. Feedback also makes students realize the level of their performance, and shows them how to improve it to a satisfactory level.

Furthermore, students are given feedback all the time. If not, it may cause confusion, leaving them unaware of the aspects of their writing that need to be reviewed, and thus causing their efforts to be misdirected, as mentioned in the previous section: the nature of ESL writing (Ferris, 2002, Ashwell, 2000). Feedback is helpful not only for students who receive it, the literature also suggests that feedback is important for teachers as well, because it offers them the opportunity to diagnose and assess the problematic issues in learners' writing, and allows them to create a supportive teaching environment. However, as Gibbs and Simpson mention, "feedback needs to meet certain criteria, such as the need to be specific and to focus on learning and process, rather than on students themselves, in order to be effective." (2002:61)

#### 2.7.1.2 Teacher-Written Feedback

This type of feedback is probably the most traditional and commonly-used technique of responding to students' writing in all levels of education where writing teachers are usually the only providers of comments to their students. Despite emphasis on alternative feedback techniques including oral responses and peer feedback, Hyland (1998) thinks that teacher-written feedback still plays a central role in L2 writing classes. Research about teacher-written feedback falls into two main categories; the first looks into teachers' actual performance and self-assessment, whereas the other looks at the topic from the students' perspective (Ferris, 2002).

When looking at the first category, teachers' feedback can take the form of praise (positive comments), criticism (negative comments), or suggestions (constructive criticism) (Hyland, 1998). Many techniques can be employed to deliver these, like providing a written commentary, which is generally considered to be the most widely-used form among teachers. Ferris (2005) thinks that comments normally take the form of marginal or terminal comments. However, according to Hyland (1998), some teachers sometimes help their students by providing them with an audio recorded commentary. Others even prefer to provide feedback via compact discs or emails, which is described by Hyland (ibid) as electronic commentary. Regardless of the forms teacher feedback can take, these techniques usually take two general shapes (Figure 2.2). While in the first type tend to give precise corrections or structure notes on students' mistakes, in the second one they give students indications that they have made mistakes.

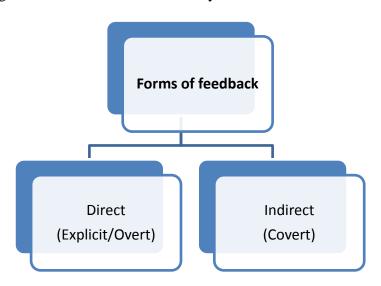


Figure (2.3): Forms of feedback

There are also many techniques that can be used to indicate errors, such as:

a) Marginal error feedback: in which the margin is used to indicate the number of

mistakes in each line.

b) Coded error feedback: in which a coding system is adopted to indicate the mistake

such as abbreviations or symbols.

c) Uncoded error feedback: whereby the mistakes are underlined or circled without

mentioning the type of mistake made. 12

As concerns the other category of research, students' perceptions of teacher-written

feedback, research shows that students, like their teachers, feel that this feedback is an important

part of the writing process. This case is especially true with ESL students in particular, who,

despite the reported undesired effects of teacher written feedback, believe that it could possibly

enhance not only their writing, but their L2 grammar as well (Ferris, 2002). One interesting

finding of studies such as Ferris (2005) is that ESL students want their teachers to focus more on

local issues than on global ones, a fact that should be carefully considered when it comes to

responding to these students' writing which can be achieved by making a balance between

fluency and linguistic accuracy.

Teachers' comments on linguistic mistakes in writing have been a subject matter of severe

criticism by Trucott (1996), who argues that grammar correction is not only useless,

unsystematic, and arbitrary, but can also deteriorate students' subsequent writing and

compromise their overall achievement. He recommends that acquiring grammatical patterns is a

very complicated process, and teachers should never interfere; any attempts are, as stated by him,

<sup>12</sup> Accumulated from: Ferris, 2002; Lee, 2004

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a waste of teachers' and students' valuable time and effort. Many following studies tried to refute Truscott's conclusion and defended using grammar feedback in ESL writing classes. For example, Ferris (1999: 2) mentions that his ideas are "premature and overtly strong." She along with other researchers, including Ashwell (2000) and Chandler (2003) think that students cannot be left without any guidance; errors that go unnoticed can be fossilized, and, referring to the fact that students expect correction from their teachers, they also think that it is therefore the teachers' responsibility to provide such feedback.

#### 2.7.1.3 Peer Feedback

Peer feedback, which is also known in the literature as 'peer review' (Mangelsdorf, 1992) can be defined as the:

"use of learners as sources of information and intercalants for each other in such a way that learners assume roles and responsibilities normally taken on by a formally trained teacher, tutor, or editor in commenting on and critiquing each other's drafts in both written and oral formats in the process of writing." (Liu & Hansen, 2002: 1)

As concerns other experts such as Pol et al. (2008), peer feedback can also be defined as an educational arrangement, in which students comment on their fellow students' work for formative or summative purposes. It is stated that peer feedback rests on a strong theoretical and pedagogical basis, which, in terms of the former, follows the model of social constructivist view of learning, and as far as pedagogy is concerned reinstates the concept of communicative approach to language learning Storch (2004). It is also stated that despite the strong bases of peer feedback, the use of peer feedback in the classroom is quite limited (ibid). It is not only that the use of peer feedback is limited in classroom settings, because peer feedback research is especially limited in ESL/EFL settings.

However, a large body of research into peer assessment in different areas covered by psychology and mainstream education has been conducted. The findings suggest that peer response is indeed consistent, and can be used as a reliable assessment tool in schools (Saito and Fujita, 2004).

Peer feedback allows instructors to share the evaluation of assignments with their students. It takes many forms and serves many purposes. It has already been mentioned that it can be employed in the form of conferencing, in the form of written as well as oral comments, or both simultaneously. This 'flexibility' is another useful aspect of peer feedback (Rollinson, 2005). Some of the most common formats of peer feedback are:

- 1) to assign groups of two, three, or four students and ask them to exchange their first drafts and give comments on each other's drafts before making final versions,
- 2) to make students read their own essays aloud, or get a colleague to read it instead, while the other students listen and provide feedback, either written or oral, on the work that they have just heard,
- 3) it is not to restrict feedback to the time after students have written their essays, since it is possible for students to use this type of feedback in the pre-writing phase by asking other students to comment on each other's outlines, or to carry out a brainstorming session (Hyland, 1998).

#### 2.7.1.4 Advantages and Drawbacks of Peer Feedback

The use of peer feedback in ESL writing classes has been suggested by many studies since it has valuable social, cognitive, affective and metalinguistic benefits (Rollinson, 2005). Yarrow

and Topping (2001) for example state that peer interaction is of great value, and the method is recognized by many educational organizations, as evidenced by recommendations by the Scottish Office Education Department. Hyland (1999) also adds that peer feedback enhances more student participation in the classroom, giving them more control and making them less passively teacher-dependant. Ferris and Hedgcock (2005), Saito and Fujita (2004) note that peer feedback helps learners become more self-aware, in the sense that they notice the gap between how they and others perceive their writing, therefore facilitating the development of analytical and critical reading and writing skills, enhancing self-reflection and self-expression, promoting a sense of co-ownership, and thus encouraging students to contribute to decision-making, and finally, it fosters reflective thinking.

In relation to the collaborative component of peer feedback, Yarrow and Topping (2001: 62) confirm that peer feedback plays a significant role in: "increased engagement and time spent on-task, immediacy and individualization of help, goal specification, explaining, prevention of information processing overload, prompting, modelling and reinforcement."

The literature also recommends that peer feedback is more authentic and honest than a teacher's response, and it offers students the opportunity to realize that other students experience similar difficulties to their own, and it can also lead to less writing apprehension and more confidence. Peer feedback can also help develop learners' editing skills, and establish a social context for writing. More importantly, peer feedback internalizes the notion of 'audience' into the minds of student writers, because it gives students a more realistic and tangible audience than their teacher, which in turn helps them in producing 'reader-oriented' texts (Hinkel, 2004. Some

new studies also revealed that peer feedback can be as beneficial to students who provide it as to those who receive it, if not more (Tsui and Ng, 2000).

On the other hand, it is also believed that ESL students will always question the purposes and advantages of this technique which is particularly true with students who are accustomed to teacher-fronted classroom (Min, 2008). The main criticism is that they instinctively feel that a better writer such as their instructor is the one who is qualified to offer them useful comments, so there is arguably the preference issue, which can act as an obstacle to the success of peer sessions. Actually, some students might view receiving comments from colleagues whose English is at the same or even at a lower level than theirs as not being a valid alternative for the 'real deal' and thus they might resist group-centered peer review activities. This is not necessarily a bad thing, as students can make 'active decisions' by which they can choose which comments to accept and which ones to reject; another way of giving students more control in the classroom (Hyland, 1999).

Further studies such as Min (2005 and 2008) argue that peer feedback makes only a marginal difference in students' writing, but other types of feedback have been accused of exactly the same effect, including teachers' comments, yet teachers, as well as students, feel that feedback is an integral part of any ESL writing class. A study, as cited by Hinkel (2000), also mentioned that some students found it difficult to provide honest feedback because they prioritized positive group relations rather than improving their writing. Another issue with peer feedback was mentioned in Hyland (1999), who argues that both NS and NNS students perceived revision as error correction, and thus were culturally uncomfortable since they felt that error correction criticizes people. Hyland (ibid) believes that there are other cross-cultural issues

involved in peer feedback, especially if students are from a large variety of cultural and educational backgrounds. These issues include conflict or at least high levels of discomfort among members of the peer feedback group. She then suggested more longitudinal and naturalistic research to be carried out in order to better understand these issues and find solutions. In some instances it was found that incorporating peer feedback could weaken students' writing. However, regardless of all these criticisms, feedback in general is still highly appreciated, especially by NNS students. It was also found that most peer responses focused on product rather than the processes of writing, and many students in L2 contexts focused on sentence-level errors (local errors) instead of the content and ideas (global errors), a finding earlier stated by ESL teachers themselves (Storch, 2004). Students themselves might experience difficulties in peer sessions resulting from their limited knowledge of ESL writing.

A number of studies show that there are a number of biases associated with peer feedback including friendship, reference (teachers using different criteria from students), purpose (development vs. grading), feedback (effects of negative feedback on future performance), and collusive (lack of differentiation) bias. However, the researchers admit that these biases can be found in most rating techniques, including teacher and peer feedback, and the focus should be on how to minimize them (Saito and Fujita, 2004).

#### 2.7.1.5 Other Types of Feedback

In addition to teacher's written feedback and peer feedback, experts also add teacherstudent face-to-face conferencing, self-correction, and keeping error logs as other valid techniques of feedback (Ferris and Hedgcock, 2004). In conferencing the teacher and the students negotiate the meaning of a text through a dialogue. Like the two previous techniques,

conferencing has its advantages and disadvantages, all of which have been thoroughly investigated by these researchers and many others.

#### 2.8 Introducing Peer Feedback to Students

Although many researchers focus on the importance of peer feedback in ESL writing classes (Hyland, 1999, Ferris & Hedgcock, 2005), many ESL teachers still find themselves reluctant to present peer feedback in their ESL writing classes. Such reluctance, according to Saito and Fujita (2004), might be based on fears that the results could be unreliable, students can be resentful, and the experience may be chaotic. It is important to distinguish between the concepts of 'feedback' and 'assessment' as the former refers to any procedure used to inform learners whether their instructional response is right or wrong with the purpose of improving learners' skills hence it is part of the learning process while the latter usually happens after teaching and learning are over and acts with accordance of giving marks. Another distinction is between formative and summative assessments because feedback is an intrinsic part of formative assessment but it might or might not be part of summative assessment. It is also important to note that working in groups is not an intrinsic skill, it is rather a learned skill, and, according to Rollinson (2005), teachers have to create the environment that supports students to collaborate with each other.

To decrease or even avoid undesired effects, careful planning and implementation of peer feedback techniques are required. Lundstorm and Baker (2009); Min (2006) and Saito and Fujita (2004) recommend a number of broad principles to prepare and apply peer feedback in the university context which are all dependent on the unique needs of students involved; university students have to start peer assessment as early as possible in the first term, before they are set in

their ways, because students are more willing to try peer feedback and peer assessment in early stages which do not usually contribute to students' final results.

It is also recommended at the early stages of peer feedback to start with small tasks, as little as just one element of assessment, in order to make students feel that they are not taking a great risk. Furthermore, peer feedback activities in early stages have to be relatively easy, and, when students are required to comment on their peers' scripts and/or assess them, clear marking criteria and guidelines should be explained and introduced. Students must be given a clear rationale for peer feedback, and procedures to be followed. A possible scenario to achieve this would be to get students to agree to the procedures and then ask them to adhere to them. It is also recommended to get students to practice peer feedback before they provide actual feedback and assessment that affect grades. The instructor must provide responses to students' peer feedback, which in turn helps enforce proper standards. Finally, teachers are encouraged to have a positive attitude towards students' efforts, and to use anonymous scripts for peer feedback and assessment, in order to make students feel less exposed and to overcome subjectivity. Besides teachers are also recommended to set out clear criteria, foster understanding of goals and limits, and develop familiarity with the instrument (Saito and Fujita, 2004).

In order to structure a successful peer feedback exercise, Berg (1999) specifies the following points, and recommends teachers to consider them when applying peer feedback:

- 1) having a comfortable classroom atmosphere;
- 2) the role of the peer response in the writing response should be made clear;

3) students must acknowledge the role of peer feedback in academic writing, and they should also recognize that even most successful professional writers benefit from peer comments;

- 4) anonymity, noting the main idea of the anonymous text in some detail, and ambiguities as well as obvious flaws in organization, support, unity, grammar and spelling in other words, students should focus on rhetoric-level aspects rather than 'cosmetic' sentence-level errors;
- 5) opinions expressed in peer responses have to be appropriate in terms of vocabulary and expressions used general comments such as 'your writing is bad' should be avoided, and alternatives such as 'you need to provide more clarification here' should be used;
- 6) students should use a support tool, such as Berg's (1999) response sheet, to help them comment on specific areas of writing;
- 7) groups of students can benefit from each other's collaborative writing projects and from responses to these projects; and finally,
- 8) students when engaged in collaborative writing projects should be introduced to revision strategies and guidelines.

Habeshaw et al. (1986) also add the following tasks:

- 1) teachers should brief their students with the procedures of peer feedback, and provide them with detailed information about different stages of the process and time allocated for each stage, and students must be encouraged to ask for clarification when needed;
- 2) students should be reminded of peer response criteria, and teachers are encouraged to provide students with copies or handouts of the criteria;

3) the process of providing peer feedback should be organized, and each script should be marked by at least three students;

- 4) teachers must introduce 'safeguard' techniques to avoid bias or any undesired influences on feedback;
- 5) teachers and students should agree on a marking scheme so that peer feedback contributes to grading; and finally,
- 6) students should reflect on their experience to identify problems and suggest solutions. Teachers, on the other hand, should organize the process and report the findings back.

#### 2.9 Peer Feedback in Real and Blended Classrooms

As a reference to cooperative learning environments that are characterized by being learner-centered, Freeman (1991) states that when learning is based on cooperation, language learners look for helpful results for themselves and their peers. In the 2000s, authors investigated the impact of peer feedback in L2 writing classroom and they note that peer feedback offers many ways to improve students' writing. Caulk quoted Rollinson (2005) as saying that: "...teachers' feedback is general while students' is more specific" (P.26).

Peer feedback, since it allows students to make negotiation of their strength and weakness where the students can make negotiation of ideas, comments, corrections, and suggestions, provides opportunities for the students to be better in writing, and also reading.

Peer feedback generates positive impact if the students are ready and well-trained and prepared by the teacher. It can be assumed that peer feedback failure is caused by ignoring this aspect, preparation. When the students are asked to write with sense "to be read" by authentic

audience (peers), their writing is better than when they are asked to write to be read by teacher (Clark et al., 2003). Rollinson (2005) notes that peer feedback also trains students to be critical readers on their own writing.

As stated above, peer commenting on each other's writing has been an important and useful instructional process in writing classes. Summarizing the advantages of peer feedback in second language (L2) classrooms, Jun Liu and Jette G. Hansen (2002: 123) stated that:

"...peer feedback not only increases an awareness of audience needs by creating a collaborative drafting process but also provides opportunities for ESL students to practice English in a meaningful context."

These advantages, however, as Liu and Hansen pointed out, are constrained by:

- (a) students' cultural backgrounds, which influence their classroom behaviors and the amount of participation in peer discussions,
- (b) students' level of English proficiency, which affects their ability to provide and comprehend peer feedback, and
- (c) the mode of peer feedback. As compared with face-to-face peer feedback, written peer feedback using a checklist or comment form offers opportunities of anonymity and a text-only environment.

Furthermore, with the development of information technology, the traditional written feedback has taken on a new aspect. As a digital written form, student commentary can be sent out electronically without the logistical complications of copying and distributing papers (Tuzi,

2004). Such feedback can be in the form of synchronous <sup>13</sup> chat system interactions, asynchronous email, and bulletin-board postings. Being relatively simple to use, these technologies are becoming popular in university writing classes. Of central concern is how such e-feedback differs from traditional feedback to affect students' commenting behaviors and the quality of revisions it generates.

To discuss the results of e-feedback, a growing number of researches have compared traditional face-to-face peer response groups versus computer-mediated peer conferences in the context of university or pre-college writing classes. A number of such studies have focused on L2 or ESL/EFL students (Tuzi, 2004). Researchers have examined the peer feedback interactions and/or the effect of peer comments on revision and quality of the final paper (ibid). Their findings have recommended that e-feedback has advantages in terms of its interactive textual exchange and greater student participation although its impact on revision may differ in individual studies.

#### 2.9.1 Advantages of Online Feedback

Researchers have indicated how peer feedback in cyberspace retains the advantage of traditional written feedback as students put words together to write about writing. As Mark Mabrito (1991) put it: "the situation demands not only writing but also the skillful verbalization of one's thoughts and ideas about writing and a peer's text" (p. 510).

<sup>13</sup> **Synchronous learning** is a general term used to describe forms of education, instruction, and learning that occur at the same time, but not in the same place. The term is most commonly applied to various forms of televisual, digital, and online learning in which students learn from instructors, colleagues, or peers in real time, but not in person. For example, educational video conferences, interactive webinars, chat-based online discussions, and lectures

that are broadcast at the same time they delivered would all be considered forms of synchronous learning.

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When focusing on writing in online environments, students, in Barry M. Maid's words:

"...are released from much of the responsibility that a face-to-face encounter sometimes forces on them. They are not affected, for instance, by students with bad breath, or by students who make them uncomfortable in some vague way, or by students who are angry with a teacher" (Stevens et al., 1995: 212).

While released from these responsibilities in the traditional way, students take on new responsibilities in online feedback. For instance, in peer e-feedback tasks, learners must still be sensitive to the audience's needs and follow a clear, concise, and informative style without having the benefit of facial cues or body language that face-to-face interactions provide (Kirk and Zemliansky, 2005). These constraints pose more challenges to students involved in peer efeedback but perhaps also in a way persuade them to be better writers. As stated by Lee's (2002) analyses of students' conferencing transcripts, students in an online environment are only linguistically co-present, so they must make explicit references by using indexical devices, such as page numbers, quotations, and paraphrases to maintain common document focus and make coherent evaluative comments. It should be noted that Honeycutt's observations were made in online conferencing, and other methods such as exchanging Microsoft Word documents would have offered possibilities of using highlighting or inserting comments to make explicit references. The request for greater document-related referencing in providing written feedback is conceptualized by Herbert H. Clark and Susan Guardado (2007) as the cost of communicative grounding in online peer feedback.

As students are obliged to focus on making coherent comments in a text-only environment, online peer feedback retains the advantages of traditional written feedback to promote the development of metalanguage and awareness about written communication. The nature of

textuality in online peer feedback implies the differences between asynchronous and synchronous conferencing. Both are electronic communications, but the first is closer to textuality while the second is closer to orality. Compared to asynchronous conferencing, which has been noted to have reduced interactivity due to the lack of nonverbal cues and the delay of interaction (Tuzi, 2004), synchronous or real-time peer commenting invites quick exchanges and personal involvement. It is, thus, effective in small group peer reviews since it improves student participation (Braine, 2003) and motivates students to request specific suggestions for revisions (Tuzi, 2004). However, synchronous networking can be unnatural when it requires: "a roomful of people to type to each other rather than hold a discussion" (Susser, 1994, p.71).

In fact, researchers have found synchronous chats sometimes disjointed, scattered, confusing, and disruptive. In comparison, asynchronous email feedback has been found to have less time pressure and to be more serious and more effective as students learn to adapt their verbal behaviors over time to reach similar interpersonal levels observed in synchronous chats.

The differences between synchronous and asynchronous conferencing not only recommend various interactive textual exchanges that e-feedback can generate but also explain some of the inconsistent findings about the benefits and drawbacks of peer e-feedback. If synchronous conferencing is a technology change from asynchronous conferencing, one needs to be aware of how similar changes of technology might have influenced and will continue to influence the findings of research studies.

Another benefit of online peer feedback is the possibility of a less threatening environment that improves greater and more equal member participation than face-to-face conferencing. ESL

learners, particularly, seem to benefit from such an environment. For instance, Elaine Digiovanni and Girija Nagaswami (2001) noticed that learners in precollege ESL writing classes participated in online peer feedback comfortably and remained on task. Likewise, Hyland (2004) found that computer-assisted ESL peer discussion had 100% participation compared to only 50% participation in the face-to-face class. Explaining how online interactions encouraged participation, Graham Lock, Rodney H. Jones, Angel Garralda and David C.S. Li (2006) recommended the electronic environment freed ESL students from the embarrassment to speak English with peers who shared the same first language versus what they experienced in face-to-face encounters.

The non-threatening environment of this kind of peer feedback seems to be linked to the anonymity that cyberspace provides. Without worrying about how handwriting in the traditional paper-based mode might reveal the reviewer's identity, some students said that using pseudonyms in cyberspace allowed them to make honest comments and try out different roles (Stephen and Strenski, 2005). High-apprehensive student writers in Mabrito's study also experienced more freedom to participate anonymously in email peer feedback and: "to engage in a collaborative venture that they might otherwise have avoided in a face-to-face setting" (1991: 529).

Although there is some anxiety about anonymity that might discourage a sense of community (Saaddedin, 1989), the benefits of having greater student participation seem to outweigh such disadvantages. The differences between traditional and electronic environments are reflected in the different types of peer comments they generate. For example, Jones et al. (2006) compared peer interactions online with those in the traditional face-to-face mode and

found the former generated more feedback on global concerns of content and the writing process while the latter focused more on local textual issues of grammar, style, and word choice. However, other researchers noticed that peer e-feedback using Microsoft Word or other special programs designed for responding to writing actually generated more concrete and revision-oriented comments than traditional oral or paper-based feedback (Hewett, 2000, Liu & Sadler, 2003).

Freed from the face-to-face encounters of the traditional classroom, some online group debates and discussions developed into critical and effective negotiations (Digiovanni & Nagaswami, 2001). Along with the findings about different types of e-feedback were observations of the different experiences of student reviewers. Based on their experiences of reading and writing on computers, some students found reading long texts on a screen complicated while others enjoyed writing elaborate comments without worrying about space (Liu & Sadler, 2003).

In fact, comments that are provided by peers via various media can help and shape students' revisions. Relevant research has mostly been conducted in L2 contexts and seems inconclusive about the quality of revisions following electronic peer feedback. For instance, L2 students using synchronous peer conferencing were found to produce writing rated either lower or higher (Braine, 2003) than those revised after traditional peer feedback. By comparing students' initial and revised drafts after e-feedback and oral feedback, Frank Tuzi (2004) found L2 students made more macro-level revisions following e-feedback, adding new information and revising structures at clause, sentence, and paragraph levels. Furthermore, Solchi Matsumura and George Hann (2004) noted that ESL students who did not post their own drafts online because of

high computer anxiety also benefited from looking at other classmates' drafts and related comments. As e-feedback may have a different result on individual students, researchers recommended that training of peer reviewers and a combination of online and face-to-face feedback should result in the greatest degree of improvement in essay writing (Matsumura & Hann, 2004, Tuzi, 2004).

In short, on the one hand, L2 students were observed to participate more in non-threatening online environments than in traditional settings; the quality of their revisions or final papers, on the other hand, suggests differing impacts of e-feedback. As a conclusion, online feedback in L2 contexts was described as either an obstacle (Braine, 2001), a help (Tuzi, 2004) or a mixture of limitation and liberation that should, therefore, be combined with traditional face-to-face sessions (Matsumura & Hann, 2004).

#### 3.10 Conclusion

Written communication skill remains the single most critical attribute for success in higher education. For most university students, writing is made particularly difficult by the need to adopt a different "style", suitable for their level and the discipline being studied. In recognition of this problem, universities frequently offer resources for students to aid them in adapting to their discipline and to engage with written work, including the provision of web-based instruction and support services.

All in all, the effectiveness of the learning teaching process could be ensured if designed and implemented in a technology-supported environment based on substantial language learning theories and sound pedagogical principles. As shown by the findings from previous studies on

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EFL learners' writing performance through the test scores, the writing skills of EFL learners at the tertiary level could be enhanced via the administering of the suitable technology-enriched learning environment. Language programs could be therefore be designed and structured around features endorsed by learning theories and technology.

Previous researches and studies agreed that educational technology is a very useful tool for promoting writing skills among the ESL learners. Although some problems may occur and hinder teachers to use tools such as electronic platforms, some solutions have been set to abolish these weaknesses. Therefore, the ESL learners can be motivated to improve their writing skills through using technology.

•	"Moodle-based Peer Review as a Tool to Enhance and Improve EFL Learners' Writing Performance"

# CHAPTER THREE

# MOODLE AS AN EFL WRITING TOOL

"Moodle-based Peer Review as a Tool to Enhance and Improve EFL Learners' Writing Performance"

#### 3.0 Introduction

Thanks to new technologies, especially the internet, teachers are provided with a wide range of important tools which can help improve the teaching—learning process. Thus teachers need to know about not only the possible uses but also about the advantages of technology use in the classroom (Chanlin, 2008); Teachers are also required to get informed about the fruits and usefulness of application of these technologies. Besides being a vast source of information, the internet provides a wide range of special web-based applications that are conceived to be used as teaching resources. The latter (often called e-learning platforms) enable teachers to provide the learners with different sorts of learning material; they enable them to interact in real-time. According to many authors, the use of such applications enables teachers to continuously follow the progress of the learning process and to evaluate learners' performances in specific tasks.

The usefulness of e-learning platforms (also known as virtual learning environments (VLE) has been proved not only in teaching the different subjects but also the languages which are not an exception. These platforms can be used for texting and implementing videos, mp3s, text documents, scanned images, links to other web which can be used to show dynamically concepts that are often difficult to apprehend by the students (Desai & Richards, 2008).

# **3.1 Virtual Learning Environments**

A virtual learning environment (VLE) is a software system designed to support teaching and learning. According to Weller (2005:78)

These specific environments can serve as tools of assessment, communication, uploading of content, return of students' work and assignments, administration of student groups, questionnaires, tracking tools, wikis, blogs, chats, forums, etc. over internet.

A virtual learning environment is a computer program that facilitates the so-called e-learning (electronic learning). Such e-learning systems are sometimes also called learning management system (LMS), course management system (CMS), learning content management system (LCMS), managed learning environment (MLE), learning support system (LSS) or learning platform (LP); it is education via computer-mediated communication (CMC) or online education (Kuteeva, 2010).

CMS and LMS are the most used terms in USA, however LMS is more frequently associated with software for managing corporate training programs rather than courses in traditional education institutions. But in UK and mostly in Europe, the terms VLE and MLE are used more frequently; they refer to two different things: a VLE can be considered a subsystem of an MLE, whereas MLE refers to the wider infrastructure of information systems in an organization that support and enable electronic learning.

There are many e-learning platforms. Some of them are commercial software, whereas others are open-source software (OSS). Examples of open-source platforms are Moodle http://moodle.org/, Ilias http://www.ilias.de/, Atutor http://www.atutor.ca/ and Claroline http://www.claroline.net/. Development of Moodle is undertaken by a globally diffused network of commercial and non-commercial users, spearheaded by the Moodle Company based in Perth, Western Australia, although its original developer is Martin Dougiamas. One of the most striking features of the design approach favored by Moodle is the ease with which course materials can be developed and refined in an iterative fashion (Maikish, 2006).

#### 3.1.1 E-learning Platforms

Various expressions are used to refer to and describe educational computer applications, such as e-learning Systems, Learning Management Systems (LMS), Course Management

System (CMS) or even Virtual Learning Environment (VLE). In all these systems, students can easily access courses' contents either in text, image or even sound and video. They can also interact with teachers and/or peers using tools such as chats, forums, messaging, video-conferences or other types of communication tools (Jones et al., 2006). Of the many features of such platforms is the possibility to configure them according to one's uses. Thus, the user is allowed to create online courses, pages of subjects, work groups and learning communities (Saaddedine, 1989). In addition to the pedagogical dimension, this type of applications is featured by the fact that their users can make use of features such as evaluating students' works and managing contents via internet. In Del Marie's words (1990:70), "an e-learning platform represents a system, which provides integrated support for six different activities: creation, organization, delivery, communication, collaboration and assessment."

In a technical perspective, there are different types of LMS, some of them representing commercial solutions (such as Blackboard/WebCT) and others open-source solutions (such as Moodle). Regardless the type, several studies revealed the existence of strong advantages on using e-learning platforms (ibid), however, their adoption involves some challenges to the institutions as well as an appropriate choice of the technologic platform.

As for open-source solutions, there are some studies that identify the Moodle (Modular Object-Oriented Dynamic Learning Environment) as the most used platform in higher education, as well as the easiest to use (Issroff, 1994).

#### 3.1.1.1 E-learning Platforms in Higher Education

After a series of international internships and after a series of on-line classes that were performed came the idea of implementing the concept of e-learning and the idea of applying

Moodle (Modular Object-Oriented Dynamic Learning Environment) in university course for the reason of improving teaching projects. As stated previously, using on-line education can benefit the learner in terms of communication, interaction between students, group development and higher access to knowledge (Ware: 2006).

Despite all those benefits, most universities and schools all over the world still follow the traditional teaching without any additional support. Moodle<sup>14</sup> as an electronic platform, if used by teachers, provides them and their students with a secure system to create personalized learning environments. Since March 27<sup>th</sup> 2014, it has been available as Moodle version 2.6.2.<sup>15</sup>

We consider Moodle a Web-based adaptive collaborative learning environment that contains all components described by (Wang, Li & Gu, 2004: 21): ".....discussion forum and one-on-one peer help, user model, collaborative strategy model and adaptive component."

Some authors were also interested in interaction and human communication on a Web-Based Collaborative Learning Environment (Zhang, 2009) while other authors call these Virtual learning environments (Berns, 2010). Similar experiences of using interactive elearning tools as Moodle were described by other authors (Chun, 1994). According to many views, teachers can use Moodle for a variety of reasons such as promoting students' positive attitudes towards discussing and implementing cooperation among peers, increasing students' skills to undertake lifelong learning by using the information technology, developing students' cognitive schema and constructing their knowledge (ibid).

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<sup>&</sup>lt;sup>14</sup> A learning platform originally designed by Martin Dougiamas (first version of Moodle was released on 20 August 2002). It was used and developed in the next years by global collaborative effort of international community.

Alternatives in terms of Web-Based Collaborative Learning are given by (Hellebrandt, 1999). In this flexible on-line community for learning, students interact with course resources and are able to develop new skills and to structure their own learning trajectory. By applying this e-learning platform, teachers can invest their students' free time and their availability to spend and structure their actions in order to submit assigned homework respecting a firm deadline (Speck, 2000).

#### 3.1.1.2 University Level Learning/Teaching via E-learning Platforms

In the literature, it is often considered that the pedagogical processes have a number of dimensions such as:

- opportunity for use
- quality of knowledge gained
- student's level of acceptance

There have been a variety of studies focusing on the acceptance of e-learning by students discussing the opportunities of using e-learning in pedagogical processes comparing e-learning to traditional learning on the acquisition and retention of knowledge, (eg: Sullivan, 1996), and evaluating the quality of knowledge gained by the students through the use of e-learning and the level of student's acceptance of e-learning. All the three dimensions must be considered concurrently in order to have an accurate picture on the benefits of e-learning on learning. In editorial guest of Chen et al. it is presented the work of several scholars that are interested in the field of e-Learning (Chris et al., 2008). Among them, Chai et al. reviewed papers that had investigated Information and Communication Technology (ICT) integration using technological pedagogical content knowledge (TPACK), a framework for the design of teacher education programs. They found positive results in enhancing teachers' capacity to

integrate ICT for instructional practice. The study by Felix focuses on improving the elearning via personal learning environments through widget spaces in Moodle (Felix, 2004).

A large number of commercial or open source Learning Management Systems (LMSs) are widely used to assist teaching activities. LMSs are the most representative e-learning applications. Some are open source software, others are commercially provided. They can be used for distance-learning and as a supplement to in-class lectures, on which course announcements, homework assignments, lecture notes and slides can be posted, for Internet access (Elbow Peter, 1997). These days, we observe a movement in higher education leading from proprietary software to open source, for e-learning applications. In fact, open source software development can provide the necessary flexibility to combine languages, scripts, learning objects and lesson plans, effectively, without the cost and rigidity of proprietary packages of R. Williams.

As well described by Psaromiligkos (2014:192): "LMSs support a number of features as: Course Management, Class Management, Communication Tools, Student Tools, Content Management, Assessment Tools, and School-Management."

Developed by an extremely active open source community, Moodle is a popular Course Management System (CMS) that is ideal for creating dynamic online learning communities and for supplementing face-to-face learning. There are a number of characteristics why Moodle is considered to be a good fit for our requirements. Moreover, it can compete with the big commercial systems in terms of features sets and is easy to extend. Our opinion is that a model best fits the university requirements if it serves to produce benefits and improve the teaching process (Maikishi, 2006). Tuparova, D. and Tuparov, G. offer an "approach for

management of student participation in collaborative activities and techniques in open source e-learning environment." (Tzanavari, 2010:51).

The implications in terms of using Moodle in higher education are reflected in previous papers, where the authors state that this platform improves teaching and the learning process and they make several considerations in terms of "causal relationships between perceived usefulness, perceived ease of use and actual usage behavior". Mentioned research is based on the Technology Acceptance Model (TAM), as main theory how users come to accept and use a technology. Another study with the theoretical grounding of the TAM was performed earlier by Ong and Lai; Moodle was used as a tool to support face to face training. A great number of authors found Moodle a very productive CMS. Moreover, Moodle was utilized in teaching various domains such as Physics or foreign languages. Robling and Kothe (2009) improved systems and have created prototypes for integrating hypertext book in Moodle LMS (Wang, 2008).

In a study conducted in Romania, it is concluded that:

Moodle was a stable solution that best fit our requirements. In our study that shows the importance of e-learning and benefits of using Moodle platforms in teaching activities, we consider that, using the e-learning platforms, in course communication, group development and homogeneity had an essential role. (Paragina et al., 2011:135-136).

Also, in many recent papers, experiences in using e-learning platforms to support face to face instruction in higher education were presented.

In our case, the need to use such an e-learning platform, came after we have observed a lack of students' interest in terms of homework tasks performed and course participation.

Current trends in educational practices proved an increasing tendency to gain benefits from

using e-learning platforms to support face to face teaching activities in a collaborative learning environment.

#### 3.2 The Moodle Platform

The name Moodle is an acronym for Modular Object Oriented Developmental Learning Environment and is a course management system (Course Management System - CMS) through the Internet, also known as a Learning Management System (LMS) or a Virtual Learning Environment (VLE). It is a free web application that educators can use to create effective online learning sites (Maikishi, 2006). One of its main advantages is its open source, or has open source allowing any user with programming knowledge to modify and adapt the environment according to their own needs. Moodle can be installed at no cost at many servers. Moreover, no maintenance costs need to be paid for upgrades. Nobody can force you to make updates, buy tools that you do not want or determine how many users should possess; the teacher manages the platform according to the learners' needs (Miyazoe, 2008).

This platform is widely used worldwide by universities, communities, schools, instructors, courses, teachers and even businesses. This system was developed by Martin Dougiamas, thanks to his background in education as in computing, managed to develop a tool with technological and pedagogical satisfaction. The number of users and developers, who are working today in the form of collaborative communities to include more features in Moodle, has increased (Turner & Katic, 2009). The great success Moodle has made is also due to the fact that the system is available to your code developers in various parts of the world to contribute new applications for the program. That's why the system is today one of the most used in distance courses. Although initially designed for higher education environment (university), Moodle has quickly become used across a broad range of

worldwide organizations to conduct courses fully online or support face to- face teaching and learning (Suvorov, 2010).

In reality, Moodle gives a less sophisticated and structured environment than a full-fledged commercial LMS such as WebCT for instance. As a result of the OS development model, Moodle looks more like a set of tools that share an environment, while commercial LMS support a complete development process and provide complex management tools.

#### 3.2.1 Moodle Activities and Modules

The Moodle represents one of the most widely used open-source e-learning platforms, that enable the creation of a course website, ensuring their access only to enrolled students (ibid). This platform allows the exchange of information among users geographically dispersed, through mechanisms of synchronous (chats) and asynchronous communication (discussion forums). In a functional perspective, it has easily configurable features, allowing the creation of student assessment processes (quizzes, online tests and surveys), as well as managing their tasks with their timetable (Paragina et al., 2011) in (Table 4.1), besides offering a wide variety of complementary tools to support the teaching and learning process.

Activity	Module	Description
Creation	Database	allows to build, display and search a bank of record entries about any topic [19]; allows to share a collection of data [15];
Organization	Lessons	represent a set of ordered topics summarizing the instructional materials [15] and allow the access to them through the respective link;
Delivery	Assignments	allow teachers to collect work from students [15]; allow teachers to evaluate the student's work and provide feedback including grades, in a private mode [19]; allow students to upload assignment files [15, 20];
	Workshops	represent a peer assessment activity with many options [19]; allow students to submit their work via an online text tool and attachments [19];
Communication	Chats	allow synchronous conversation [20];
	Forums	represent a communication tool where students and teachers can exchange ideas by posting comments [15, 19];
	News	represent a special forum for general announcements [19]; allow teachers to add posts and to send emails [19];
Collaboration	Glossary	allows creating and maintaining a list of definitions [19]; represents a mechanism for collaborative activities that can be restricted to entries made by the teacher [19];
	Wikis	allow users to edit collaborative Web pages [15]; provide space for collaborative work [15, 20];
Assessment	Choice	allows teachers to ask questions and specify multiple choice answers [19]; represents a useful mechanism to stimulate thinking about a topic [19];
	Quiz	allows teachers to design and build quizzes with a variety of questions, with different types of answers, such as multiple choice, true/false, short answer [15];
	Survey	allows teachers to gather feedback from students using prepackaged questionnaires [15,19];
	Feedback	allows teachers to create surveys to collect feedback [19];
Reusability	SCORM	represent specifications that enable interoperability, Accessibility and reusability of the learning content [19]; represent tools that enable SCORM packages to be included in the course [15]; External tools enable interaction with compliant learning resources (eg. Learning Tools Interoperability) and
		activities on other Web sites [19]; provide access to new activities' types or materials [19];  Activities and modules of the Moodle platform

Table (3.1): Activities and modules of the Moodle platform

Based on the classification presented in (Table 3.1), a set of functionalities characterize the Moodle platform. The latter are grouped in two different classes: resources and modules. First resources represent instructional materials that are usually created in digital formats and then uploaded to the platform. Web pages, PowerPoint files, word documents, flash animations, video and audio files represent some examples of these resources.

As for modules, these are components created via Moodle for enabling interaction among students and teachers towards manipulation and content transformation (Table 3.1). In this context, the Moodle platform provides several modules, such as Database, Lessons, Assignments, Workshops, Chats, Forums, News, Glossary, Wikis, Choice, Quiz, Survey, Feedback, SCORM (Sharable Content Object Reference Model) and External tools (Robling and Kothe, 2009) (Table 3.2).

The activities of the learning platforms (ibid) present a classification based on six classes:

1. Creation

- 2. Organization
- 3. Delivery
- 4. Communication
- 5. Collaboration
- 6. Assessment

Table (3.2) presents these activities, their correspondence to the modules, and a brief description based on the instantiation of some features that are possible to perform with them.

#### 3.2.2 General Features of Moodle Platform

According to Stanford,

The Moodle platform has three levels of use, with features of differential use and access. So is the concept of trustee or administrator (the manager of the platform), teacher (who may also have other designations, for example, trainer, facilitator, promoter) and the student (learner, participant, among others). Moodle is composed of a simple interface that looks more like a portal of information. (2009: 21-22).

In general, the pages of the courses are divided into three columns that can be customized by the teacher or the course, adding elements such as: calendar, online users, list of activities, among others. These elements are arranged in columns to the right and left of the screen, and the user can move from one to another. In the center, a set of options are available. These refer to the list of topics numbered or dated weekly. (ibid).

Feature	Description
CHAT	The Chat module allows participants to have a real-time synchronous
	discussion. Chat contains a number of features for managing and reviewing
	chat discussions.
DATABASE	The Database module allows the lecturer and/or students to build, display and
	search a bank of record entries about a topic.
FORUMS	Forums are used for asynchronous online discussion.
GLOSSARY	The Glossary activity allows participants to create and maintain a list of terms
	and definitions, as in a dictionary.
QUESTIONNAIRE	The questionnaire module in Moodle allows you to create a survey or
	questionnaire for students to fill out, for instance a course evaluation or a
	reading response survey. You may choose whether or not the responses are
	anonymous.
SCHEDULER	Scheduler is a Moodle Activity that allows the course instructor to post
	available meeting times and then has the students sign up for the slot that best
	suits them.
LESSON	A Lesson allows a lecturer to create conditional pathways through material.
HOT POTATOES	The Hot Potatoes module, allows teachers to administer Hot Potatoes quizzes
	via Moodle.
ASSIGNMENTS	Assignments allow students to submit work online, including uploading any
	file type (Word document, Powerpoint, video clip etc.). Lecturers can grade
	and give feedback.
Advanced	This option should be used when you want your students to be submitting
Uploading of Files	multiple files, or particularly big files.
Online Text	This option is for relatively short, text-based assignments. For example, if you
	wanted to ask students to submit their thoughts on a reading assignment, you
	might use this kind of assignment. Students will not be able to upload files
	from their computer; they will simply see a text editor box, approximately
	paragraph-sized, where they can type something up online and submit it to
	you. In the sub-module, you can set things like due dates, whether late
	assignments are acceptable, whether assignments can be resubmitted, and
	whether you would like to receive email alerts when a submission has been
	made. You can also make the submissions easier to grade by turning on the
	"Comment inline" option, which will allow you to edit the original text, or
	comment using a different color. Furthermore, you can split students into
	groups, but this is generally a solitary kind of assignment.
Upload Single File	If you would like to have your students upload files, but you only want each
	student to upload one file and the files aren't particularly big (Word
	documents, Excel spreadsheets, etc.), then you can use the much simpler
	"Upload a single file" option, which works almost exactly like "Advanced
	uploading of files", except for the number limit on each student. ( Bottentuit
	Junior,2004).
Offline Activity	This is the easiest option to use. There is no online submission of any kind; the
	assignment mostly exists as a reminder to students that they have a certain
	assignment due on a certain day.
QUIZ	The Quiz module allows the lecturer to design and set quiz tests, and includes
	a range of question types and reporting options. Moodle Quizzes are a great
	resource for every teacher.
T 11 (2.2) I 1	resource for every teacher.

Table (3.2):Levels of Use of the Moodle platform (Levels of use of the Moodle Platform by Rauhvargers. and Rusakova,2010)

In short, the Moodle is an e-learning platform used throughout the world. Universities, communities, schools and teachers serve up to this platform to communicate and transmit information to their educational communities. Developed by Martin Dougiamas, Moodle is a platform with technological characteristics that enable users to develop working collaboratively. The great success of this platform is due to the fact that it is an open source system, providing programmers the opportunity to make new contributions, with new applications, making it one of the most widely used in distance learning. It seems to us that the integration of such platforms deserves special attention and should be included in educational settings, despite all the limitations and lack of existing at the different levels, such as difficulty in accessing the platform, because the connections are very slow or that the servers cannot manage the information when there are many users, or because there is no availability of computers with Internet connection (Rauhvargers, and Rusakova, 2010).

#### 3.3 The Effects of CALL on the Learner

For the development of EFL learners' writing skills, early studies on writing in CALL focused on two areas: developing word processing skills in learners and the use of text-based and later graphic organizers to support the writing process. Word processing was common in CALL but it is not any longer. Kehagia notes that "research in word processing showed positive effects in terms of writer attitudes, text length, text quality and quantity and in some cases quality of revisions; word processing is now used by virtually everyone for composing." (2005:72). Spell checkers and grammar checkers were brought in as useful tools in the development of second language writing. Systeme-D for French was a CALL program that included aspects of vocabulary, grammar and composition to create an integrated composing and editing environment.

Hirvela (2005) explains that college writing is becoming more computer-based and computer is turning into a popular tool in writing instruction. So, it is necessary to learn about the world of electronics and the demands which are put on the shoulders of writers and readers. He continues that it is essential to introduce to them the idea of screen culture.

Felix (2008) maintains that there are two waves in Computer Assisted Language Learning. The first one started in 1980s and early 1990s which was related to using word processors and improvement in writing quality and even motivation which the learners had with the new system of writing and typing. The second one is placed on computer-mediated communication (CMC) which appeared with the arrival of Internet and the role of hypertext which link a related text to numerous texts. On the other hand, students can electronically communicate with each other.

Cumming (2001) sought to examine whether word processors could change a second language learner's writing process and improve the quality of writing or not. Analysis of the raw data indicated the advantages for the word processing medium over the pen and paper medium in terms of a greater frequency of revision made at the discourse and syntactical levels. The computer mediated learners gained higher scores for content on analytic ratings of the completed compositions. Cumming asserts (2001: 127):

"word processors help reduce the mechanical difficulty involved in changing texts and offer a fluid and easily transformed communication, users might create longer compositions and do more revisions of their writing than they would do with pen and paper."

Van Patten (1996) investigated the influence of word processing on the writing of students of English as a second language (ESL) and on writing assessment as well. Twenty-one adult Mandarin–Chinese speakers with advanced English proficiency living in Toronto

participated in that study; one on a computer that traced and recorded their writing and revision processes and the other written with pen. Think-aloud protocols were also recorded. The results of that study revealed that participants paid more attention to higher order thinking activities while evaluating their written texts in the computer session, that they revised significantly more at most levels on the computer, and that their computer-generated essays received higher scores in argumentation than the hand-written ones. He came to this conclusion that educators should seriously consider the impact of computers on writing assessment.

To date, few studies have been investigated to examine the effect of teaching writing in an EFL context by means of online platforms as a word processor to fix learners' errors considering these two variables.

#### 3.3.1 Fostering Student Self-Directed Learning

Experiential and research evidence shows that the current generation of students in higher education is unenthusiastic about and disengaged from the learning process especially if it follows only the traditional teacher-centered, classroom learning characterized by instructors dictating content (Robert E. Clasen and William E. Bowman 1974). This is compounded by the fact that today many undergraduate students do not fully appreciate the value of succeeding in their education (Lo, J. and Hyland, F., 2007). This lack of motivation leaves teachers in undergraduate programs distraught with the task of keeping students interested in their lectures and other learning activities.

As a remedy, Hanson-Smith (2001) proposes that educators need to incorporate highquality and highly effective information technology tools to engage students in SDL. These e-

tools offer several advantages among them, being more learner-friendly, enhancing the collaborative nature of learning, motivating students to be more engaged, and most importantly, to take more responsibility for their learning (Haythornthwaite, 2008). When used appropriately by teachers, e-tools such as MEP can motivate students to remain focused in their studies and engage in learning beyond the classroom (ibid). Learning beyond what the teacher offers is one of the hallmarks of SDL. It has been recognized in nursing that corrective actions are needed because in the past limited efforts were made to provide nurses with appropriate skills to engage in SDL and in some cases this resulted in suboptimal orientation towards lifelong learning (Radnor, 1994). This lack of skills in SDL and subsequently lifelong learning has major implications because it makes the student nurses uncompetitive upon graduation and puts patients' lives at risk of poor quality nursing care. The ever changing nature of health care, treatments and technological advances require that student nurses who are being prepared to work in such dynamic environments have appropriate competencies including SDL skills to keep abreast with scientific advances. Being aware of this shortcoming, more university based undergraduate programs are now integrating SDL in their curricula and learning activities to increase student's capacity for independent learning in dynamic and challenging educational and work environments (Lamb, 2004).

In addition to e-tools such as MEP, nurse educators have continued to promote SDL abilities of their students through problem-based learning pedagogy, inquiry based learning and evidence based practice (Brush, 2008). Despite availability of these interventions, many educators still find enhancing students' interest and motivation for SDL to be very challenging. The challenge faced by most educators in promoting student SDL seems to be related to creating "spaces" in which SDL capacity can thrive. Creation of space for student to engage in SDL is a major challenge because nursing is much concerned with patient safety

and most nurse educators feel that they must "teach" in order to ensure that students learn the "right" things to be competent and safe practitioners. This tendency diminishes the space and opportunities available for students to engage in SDL and many times it de-motivates them. Other challenges that make it difficult for nurse educators to promote SDL relate to their failure to appreciate the role of a teacher in an undergraduate program as that of a facilitator of learning, personal cultural beliefs about teaching and emphasis on student's ability to pass professional licensure examinations.

To effectively motivate and enhance SDL in students, Knowles argues that:

Teachers as facilitators of learning need to create learning environments that are conducive for collaborative learning characterized by mutual support and intellectual rigor; facilitate group decision making process without neglecting individual learning needs and curriculum requirements; diagnose student learning needs and facilitate learners' ability to diagnose their own needs; assist learners to set their own goals by translating learning needs into clear, realistic and achievable learning objectives; promote collaborative learning that allows individuals to work as a group, design learning plans and work towards common goals, and evaluate learning outcomes using methods that integrate reflection on learning and peer review. (1975: 35).

These essentials suggest that fostering student motivation and interest in SDL requires the teacher to use innovative teaching strategies because the lecture method which most instructors use to "teach" is very limited in its output and at best only serves students who are intuitive rather than sensory learners.

Brush (2008) affirms that lectures as delivered in most colleges and universities do not help most students to grasp core concepts and skills, implying that a sizeable number is left behind in the course of their learning. Therefore SDL which is a precursor for effective learning is required in undergraduate programs because it leads to active engagement of the student and keeps the youngsters interested and motivated to learn (Keller, 1983). Recent reports indicate that the current generation of students have a high level of readiness to exploit

learning opportunities, initiative and independence in learning, informed acceptance of responsibility for one's own learning, creativity, and the ability to use basic study and problem solving skills (Savery, J. R., & Duffy, T. M. (1996).

This, in addition to the culture of "technology astuteness" is a strong impetus for including interactive e-learning applications such as MEP to engage young learners, in self-paced learning, which in turn helps to increase their motivation and mastery of the subject matter (Keller, 1983).

## 3.3.2 Students' Motivation and Experiences in Online Communities

Although many higher educational institutions currently use the Web for teaching and learning, little research has been done to identify the factors that influence students' acceptance of a Moodle-based learning system.

The TAM model<sup>16</sup> was first introduced by Davis et al. (1989) to explain the acceptance and usage of information technologies (Figure 3.1). It was based on the "Theory of Reasoned Action" developed in Social Psychology by Fishbein and Ajzen (1975). The Theory of Reasoned Action (TRA) is a general system designed to explain almost every type of human behavior, and part of the importance of individual beliefs, in order to predict human conduct. TAM models center exclusively on the analysis of information technology and, as opposed to TRA models, pre-establish those factors that condition user attitude towards innovation, behavioral intention and intensity of system usage. The two key factors in determining intention, which predict the development of an innovation and are present in all studies of

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<sup>&</sup>lt;sup>16</sup> The **technology acceptance model (TAM)** is an <u>information systems</u> theory that models how users come to accept and use a technology. The model suggests that when users are presented with a new technology, a number of factors influence their decision about how and when they will use it.

TAM model development, are: perceived usefulness (PU) and perceived ease of use (PEOU) (Davis et al., 1989).

Perceived usefulness is considered to be an extrinsic motivation for the user, and is defined as the degree to which a person believes that the use of a particular system can enhance work performance. Davis et al. (1989 (1989) insist on the influence that a belief such as usefulness has on user intention. An extensive body of theory on this, as well as empirical studies, allows us to affirm the link between both variables.

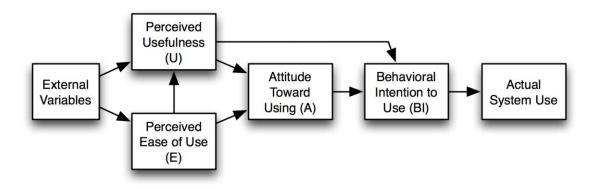


Figure (3.1): The Technology Acceptance Model, version 1. (<u>Davis, Bagozzi &</u>
Warshaw 1989)

The other determining factor is ease of use, which is the degree to which the individual considers that the usage of a particular technology does not entail extra effort; the greater the perceived complication, the lower the degree. This has a positive influence on perceived usefulness.

Several investigations have shown the validity of this model through a wide range of Information Systems (Kim, 2008). The TAM model has an acceptable predictive validity when measuring the usage of new information and communication technologies.

Most TAM researchers have focused on its extrinsic perspective. Only recently have they taken account of the significance of non-cognitive aspects such as emotions, symbolism, desires, etc., in the understanding of attitudes towards usage of Information Systems and facets of human behaviour. Consequently, investigators call for the incorporation of intrinsic factors or other theories in studies that could enhance the TAM model.

There are few recent studies that explain the acceptance of Web-based learning systems. Hellebrandt (1999) examined the critical mass effect as an external variable to explain acceptance of Groupware or collaborative software based on TAM. These authors acknowledged that the critical mass effect, perceived use and ease of use variables affected intention to use Groupware. Campbel (2003) investigated the student use and acceptance of course websites based on the variables of the perceived usefulness of the courses, perceived ease of use and usage. The results showed that there exists a significant relationship between usage and ease of use in determining usage of a website course.

The factors that influence WebCT use in higher education institutions in Hong Kong were researched using the TAM model. They extended the model to include a new factor "technical support". The results revealed that technical support is an important direct factor in the feeling that the system is easy to use and is useful. Berns (2003) studied the acceptance and usage of a virtual learning environment with the extended TAM2 model, and the results indicated that perceived usefulness has a direct effect on the use of virtual learning environments (VLE). Perceived ease of use and subjective norms only had an indirect effect via perceived usefulness. It was also demonstrated that new variables related to personality traits, like being innovative and feelings of anxiety towards the computer, had a direct effect on perceived ease of use.

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## 3.4 CALL & Writing: Language Teachers' Attitude

For many years, the computer has been used by language teachers to provide supplemental exercises. Recently because of the technology advancement, computers became an essential component of the daily FL and SL teaching and learning. Technology has the potential to play a major role in foreign/ second language teaching and learning. In other words, Computer Assisted Language Learning (CALL) has gained considerable attention from different entities including researchers and writers. CALL is a language learning and teaching approach in which computer is used as a tool for presentation, assisting students, and evaluating material (Felix, 2008). Peterson stated that:

CALL has developed from small beginnings into major elements in many university language programs in Japan. The number of individual educators incorporating CALL materials into their classes has increased markedly. This increase of interest in CALL, and educational technology in general, has also been manifested in the number of CALL facilities created within universities and schools. (2003:64)

Since the 1980s, CALL software applications have tended to shift the focus of control from the computer to the learners. Later generation of CALL viewed the computer as a tool controlled by the learner rather than an expert controlled environment for the learner (Felix, 2008). From past to now, CALL has developed along with facilities provided by computer technology. Many studies worldwide have been conducted to investigate the effect of CALL on language learning. Computer based instruction has been challenging traditional teaching and learning process (Guardado, 2007).

Computer assisted writing instruction also proposed an alternative method to the traditional ones (ibid). This approach may overcome some shortcomings of traditional method of writing to some extent by providing feedback about students' mistakes and errors. The

learner can readily correct mistakes as soon as his/her attention is drawn to them. But errors are systematic, consistent evidence representative of the learner's linguistic system and evidence of his proficiency level. So computer- assisted teaching and learning writing contains features such as self-discovery, invention and multiple drafting (Borham et al., 2011).

Using computers in writing classes allows learners to receive feedback both from the teacher and computer. Computer provides the correct form of the erroneous word and structures that students have produced. Constantly, it seems that writing is more error-free and cohesive sentences and texts can be produced by using computers. The learners will also become aware of the mistakes/errors they have made just as they type the sentences (ibid). A lot of studies have been done regarding CALL. Some studies have suggested that the use of writing software application in students' text may be positively correlated with the text quality or L2 proficiency (Kamimura, 2006). On the other hand, other studies have shown negative effects for novice writers. Kepner (1991) noticed that, when ESL students used a text analyzer alone without teacher's feedback the results were that writers tended to accept the analyzers' suggestion, even when these alternatives were inappropriate. Studies conducted by Brock and Walters suggested that:

"L2 writing errors are more idiosyncratic and harder to classify than L1 errors. Several researchers have emphasized the use of computer programs to enhance learner autonomy in second language learning, particularly in the field of EFL/ESL writing." (1990:105).

According to Williams (2004), if the use of computer software is carefully modeled, it can offer students both assistance and autonomy in the writing process. Furthermore, he suggested the use of computer programs to serve the aim of the autonomous development of writing skills, particularly for EFL writers.

A meta-analysis of effectiveness of computer-assisted instruction (CAI) on students' achievement in secondary and college science education compared to traditional instruction was conducted by Cleborne (2013) Results showed a small positive effect for CAI use when used in simulation or tutorial models, with individual computer use, and when used as a supplement to traditional instruction. Following the same path, a language tutor program to improve learners' grammatical and sentence production skill in Japanese language was developed. The study revealed that students' achievement improved tremendously. Likewise Ohta (2001) examined the effect of computer on writing efficiency and quality among intermediate learners of Japanese. One of the findings was that a number of Kanji characters used were significantly different, indicating that learners benefit from computer writing.

One of the important aspects of language teacher education programs is language teacher technology education which equips teachers with computer skills and strategies to help learners learn a foreign language better and easier. The majority of studies on teacher technology education explore the following issues: what teachers are and/or should be learning in technology courses; teacher-education students' knowledge of and attitudes toward technology and how teachers think about and use computers in the classroom (DelMarie, 1990).

In the literature few studies have been carried out in order to find out what makes English language teachers use computer, internet materials, resources and software in the language classroom. In order to help language teachers learn about and use technology effectively, we need to know more about the transfer of CALL experience, background and knowledge to the classroom. More specifically, we need to know to what extent computer attributes (availability, complexity, relative advantage, observability, and finally trainability)

on the one hand and teachers' attitudes, computer competence on the other, influence teachers' use of the computers in the language classrooms(Felix, 2008).

The promise of computer technologies, supported by both research and practice, underlies the emergence of technology classes across teacher-education programs and a sharp increase in courses specifically aimed at language teachers (Celborne and Johnson, 2013). However, the appropriateness of technology for student learning is only one factor in understanding teachers' use of CALL. Teacher educators need to design CALL courses that teach what language teachers really need to know.

# 3.5 Moodle and the Writing Skill

Studies report on student performance in web-based writing courses for facilitating writing instruction via the web. The College Composition and Communication Conference Committee on Best Practices in Online Writing Instruction recently studied practices for web-based writing instruction (Lee, 2004). They found that writing instructors use some different assignments online than they use in classroom-based settings. These different assignments, further, tend to require more multimodal and digital composing skills than traditional writing assignments do. Likewise, understanding what other disciplinary faculty may be doing in their web-based courses is also important to understanding any skills related to writing for courses delivered there and how to prepare students for them.

There are not many studies looking into the writing expected of students in web-based disciplinary coursework like those studies reporting on such in classroom-based courses. It was acknowledged that, among 31 proposals they received for publication consideration in a special issue of Across The Disciplines on program assessment, very few "integrated digital technologies into their programs in any explicit way" (Lee, 2004: 17). Further, of the articles

published in that special issue, none pertained to writing expectations in web-based coursework. However, as digital technologies become part of the delivery method for instruction, it is important to ascertain how they may be affecting writing expectations in disciplinary course work and how writing programs can prepare students for those demands.

A survey of disciplinary faculty focused on particular skills expected of students in upper-division, writing-intensive courses, most of which are delivered in classroom-based settings and those not so designated; while another survey considered assignments and skills expected in web-based disciplinary courses. The findings report on some similarities and differences from the two studies, calling attention to differences in composing assignments and expectations associated with web-based courses (Rosa M. Manchon, 2009). Generally, faculty who teach via the web use more multimodal composing assignments than those who teach in the classroom, include visuals among important criteria in assessing compositions, and expect students to have certain kinds of digital literacies that they also feel are appropriate to teach in first-year college writing courses. Some dynamics related to faculty disciplines and training in web-based pedagogies that contribute to these differences are also reported; the more formal training one has in web-based pedagogies, the more likely they are to assign multimodal compositions and expect particular digital literacies. While specific findings of such institutional research cannot be generalized beyond the local institution, our hope is to encourage further study of these differences across delivery modes, given the proliferation of web-based courses and programs. Web-based writing instruction has theorized ways to facilitate effective web-based writing pedagogy (Hewett, 2000). For example, Hewett noted that interaction amongst students in web-based contexts needs to be similar to the interaction they experience in a classroom setting. This prompts certain uses of discussion boards that facilitate certain kinds of writing activities to include in course-grading. Also, Beth Hewett

(ibid) observed challenges related to distinguishing web-based pedagogy from classroom pedagogy. She stated that (Hewett,2004:18): "such comparisons may contribute to a tendency to try to fit OWI into the mold of f2f writing instruction, where differences seem to be interpreted as OWI not doing what it is supposed to do."

Indeed, web-based pedagogies require a different approach to writing assignments that integrates the influence of related technologies by which the pedagogy is affected. As writing programs try to prepare students for the writing they will experience in upper-division courses in their major, and as more coursework moves to a web-based environment option, we must understand how faculty in those disciplines are dealing with writing assignments and activities in their web-based courses (Smith, Pauline, 1997)..

#### 3.6 Virtual versus Traditional Peer Review

With the widespread application of CMC in language classrooms, peer review via CMC modes has become an alternative to face-to-face peer review. Different from face-to-face mode, virtual peer review has three characteristics, as outlined by Lee-Am. K. Breuch (2004), time (either real-time or delayed time), space (beyond geographic boundaries), and interaction (mainly text-based). It is argued that these unique features of CMC modes may change the ways in which peer review is undertaken and shape peer review response. Numerous studies have shown their interests in peer review via CMC modes. A line of studies have found that peer review via CMC modes tended to generate certain types of feedback. For example, while examining the impact of an online writing system on ESL students' choice of revision, Frank Tuzi (2004) found that e-feedback tended to center on local levels (clause, sentence, and paragraph) rather than the overall global level. Guardado and Ling Shi (2007) also found that when giving text-based e-feedback via an asynchronous mode, students tended to balance

both positive and negative responses and provide specific suggestions for revisions. Comparing EFL students' comment patterns in peer review sessions via both synchronous and asynchronous modes; it was also found that peer review via synchronous and asynchronous CMC modes resulted in students' high engagement in peer review activities and most revision-oriented comments in local areas (Butler & Britt, 2011).).

The results of these studies have demonstrated that CMC modes may influence students' review behaviors and comment patterns. The mixed results relating to the relationship between feedback and CMC modes further imply the complexity of examining virtual peer review, which may be determined by what CMC modes are used and how they are implemented.

#### 3.6.1 Peer Review via Different Modes

Effectiveness is one of the major research concerns in studies comparing different peer review modes although the study results have been mixed or conflicting. For example, George Braine (2003), investigating peer review via a networked computer class and in a traditional lecture-style class, found that peer review via networked computers produced longer comments than face-to-face peer review did. In a later study (2001), however, he found negative effects of virtual peer review via a local area network (LAN), a synchronous CMC mode; for example, peer comments were less organized, less thoughtful, and more scattered than those produced via the traditional face-to-face mode. He concluded that peer review via LAN was less efficient than via traditional face-to-face mode.

Another research concern is the comments and revisions made in peer review via different modes. Jean M. Schultz (2000), for example, found that her French students made more local changes in a synchronous CMC mode but more global changes in a face-to-face mode. She further found that the students who received feedback from both modes made more productive changes than those who received feedback from only one mode. Elaine

DiGiovanni and Girija Nagaswami (2001) found that the students used similar types of negotiation in both face-to face and synchronous CMC modes of peer review but the amount of negotiation was higher in face-to-face than in synchronous settings. Examining the effectiveness of peer review via different modes (i.e. face-to-face, synchronous CMC, paper and pen, and Microsoft Word editing) Jun Liu and Randall W. Sadler (2003) found that modes affected the quantity and foci of peer feedback and further influenced the revisions made based on the feedback. They further found that using "Track Changes" in Microsoft Word editing was more effective than using synchronous CMC mode while face-to-face interaction was more effective than simply responding textually with paper and pen. They suggested that combining technological modes with a face-to-face mode may lead to more effective peer review (Sommers, 1982)...

## 3.7 Online Peer Feedback

Peer commenting on each other's writing has been an important and useful instructional process in writing classes. Summarizing the advantages of peer feedback in second language (L2) classrooms, Jun Liu and Jette G. Hansen stated that "peer feedback not only increases an awareness of audience needs by creating a collaborative drafting process but also provides opportunities for ESL students to practice English in a meaningful context" (2002:101). These advantages, however, as Liu and Hansen pointed out, are constrained by:

- (a) students' cultural backgrounds, which influence their classroom behaviors and the amount of participation in peer discussions,
- (b) students' level of English proficiency, which affects their ability to provide and comprehend peer feedback, and

(c) the mode of peer feedback. Compared with face-to-face peer feedback, written peer feedback using a checklist or comment form offers opportunities of anonymity and a text-only environment.

With the development of information technology, the traditional written feedback has taken on a new dimension. As a digital written form, student commentary can be transmitted electronically without the logistical complications of copying and distributing papers (D`anielle Nicole DeVoss et al., 2010). Such feedback can be in the form of synchronous chat system interactions, asynchronous email, and bulletin-board postings.

Being relatively simple to use, these technologies are becoming popular in university writing classes. Of central concern is how such e-feedback differs from traditional feedback to affect students' commenting behaviors and the quality of revisions it generates. To explore the effect of e-feedback, a growing body of research has compared traditional face-to-face peer response groups versus computer-mediated peer conferences in the context of university or pre-college writing classes. A number of such studies have focused on L2 or ESL/EFL (English as a second/foreign language) students (Braine, 2003). Researchers have examined the peer feedback interactions and/or the effect of peer comments on revision and quality of the final paper. Their findings have suggested that e-feedback has advantages in terms of its interactive textual exchange and greater student participation although its impact on revision seems to vary in individual studies.

## 3.7.1 Student Participation in Online Peer Feedback

Another advantage of online peer feedback is the possibility of a less threatening environment that encourages greater and more equal member participation than face-to-face conferencing. ESL students, in particular, seem to benefit from such an environment. For

example, Elaine DiGiovanni and Girija Nagaswami (2001) observed that students in precollege ESL writing classes participated in online peer feedback comfortably and remained on task. Similarly, Nancy Sullivan and Ellen Pratt found that "computer-assisted ESL peer discussion had 100% participation compared to only 50% participation in the face-to-face class." (1996:67). Explaining how online interactions encouraged participation, Rodney H. Jones, Angel Garralda, David C.S. Li, and Graham Lock (2006) suggested the electronic environment freed ESL students from the embarrassment to speak English with peers who shared the same first language versus what they experienced in face-to-face encounters. Jun Liu and Randall W. Sadler (2003) also noted that the online environment facilitated participation of ESL students whose cultures placed a strong value on listening and silence in traditional classrooms. Japanese students, for instance, are socialized in an educational system where student-initiated classroom interaction is discouraged. The non-threatening environment of this type of peer feedback seems to be related to the anonymity that cyberspace offers. Without worrying about how handwriting in the traditional paper-based mode might reveal the reviewer's identity, some students said that using pseudonyms in cyberspace allowed them to make honest comments and try out different roles or develop a "writerly persona" (Strenski et al., 1999:195).

High-apprehensive student writers in Mabrito's study also experienced more freedom to participate anonymously in email peer feedback and "to engage in a collaborative venture that they might otherwise have avoided in a face-to-face setting" (1991: 529). Although there is some concern about anonymity that might discourage a sense of community, the advantages of having greater student participation seem to outweigh such disadvantages.

## 3.7.2 Peer Review and the Reviewer

One aspect of peer review that could also provide extensive gains but that has rarely been investigated empirically in L2 writing research is the possible benefits of peer review to the giver, or the person reviewing the essay and offering feedback. The skill of being able to critically evaluate writing, defined as the ability to look at a classmate's writing and then provide effective feedback, particularly on a global level (i.e., at the level of content and organization), is a very necessary skill for quality writing and academic success in general (Bouyakoub, 2011). Developing critical evaluation skills may also help students effectively review texts and see logical gaps, problems with organization, and other defects that weaken the argument of the paper on a global level (Ferris, 2005), making students better writers and self-reviewers.

Such skills may best be understood within the framework of sociocultural theory (e.g., Vygotsky, 1986), which theorizes that learners can only acquire information within their zone of proximal development (ZPD).<sup>17</sup> The learner's ZPD refers to the place between where learners (i.e., "novices") are able to perform a task on their own versus with the help of an expert such as a teacher or a parent (Lantolf, 2000). The goal is to help learners reach a level where they are able to perform a task on their own. Past studies cite joint scaffolding (i.e., each learner helping the other by providing extra support) to explain the effectiveness of peer review. For example, De Guerrero and Villamil (1996) demonstrate how two students, one the writer and one the reviewer, learn from each other during a peer review exercise. In this

<sup>&</sup>lt;sup>17</sup> The **zone of proximal development**, often abbreviated as **ZPD**, is the difference between what a learner can do without help and what he or she can do with help. It is a concept introduced, yet not fully developed, by Soviet psychologist <u>Lev Vygotsky</u> (1896–1934) during the last ten years of his life. Vygotsky stated that a child follows an adult's example and gradually develops the ability to do certain tasks without help. Vygotsky and some other educators believe that the role of education is to give children experiences that are within their zones of proximal development, thereby encouraging and advancing their individual learning. (definition by Wikipedia)

analysis, they demonstrate how at times the reviewer scaffolds the learning of the writer while at other times the writer scaffolds the learning of the reviewer. Therefore, one of the important findings of these studies is that even when two novice learners are paired together they still scaffold each other's learning. Thus, both the giver and receiver of peer feedback may benefit from peer review activities.

Learning to effectively review others' writing may then ultimately lead to the creation of better self-reviewers, or students who are able to look at their own papers and accurately assess areas in which they need to improve and revise them (Rollinson, 2005). One study that suggests this may be the case conducted by Min (2005), which found that the majority of the student participants commented that training on how to review their peers' papers helped them improve their own writing.

# 3.7.3 Exchanges in Online Peer Feedback

Researchers have identified how peer feedback in cyberspace retains the advantage of traditional written feedback as students put words together to write about writing. As Mark Mabrito put it, "the situation demands not only writing but also the skillful verbalization of one's thoughts and ideas about writing and a peer's text" (1991: 510). When focusing on writing in cyberspace, students, in Jennifer Jordan-Henley and Barry M. Maid's (1995:212) words:

...are released from much of the responsibility that a face-to-face encounter sometimes forces on them. They are not affected, for instance, by students with bad breath, or by students who make them uncomfortable in some vague way, or by students who are angry with a teacher.

While released from these responsibilities in the traditional mode, students take on new responsibilities in online feedback. For example, in peer e-feedback activities, students must

still be sensitive to the audience's needs and follow a clear, concise, and informative style without having the benefit of facial cues or body language that face-to-face interactions offer (Breuch, 2004). These constraints pose more challenges to students engaged in peer efeedback but perhaps also in a way that persuades them to be better writers. According to Lee Honeycutt's (2008) analyses of students' conferencing transcripts, students in an online environment are only linguistically co-present, so they must make explicit references by using indexical devices, such as page numbers, quotations, and paraphrases to maintain common document focus and make coherent evaluative comments. One should note that Honeycutt's observations were made in online conferencing, and other methods such as exchanging Microsoft Word documents would have offered possibilities of using highlighting or inserting comments to make explicit references.

The demand for greater document-related referencing in providing written feedback is conceptualized by Clark et al. (2003) as the cost of communicative grounding in online peer feedback. By obliging students to focus on making coherent comments in a text-only environment, online peer feedback retains the advantages of traditional written feedback to foster the development of metalanguage and awareness about written communication. The nature of textuality in online peer feedback implies the differences between asynchronous and synchronous conferencing. Both are electronic communications, but the former is closer to textuality whereas the latter is closer to orality. Compared to asynchronous conferencing, which has been observed to have reduced interactivity due to the lack of nonverbal cues and the delay of interaction (Tuzi, 2004), synchronous or real-time peer commenting invites quick exchanges and personal involvement (Honeycutt, 2008). It is, therefore, effective in small group peer reviews because it increases student participation (Braine, 2004) and encourages students to request specific suggestions for revisions (Tuzi, 2004). However, synchronous

networking can be unnatural when it requires (Susser, 1994: 71): "a roomful of people to type to each other rather than hold a discussion".

Indeed, researchers have found synchronous chats sometimes disjointed, scattered, confusing, and disruptive (Liu & Sadler, 2003). In comparison, asynchronous email feedback has been found to have less time pressure (Tuzi, 2004), and to be more serious (Honeycutt, 2008) and more effective as students learn to adapt their verbal behaviors over time to reach similar interpersonal levels observed in synchronous chats. The differences between synchronous and asynchronous conferencing not only suggest various interactive textual exchanges that e-feedback can generate but also explain some of the inconsistent findings about the advantages and disadvantages of peer e-feedback. If synchronous conferencing is a technology change from asynchronous conferencing, one needs to be aware of how similar changes of technology might have influenced and will continue to influence the findings of research studies.

#### 3.7.4 Impact on Revision

The differences between traditional and electronic environments are reflected in the different types of peer comments they generate. For instance, Jones et al. compared online peer interactions with those in the traditional face-to-face mode and found "the former generated more feedback on global concerns of content and the writing process whereas the latter focused more on local textual issues of grammar, style, and word choice." (2006: 102). However, other researchers found that peer e-feedback using Microsoft Word or other special programs designed for responding to writing actually generated more concrete and revision-oriented comments than traditional oral or paper-based feedback (Liu & Sadler, 2003). Freed

from the face-to-face encounters of the traditional classroom, some online group discussions developed into critical and effective negotiations (DiGiovanni & Nagaswami, 2001).

Along with the findings about various types of e-feedback were observations of the different experiences of student reviewers. Depending on their experiences of reading and writing on computers, some students found reading long texts on a screen difficult (Tuzi, 2004) whereas others enjoyed writing elaborate comments without worrying about space (Liu & Sadler, 2003). Peer comments generated via various media shape students' revisions. Relevant research has mostly been conducted in L2 contexts and seems inconclusive about the quality of revisions following electronic peer feedback. For example, L2 students using synchronous peer conferencing were found to produce writing rated either lower (Braine, 2001) or higher (Sullivan & Pratt, 1996) than those revised after traditional peer feedback. By comparing students' initial and revised drafts after e-feedback and oral feedback, Frank Tuzi (2004) found that L2 students made more macro-level revisions following e-feedback, adding new information and revising structures at clause, sentence, and paragraph levels. In addition, Solchi Matsumura and George Hann (2004) reported that ESL students who did not post their own drafts online because of high computer anxiety also benefited from looking at other classmates' drafts and related comments. As e-feedback may have a different effect on individual students, researchers suggested that training of peer reviewers and a combination of online and face-to-face feedback should result in the greatest degree of improvement in essay writing (e.g., Liu & Sadler and Tuzi, 2004).

The above review suggests further research on the effect of online peer feedback in EFL contexts. On the one hand, EFL students were observed to participate more in non-threatening online environments than in traditional settings (Braine, 2004); the quality of their revisions

or final papers, on the other hand, suggests differing impacts of e-feedback. As a result, online feedback in EFL contexts was described as either an obstacle (Braine, 2001), a help (Tuzi, 2004) or a mixture of limitation and liberation that should, therefore, be combined with traditional face-to-face sessions (ibid). These conflicting findings call for further explorations of online ESL peer feedback.

# 3.8 Online Peer Feedback, Motivation and Achievement

Social constructivism as a theoretical model provides a sound base for analyzing the peer learning model in preparation for developing an effective learning environment that could improve students' academic achievement. Peer learning within groups values cooperation above competition and encourages greater respect (Boud, 1995).

Social constructivism argues that students can, with the help from experts, grasp concepts and ideas that they cannot understand on their own. Through the process of sharing experiences and discussion to build knowledge, students would learn more. It is argued that peer learning allows students to actively convey ideas from their peer influence (ibid). One Vygotskian social constructivist notion, which has significant implications for peer learning, is that of the zone of proximal development (ZPD), which is defined as the:

...distance between the actual developmental level as determined by independent problem solving and the level of potential development as determined through problem solving under adult guidance or in collaboration with more capable peers. (Vygotsky, 1978: 86)

The ZPD emphasizes the idea that effective learning requires support and guidance from others. This zone fosters a meeting place for learners to improve the ability of problem solving through collaboration with a peer (Blaye et al., 1991). Yarrow and Topping (2001) reported that co-construction of new cognitive structures can be obtained by peer tutors acting

to provide support and scaffolding besides managing the learning and activities to keep them in ZPD. A learner's knowledge can be extended beyond the limitations of physical settings through a process of negotiation and scaffolding. As suggested by Land and Hannafin (1997), teachers can use question prompting techniques to help students learn cognitive strategies for building better understanding, besides encouraging students to elaborate their thoughts and presenting multiple explanations.

The online environment provides an array of scaffolding features to support learning (ibid) and provides active and engaging activities for students, besides giving opportunities for students to construct knowledge rather than just be exposed to the transmission of knowledge. The online environment provides the out-of-school learning environment as a complementary and reinforcement agent, which broadens the learning environment for the student and provides novelty in education .

#### Warschauer and Liaw (2008) stated that:

....students have more opportunities to be in full control of their own learning and participation without limitation of knowledge levels. This institute introduced a Learning Management System, Moodle, in 2006 to assist the learners in managing their own learning as well as to help the lecturers to facilitate learning in an online learning environment. (2008:151).

In addition, Moodle is free and open source software that was developed around social constructivism pedagogy. However, the practice of this online medium is to transfer information from the lecturer to students. This is accomplished by providing students with access to information and expecting them to demonstrate their learning in an exam. There is an increasing need to develop a powerful online learning environment to support quality in the teaching and learning process and thus boost the participation of the students (Tan, Fujuan, 2009). The teaching and learning process is enhanced through manipulating the level of control teachers have over the learning activities in this environment (Lamb, 2004).

#### 3.9 Writing Anxiety

Anxiety is one of the factors that have been an issue in language teaching. Anxiety is defined in Advanced American English Longman (2005): "as a feeling of wanting to do something that may happen or may have happened, so that you think about it all the time or is a feeling of wanting to do something very much, but being very worried that you will not succeed." (cited in Talebinezhad, M., & Negari, G: 25).

Among the different types of anxiety in language learning, writing anxiety is defined by scholars like Thompson (1999) as an inability to write, which is caused when a person is fearful over the end result and cannot concentrate on the writing process itself. Tsui also said that "writing in a foreign language causes more anxiety than other skills since in most classes writing is product-oriented that requires a great deal out of student with regards to their own thinking and ideas." (2000:224). Additionally, students may not be getting the support from instructors that help them to know that they are on the right track. These two things make writing stressful for students. Also, writing anxiety is defined by Hassan (2001) as a general avoidance of tasks or situations that may require writing and has the possibility of evaluation and assessment.

Thus, the anxiety factor in writing can affect learners' perception toward writing and their writing performance. Cheng (2004) noted that students with high-anxiety tend to avoid enrolling in writing courses and prefer careers that have very little to do with this skill. Some students with anxiety in writing courses do not attend the classes regularly; find excuses to write at home or outside class so that they have a friend write instead of themselves. They have less confidence, self-efficacy, and self-esteem.

## 3.9.1 Peer Feedback and Writing Anxiety

There are various effects of peer feedback on writing L2 anxiety. Peer feedback increases motivation through the sense of self-responsibility, and it also has an impact on the self-confidence of learners (Yarrow and Topping, 2001). Since student readers see that other students make the same mistakes or go through the same difficulties, they are relieved, their apprehension decreases. In turn, their confidence increases. With collaborative dialogue, two-way feedback and discussion on content between the peers will be stimulated (Rollinson, 2005). The peers can discuss the reasons of revision required on their writings and question them. However, when teachers give feedback, students just take them without questioning. Thus, peer feedback gives students the opportunity to improve their critical thinking abilities in a learner-centered and non-threatening classroom atmosphere.

## 3.9.2 Causes of Writing Anxiety

Martin states that:

"Anxiety is the fear of the unknown because unknown things are threatening. Feelings like anxiety cause a person to avoid tasks that require productive skills. Writing is a demanding productive skill that requires strategies such as finding ideas, collecting information, organizing and combining that information and those ideas with a correct linguistic knowledge of L2" (2007:131).

According to many scholars, in order to be successful in writing, you need to be able to express yourself, meet your readers expectation, organize your ideas smoothly, enjoy writing in L2, and your self-esteem should be increased, yet L2 students cannot cope with them easily (Lee, 2003).

The research also supports that because of the complexity of writing as a skill and complexity of a language can cause apprehension among students. According to the study that was administered by Kara (2013), the three causes of anxiety in writing courses are the most

attention grabbing: "writing itself, writing as a skill" and the "teacher." Then, Kara explains them (2013: 108):

The learners claimed that they have writing anxiety and may fail because they do not have a writing habit and they occasionally wrote in their previous experience and they are not used to writing and express themselves in writing because in their previous education they are familiar with taking tests. Most students have not had the writing experience in their previous education life since they have a predominantly test-based education background that requires students to choose one of the options that are already given. This can create a generation that lacks critical thinking ability and cannot put down the things they have learned on paper. In such a system, when learners, who come from such a system, are asked to write, they will not be able to produce what is expected. Even if they do, they will have many difficulties during the process, which will finally make them feel anxious.

Kara (2013) continues in explaining the second reason "writing as a skill." Learners, who already see writing as a complex productive skill, believe that they lack skills such as finding ideas, collecting information, organizing and combining that information and those ideas, as they have not practiced those skills enough. In addition, students' limited linguistic capacity also results in poor performance that causes an increasing number of anxious students.

#### For the third reason, says:

"Learners stated that the teacher does not encourage, does not give feedback and is not interested in students' writing problems. The teacher's teaching style may cause trouble as well like not giving examples or not teaching in an interesting way." (2013: 108).

#### 3.10 Conclusion

As technology in teaching and learning has evolved over the past decades, it has been slower to reach the university setting in countries like Algeria. Professional development for EFL teachers has also evolved over the years from a focus on the skills needed for the use of technology tools to the emphasis on student achievement as a result of the integration of technology-enhanced strategies. This emphasis on effective use of technology in the classroom has reached the post-secondary level of education and university staff members are currently revising and enhancing their teaching strategies.

To sum up, nowadays we live in the technology-shaped era which is governed by technology devices use. At the same time, people in general, especially youngsters are addicted to these devices. No doubt they make use of them in their daily communication, that's why these technologies can be utilized by teachers and adapted to their teaching styles. In this respect, e-platforms have served a lot this reason. Moodle is no exception; it can serve teaching and learning objectives mainly for exercising writing in the digital era.

Moodle is a free CMS, which can greatly help teachers of writing expression manage and edit their teaching materials, deal with writing assignments easily, and promote synchronous and asynchronous communication between students and teachers. To English writing teachers at universities, Moodle would be a perfect teaching tool, but instructors, teaching materials, and curricula still play more important roles in technology-enhanced classrooms.

•	"Moodle-based Peer Review as a Tool to Enhance and Improve EFL Learners' Writing Performance"

# CHAPTER FOUR

# METHODOLOGY AND PROCEDURES

"Moodle-based Peer Review as a Tool to Enhance and Improve EFL Learners' Writing Performance"

#### 4.0 Introduction

Appropriate research methods are an essential component of a successful research study. While qualitative research methods are flexible and suitable for answering the research question at hand, quantitative methods are also needed for drawing a complete picture of the results (Cohen and Manion, 1994).

Design research concepts lay a framework to guide the research experimental design towards achieving its goals in answering the research question. This is done through an iterative framework of a variety of studies and several research tools allowing results to better determine what the collected data means.

The chapter starts with an overview of the research framework used in the doctorate research project, including the issues that need to be considered, and an overview of the design research which was adopted as a framework for the purposes of this research project. The focus then shifts to key concepts, including a debate between supporters and sceptics of peer review in EFL writing settings mainly online contexts studies, leading to a critical stance on the matter. Issues of sampling, validity, ethics and informed consent are addressed in respect to the research Study (Scott and Morrisson, 2006).

The research design then expands on a set of class delivery models, and justifies why certain models are to be used to determine the effectiveness of the online peer reviewing medium as compared to more traditional f2f peer editing. The chapter then explains the research methods and tools used within this research project, including the concepts related to the design of the virtual learning space, and data collection tools such as attitude surveys, tests, class assessments, and online assignments that were applied.

#### **4.1 Research Questions**

The previous chapter shows that most peer feedback studies in the literature investigate one or more of the following issues: students' perception of peer feedback and obstacles that could affect its progress (Storch, 2004), training students in peer feedback sessions (Min, 2006), how peer feedback activities should be executed (Bitchener et al.,2005), types of errors addressed in peer comments (Ashwell, 2000) and how feedback could affect students' subsequent writing in the short and long run. Many studies conducted the pre- and post-tests technique to assess the progress of students' writing before and after the experiment (Al-Hazmi and Scholfield, 2006). Most studies also compared peer feedback to teacher-written feedback and in some cases other types of feedback such as conferencing (Miao et al., 2006).

As far as the educational context is concerned, most of these studies were carried out in Asia. For example, Miao et al., (ibid)) led their study in China, Min (2006) did it in Taiwan, and some researchers like Bouyakoub (2011) studied the writing skill in an academic Algerian context and led a research that included university-level students. Besides, many other Algerian authors wrote about Algerian students' failure both in writing and official exams, Mellouk (2000) and Miliani (2001 and 2003).

The review of the literature clearly shows that, first of all, peer feedback research in the Algerian context is very scarce, and, secondly, although many studies followed the pre-test, post-test method to evaluate students' performance before and after an experiment, a very limited number of studies investigated if students' perception of peer feedback could have changed as a result of the experiment. Although this study does not attempt by itself to establish a relationship between students' performance and their beliefs, a field which could

benefit from more investigation, it can nevertheless recommend a template for future research where such a relationship could be thoroughly investigated.

With regard to the research gap already established in the literature review and summarized in the previous section, the purpose of this study is to identify the effects of ICT-supported peer review on EFL students' writing performance. In order to conduct an in-depth analysis and make inferences, varied the following questions were raised:

- 1. How can EFL learners be trained to review and evaluate their peers' written production (essays and reports) effectively?
- 2. To what extent is Moodle software an enhancement tool conducive to effective peer review?
- 3. Does peer review have any effects, whether negative or positive, on EFL learners' writing performance?
- 4. Are there any differences on EFL learners' writing attainments between the effects of Moodle-based peer review and those of peer review led in traditional classrooms?

The first investigates how EFL students perceive the various techniques of feedback, and it aims to reveal Algerian adult EFL students' preferences, attitudes, and beliefs, and if these students are going to modify their views as they are introduced to the non-traditional techniques of collaborative learning. The reason why the researcher is interested in EFL students' points of view is that their beliefs and preferences have been reported to have a

significant influence over their current and subsequent performance when they learn ESL writing, as reported by researchers such as Kepner (1991) and Ferris (2001).

Through the second, third and fourth research questions, the researcher also aims to investigate whether peer editing, when practiced within an electronic environment, may be more effective compared to traditional settings and have its impact on the students' level, of course those who will be involved in the experiment.

In order to collect the necessary data for the above research questions, the researcher planned to use purpose-built, non-standardized, semi-structured questionnaires that will be discussed in detail below (Appendix 1). As the second and third questions have a more practical nature, the researcher planned an experiment which involved entry and exit writing tests (Appendices 3 and 4) to assess students' performance before and after the treatment. The purpose was to discover if there would be any difference in the results of the experimental group and the control group. The researcher carried out fieldwork which extended for a whole semester and involved actual teaching in the university these EFL students were attending.

The results should give the researcher strong evidence to decide if the group trained to use online peer feedback performed differently from the control group. The hypothesis being questioned is that students in the experimental group would outperform their counterparts in the control group; the null hypothesis is that no significant difference in their performance would be recorded and the alternative hypothesis is that the experimental group would perform less well than the control group.

Finally, the researcher used a task-based, semi-structured interview (Appendix 10) to supplement the data gathered from questionnaires and to give an in-depth insight into the

subject matter (Issroff, 1994; Hacker D. & Sommers N. 2010). This qualitative method helps the researcher better understand the processes involved in the actual application of peer feedback during the experimental phase, as well as offering a better opportunity for respondents to elaborate on their answers in the questionnaire. Furthermore, the multimethodological triangulation achieved by applying both quantitative and qualitative measures serves the purpose of validating the results, where data produced by one tool could be cross-checked against data produced by the other tool. Triangulation is also a valid technique to check the consistency of the data gathered (Cohen and Manion, 1994). In fact, the interviews gave respondents more space to comment on their beliefs and experience.

## 4.2 Context of the Study

The main study was conducted at Ammar Telidji University, Laghouat, Algeria, from October 2015 to May 2016, during the first and second semesters. The statement and justification of the research problem were presented in the general introduction. In addition, an elaboration of the rationale for the study was presented in the same section in the review of the literature.

A briefer section about teaching English in Algeria has already been included in the literature review chapter. This part tackles issues more connected to the research population actually involved in the study rather than general statements about teaching ESL in Algeria. This part therefore contains detailed pedagogical descriptions of the participants of the study.

## 4.2.1 EFL in the University of Laghouat

Although all students who join the department are expected to have successfully completed at least eight years of formal education learning EFL as a requirement, few of them

actually achieve satisfactory results in their entrance exams when joining an Algerian university (Mellouk, 2000, Miliani 2001 and 2003, and Bouyakoub, 2011). As a result, the department has integrated basic remedial English crash courses (through tutorial meetings) for low-achievers in grammar, reading and vocabulary, speaking and listening, and writing to enable them embark on advanced courses in either linguistics or English literature. Although there is no English placement test on graduation, the information provided by the Department suggests that many students show a good level of progress, and some of those who took English level exams such as IELTS, TOEFL and the national exam (upon which international scholarships are offered by the ministry) have supported this assertion. Unfortunately official statistics are not available.

Although this might always be possible, the English department endeavors to graduate students with sufficient language proficiency, both written and spoken. All graduates are also expected to achieve a good level in academic English. For writing and composition, the Department requires all students to successfully complete six (one course per semester) compulsory courses in writing.

# 4.3 Sampling

Domain	Specialty	Level	Students		
			Male	Female	Total
Language and Literature	English	1 <sup>st</sup> Year	136	227	363
		2 <sup>nd</sup> Year	41	125	166
		3 <sup>rd</sup> Year	42	127	169
Grand Total			219	479	698

Table (4.1): Statistics of the English department students (Laghouat, Algeria) 2015-2016

The sample comprised 69 third year English students from the University of Laghouat. Classes were classified as Experimental or Control groups. 36 students were in the Experimental Group, and 33 in the Control group (Figure 5.1). For more details, refer to Appendices 2 and 9. The groups were taught by two male teachers. The enrollment at the department at the time of the experiment in October 2015 was 698 students (Table 5.1)<sup>18</sup>. The sample of 69 students (40.82%) was drawn from a third year university population of 169. These students were selected at random.

The sample represented 28% of all third year students (Department of English, 2015). There was a total of 63 girls and 6 boys participating in the experiment. Most students were aged 20-22 years, with a low of 20 and a high of 26.

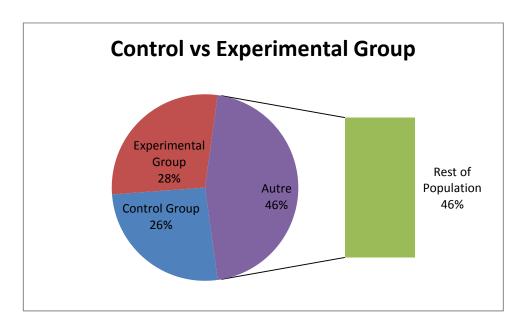


Figure (5.1): Control versus Experimental group: Number of participants

166

 $<sup>^{18}</sup>$  For more details concerning the official statistics by the Department/Faculty, see Appendices 2 and 9.

# 4.3.1 Experimental Group

The Experimental Group used special instructional materials designed by the researcher. Students learned to use the components of an analytic scale to evaluate writing for content, organization, structure and wording. Every student had his own username and password to have access to the platform. Usernames make of the participants appear unanimous, having usernames such as EFL1, EFL12 and so on.

## 4.3.2 Control Group

The Control group was composed of one third year class. These students studied the same components of composition as the Experimental group, but the teacher followed the curriculum and procedures outlined in the English programme. However, the teacher in the Control group was given the scale description for each unit. Both the Experimental and Control groups had 3 writing sessions a week. Each session is a 90 minute period.

#### 4.3.3 Personnel

The first teacher, a male, taught the control group. He graduated from the University of Setif, Algeria in 2001 with a B.A. in English, and from the University of Laghouat in 2011 with an M.A. in ESP. He had over 12 years' teaching experience at the high school level, with 4 years' experience at university.

The second, a male, taught the Experimental group. He received a B.A. in English education from the University of Algiers in 1991. He had been teaching high school English from 1991 to 2011. He received his M.A. in ESP from the University of Laghouat in 2011.

Since then, he has been teaching at the Department of English as a permanent teacher, where he worked as a part-time teacher for about 15 years.

## 4.4 The Design and Development of Tools

A multi-strategy research was conducted in this study, whereby different data collection methods were used to gather the necessary data during three different stages; tools included pre-test and post-test writing tasks, pre-experiment questionnaires, and post-experiment interviews with members of the treatment group. The first questionnaires helped obtain a general idea of students' perceptions of various types of feedback, and following stages of data collection enable us to see if students' perceptions and writing competency are likely to change by the end of the experiment. This idea of what students thought of feedback strategies as well as the introduction of peer feedback is captured from the subsequent questionnaire and interviews. However, the writing tasks help track students' progress and improvement in their writing.

#### 4.4.1 Justification of Choosing Data Collection Tools

This project follows a tradition of studies that employed the pre-, post-tests technique including Lundstorm and Baker (2009), Ellis et al., (2008), Al-Hazmi and Scholfield (2007), Min (2006) and many others, to compare students' progress either within a period of time usually in which an experiment is carried out with or without different treatment groups.

Semi-structured questionnaires were used in the first stage of data collection for the relatively large number of potential subjects (n=169). However, as the number of participants in the subsequent stages is considerably smaller, more qualitative means of collecting data were used including more open-ended questionnaires and interviews.

## 4.4.2 The Design Phase

Generally speaking, there are some considerations involved in the process of developing any data collection method. Mertens (1998) mentions the following steps to develop a data collection instrument:

- 1. Define the objectives of the instrument.
- 2. Identify the intended respondents.
- 3. Review existing measures.
- 4. Develop an item pool, i.e. resources for draft items, new measurement devices, adapting existing tools and/or adopting tools. (1998: 201)

It is also very important to think of an appropriate title for the instrument, because this is the first thing a respondent will see, especially if the instrument is a questionnaire. Many researchers (e.g. Cohen and Manion, 1994) have all stressed the importance of having a cover letter that contains the title and an introductory paragraph attached to the questionnaire, especially for ones to be distributed by mail, where respondents usually have little chance to ask the researcher for clarification.

Cohen and Manion (ibid) also mention that it is equally important to reassure participants of privacy and confidentiality in the questionnaire, especially when a survey asks questions of a sensitive nature; such assurances were expressed clearly in the body of the questionnaires and by the instructors themselves. Other important considerations include ensuring that the questionnaire is written in a language easily understandable to the intended respondents, and including instructions on how to complete the questionnaire.

The researcher also consulted other questionnaires from previous studies that investigated similar issues, such as Ferris (1999). No items were duplicated, because the questionnaire was specifically designed for the purpose of this study, but many ideas were adapted when required. In other words, the questionnaire was designed with Cohen's questionnaire in mind (later used by Ferris, 1999; and Min, 2006) but the questions used were chosen to fit the purpose of the study.

The survey was conducted in two stages:

a) the pre-experiment stage, when participating ESL student writers were asked about their beliefs, preferences, and attitudes regarding both traditional teachers' written feedback, the difficulties they encounter when writing, and the relatively new concept of peer feedback whether f2f or online; and

**b)** the post-experiment stage, when students involved in the experiment group were interviewed and asked to report their beliefs in writing, preferences, and attitudes, to find out if the exposure to these techniques in general, and training to adopt online peer feedback in particular influenced their perceptions and quality of their composition.

The researcher used Likert scale questions to determine students' attitudes. A number of concerns are usually involved with questionnaires that contain items of attitude scales and self-report measures. Cohen and Manion (1994) identify three major problematic aspects usually associated with questionnaires and interviews. They are:

#### 4.4.2.1 Subjectivity

This basically means ascertaining the truth of the respondents' reply. The researcher is therefore advised to spot responses that might have indicated exaggeration, consciously or unconsciously. The subjectivity of questionnaires and interviews also requires a clear distinction between 'opinions' and 'truth', as they are not necessarily interchangeable notions. However, if teacher respondents all agreed that a course book is very poor, and then this book is unlikely to contribute much to an effective teaching programme. The researcher needs to be realistic and sensible about evaluating data presented through questionnaires and interviews. Moreover, the researcher needs to employ common sense when applying a questionnaire which can be reflected in items such as quality of the source and possible hidden motivations, especially in a small-scale action research, when the researcher knows the subject helping them to evaluate the resulting data well.

# **4.4.2.2 Sampling**

Sampling, according to education research experts such as Scott and Morrisson (2006) is a very complex process. Comments and guidelines provided by these experts however were strictly observed when choosing a representative sample for the sake of this study. A simple random sampling technique was used in the first questionnaire because, to our knowledge, the research population was homogenous in most aspects, including linguistic background, age group, gender, educational level and proficiency.

#### 4.4.2.3 Intrusiveness

This is the third problem associated with questionnaires and interviews. These techniques can be described as intrusive in terms of the time consumed to answer the question, the unwillingness of respondents to answer questions, stemming from their belief that their

responses will benefit only the researcher and not themselves, or from the fact that there is no immediate feedback, as in the case with different types of questionnaires such as 'rate yourself'. Moreover, questions asked during interviews are threatening in every aspect, especially in terms of time needed, possibility of awkward or personal questions, and anxieties resulting from speculations on how the results will be presented and used.

There are yet more specific issues that have to be avoided in order to produce a sound non-standardized questionnaire, as mentioned in Brown and Rodgers (2002:143). They are included in Table (4.2).

1. Overly-long items	7. Double-barreled items	13. Biased items		
2. Unclear or ambiguous	8. Loaded word items	14. Items at the wrong level of language		
items				
3. Negative items	9. Absolute word items	15. Items that respondents are		
		incompetent to answer		
4. Incomplete items	10. Leading items	16. Assuming that everyone has an		
		answer to all items		
5. Overlapping choices in	11. Prestige items	17. Making respondents answer items		
items		that don't apply		
6. Items across two pages	12. Embarrassing items	18. Irrelevant items		
19. Writing superfluous information into items				

Table (4.2): Brown and Rodgers' Issues for Non-standardized Questionnaires

The questionnaire that will be used in the first stage of data collection is divided into three main parts (see appendix 1). The first section asks students general questions about their age, educational background, courses they have taken and suchlike. The second section asks more specific questions about teachers' written feedback in the form of a tendency scale to measure attitudes. The third section asks similar questions to the previous section, but with regard to peer feedback. The last two sections should reveal students' conceptions of the different types of feedback, which is the subject of investigation in this research project.

As the main purpose of the questionnaire is to investigate students' competence in composing, most questions are in Likert scale format which, according to Cohen et al. (2000), is helpful in terms of helping combine the opportunity for a flexible response with the ability to determine frequencies, correlations, and other forms of quantitative analysis. In other words, these rating scale items offer measurement with opinion, quantity, and quality, and therefore are very suitable to collect data for this research project.

# 4.5 The Development of the Questionnaire

Bearing in mind that the questionnaire was intentionally non-standardized, it was extremely important to achieve certain standards to render it valid. For instance, the questionnaire had to be fairly easy to use, simple and undemanding. A questionnaire should also be written in a way that never intimidates the respondents, neither in linguistic nor in technically complicated terms. Even if the purpose comes first, the questionnaire should also appear attractive, easy to read and to follow, and easy to answer. Cohen et al. (2000) recommend survey designers to make them attractive by using coloured ink, coloured papers, and different type styles. In this project it was decided that items and pages should also be numbered, a brief instruction should be included (see appendix 1), examples should be given before any item that might be confusing, the questions should be organized in a logical sequence so related items should be grouped together, beginning with interesting and

nonthreatening, factual questions, and the most important questions should not be left until the end.

All of these features generate user-friendliness, a very important characteristic of credible questionnaires. The early draft of the questionnaire underwent numerous editing processes, and was regularly reviewed in the light of relevant educational research handbooks and references, such as Cohen et al. (2000) and Brown and Rodgers (2002). Moreover, the advice of other researchers currently working in the field of education was sought prior to the pilot study stage.

## 4.5.1 The Pre-pilot Stage

This was an important step in the process of developing the questionnaire. The purpose of the pre-experiment study was basically to consult other well-informed researchers in the field about the data collection tools to be used. This process is known in the literature as the pre-pilot stage. The opinions and comments of twelve research students were gathered via an opinion questionnaire specifically designed for this purpose. The opinion questionnaire also comes in an electronic MS-Word format, which enabled the researcher to send it via e-mail to more participants than would be possible using only conventional means and regardless of their geographical locations. It contains both closed items along with an unrestricted space for further comments. However, to help get helpful yet specific responses, prompts addressing three major aspects of the non-standardized questionnaire were included. These aspects are the layout and appearance, the nature of the items involved, in terms of both content and type, and the time needed for completion. The guidelines and points to consider mentioned by Brown and Rodgers (2002) were also included.

The pre-pilot study has revealed some interesting findings about both contents and the appearance of the questionnaire. For instance, five of the subjects located some minor errors in terms of grammar, organization, and/or typography, which were all rectified accordingly. Almost half of the subjects had had concerns about some of the questions asked, and their main concern was that these questions did not necessarily apply to the targeted respondents, and therefore cannot be answered. As a result, these questions were rephrased to avoid asking for information respondents could not be expected to have. A similar number of subjects believed that the researcher should have included more questions, especially ones about students' past experiences with teachers. In fact, the researcher intentionally left a margin for students' further comments, but it seems that students could use some prompts to comment on their past experiences, which were included in the edited version of the questionnaire.

Few of the researchers also believed that it would be a good idea to have the questionnaire in Arabic instead (i.e. L1 of the target research population). An Arabic version of the questionnaire, according to one of the researchers, would be more convenient for those students whose English proficiency might be lower than others, and for freshmen if they will be included. The researcher was particularly concerned about the time factor. Poor time management results in surveys that take a very long time to complete, which are thus very likely to deter respondents from completing them, lead to them being filled in hastily and inaccurately (Cohen et al., 2000). The researcher initially sets a maximum time for completion of around 30 minutes.

#### 4.5.2 The Pilot Study

This was the last stage of developing the non-standardized questionnaire. Mertens (1998: 117) explains how piloting a questionnaire functions as: "...you try it out with a small sample to your intended group of respondents."

Piloting in many aspects is very similar to trialing, and a close inspection will reveal that both have the ultimate purpose of getting feedback that helps produce a better data collection tool. The main difference however lies in the source of feedback each is likely to produce as in the pre-piloting stage more experienced participants were the ones offering their views, while in the piloting stage participants who are likely to represent the research population are the ones involved in a study very similar to the actual one.

Cohen et al. (2000) and Mertens (1998) mention that piloting data collecting tools is a very important step towards validating any data collection tool and has many advantages. They mention that everything about a questionnaire should be piloted; nothing should be excluded, not even the typeface or the quality of the paper. Piloting increases the reliability, validity and practicality of the questionnaire. Additionally, piloting a questionnaire serves many functions including:

- ✓ to check the clarity of the questionnaire items.
- ✓ to gain feedback on the validity of the questionnaire items.
- ✓ to eliminate ambiguities or difficulties in wording.
- ✓ to gain feedback on the type (i.e. rating scale, multiple choice ... etc) of question and its format.
- ✓ to gain feedback on the attractiveness and appearance of the questionnaire.

- ✓ to gain feedback on the layout, sectionalizing, numbering and itemizing of the questionnaire.
- ✓ to check the time taken to complete the questionnaire.
- ✓ to check whether the questions are too long or too short
- ✓ to identify redundant questions.
- ✓ to identify commonly misunderstood or non-completed items.

# 4.6 The Writing Entry and Exit Tests

Writing tests, as already discussed, should help yield essential data required for analysis into the effectiveness of different feedback techniques. However, many experts in educational research (e.g. Cohen et al, 2000 and Ginsburg 2010) stress the fact that the use of tests in research raises a number of ethical concerns. For instance, many researchers have reported that individuals may suffer from anxiety in testing situations. It is therefore the researcher's responsibility to elicit participants' best performance, while minimizing their anxiety if they plan to use a test as part of the data collection process. This task will be involved in phase three of data collection, and will be discussed in detail in a later section. The evaluated pieces of writing were new writing tasks instead of text revisions, especially important with the exit test. Both content and grammar errors were addressed, as shown in the results obtained (see chapter 5).

#### 4.7 Interviews

Interviews were the last stage of data collection and were supposed to supplement and give an in-depth account of data already generated by the questionnaire. Most research manuals mention that interviews and questionnaires are two very accepted methods for

collecting data in educational research, and such extensive reviews of interviews give a clear idea of how they best function in this situation (e.g. Radnor, 1994).

One important step towards developing the questions in the interviews is what Gillham (2000) calls 'trialling the interview questions,' which, despite many similarities, is different from 'piloting', a more advanced and mature level. In fact, trialling in a way resembles what has been already described in the earlier questionnaire section as the pre-pilot study, in the sense that both were early stages in developing data collection methods for the inexperienced researcher. Eventually, having reviewed all the available interviewing options and the unique needs of this project, the researcher imagined a scenario of how the interviews would have been conducted and what issues were to be included. The scenario was shown to two research students who commented on the prompts, timing, topics and execution.

The interviews (see Appendix 10) subsequently took a semi-structured, one-to-one format to best meet the requirements of the study. Interviews also observed a more inductive logic, as opposed to deductive logic, whereby theories and cognitive principles would emerge from the data, or in other words moving from the specific to the general. Research methods literature suggests that inductive logic is more suitable for arguments based on experiences or observation as the case here (Gillham, 2000 and Cohen et al., 2002).

#### 4.7.1 Reflections on the Interviews

My interviewees (Appendix 10) were all students and according to Tierney and Dilley (2001), interviewing students is of great significance to include them and their views into the learning process. They also predict a change in the way interviews are being conducted and the type of respondents included in educational research. In fact, they take the inclusion of

students in research as an example of this change because until early 20th century, students' views were largely ignored.

Apparently, before I started interviewing students, I had to consult manuals in educational research including Gillham (2000) and Cohen et al., (2000), to review various types of interviews and to figure out the best possible option of interviewing participants of this study.

Careful preparation plays an important role when it comes to the successfulness of the event but I was also aware that interviewing skills such as the ability to prompt questions and to control the discussion in a smooth and timely manner are equally important traits of any interviewer. Being an unexperienced interviewer, I acknowledge that these skills in no small part come with experience rather than reading and training, and I therefore believe there is still some margin for me to improve my interviewing skills.

In all, I have learned how to respect the ethics of educational research including students' privacy and trying to present their ideas in their words. I have also learned how to balance what I – as a researcher – want to investigate with what issues students want to raise within the available time limit. Asking prompts, eliciting stories, asking follow-up questions while trying to keep the interview interesting are important aspects that I might have started to learn but want to develop further more.

#### 4.8 The Design of the Course

In designing this course I had to draw on both my experience as a teacher of writing and on existing theories of teaching writing. In other words, I was aware that I needn't reinvent the wheel but that I could select and develop existing ideas to suit my students' needs and context.

This approach is supported by Graves when she says: "Both the efforts of others to provide models and the teacher's own experience and understanding of that experience are part of how teachers make sense of what they do." (1996: 2) Hence, on this premise I set out to design the writing course on which the present study is based. One may wonder why a writing course?

# 4.8.1 Why a Writing Course?

**a.** Algerian students who opt for English as a major at university will have had almost no strategy-based instruction in EFL writing at university. Therefore, a sound intervention, which would give them a clear idea about what writing in English as a foreign language involves, becomes a priority.

**b.** My proposal of undertaking the study while teaching at the University was welcomed because there was a substantial need for new writing strategies in the English Language Department.

c. Students seem to encounter substantial difficulties in writing academic essays in English. It is not uncommon in Algerian universities to find teachers who complain that their students' writing is well below the required university level, and also students who moan about their inability to write successful essays to meet the expectations of their lecturers. This problem with EFL writing is particularly felt by students who choose English as a major at university.

#### 4.8.2 Course Objectives

**a.** The intervention was meant to develop third year students' academic writing skills in ways which would benefit them in their academic studies in the English Language Department.

I believe that if students learned how to go through the different steps of writing collaboratively through peer intervention, they would be well prepared to write long essays.

**b.** In this six-month course, students were exposed to both theory and practice with a view to process writing, producing clearly organized and simple essays.

The program aimed at encouraging students to focus their attention on producing paragraphs and essays following a specific rhetorical pattern; the pedagogical approach was also an attempt to make use of the best elements of the process approach with a view to achieving a better product. Students were taken step by step through the various stages of the writing process and their awareness was raised through activities of writing, rewriting, and working collaboratively to provide feedback on each other's writing using a non-traditional environment. In other words, feedback is supplied within a technology-shaped environment, in our case the Moodle platform..

Title of the Course:	EFL Assignment Writing and Peer Review via Moodle		
<b>Date of Introduction</b>	October 16th, 2015		
<b>Course Duration</b>	6 Months		
<b>Department Responsible for Teaching</b>	Department of English,		
	University of Laghouat, Algeria		
Teacher's experience	25 years		

*Table (4.3): Pedagogical features of the writing course* 

More important, the nature of the course (Table 4.3) can also be explained in terms of two important characteristics of the process approach: "awareness" and "intervention". The former means that students are made aware that writing is a process, and that different

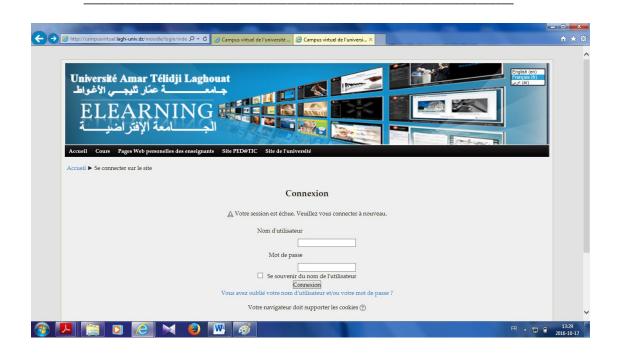
processes can be used for different types of writing (Susser, 1994). The latter, "intervention", is based on the fact that writing is a:

"complex problem-solution process. This viewpoint provides a useful orientation to writing instruction. It could enable teachers to intervene at points in the writing process that could do writers the most good as they are actually engaged in the act of writing." (Flower and Hayes 1981: 55)

In this way, through constant writing practice, the aim was that student writers would become aware of the process nature of writing, with my intervention taking place at different stages through providing appropriate input and feedback.

## 4.8.3 Pedagogical Design

An account can be created for every participant provided he disposes of an e-mail address, as a requirement. Based on this, the researcher created accounts for his students. As mentioned earlier, they were given anonymous usernames and passwords (eg: username: m.dalimo, password: 11Dalimo!!) to assure confidentiality and privacy. Participants get access to the platform through the site of the University of Laghouat, http:// lagh-univ.dz. Then, by clicking on the "campus virtuel" icon, they are within the following address: <a href="http://campusvirtuel.lagh-univ.dz/moodle/login/index.php">http://campusvirtuel.lagh-univ.dz/moodle/login/index.php</a>. Within the platform, they can choose either English or Arabic for displaying data, as indicated in Figure 4.2.



*Figure (4.2): Interface of the writing course* 

As soon as the participant provides the correct username and password, a page is displayed with the names of the course and teacher responsible for (Figure 4.2). He/she is required just to click on the title of the course icon (EFL Assignment Writing and Peer Review via Moodle) as shown in Figure 5.3, and then the task with the assignment title are displayed.

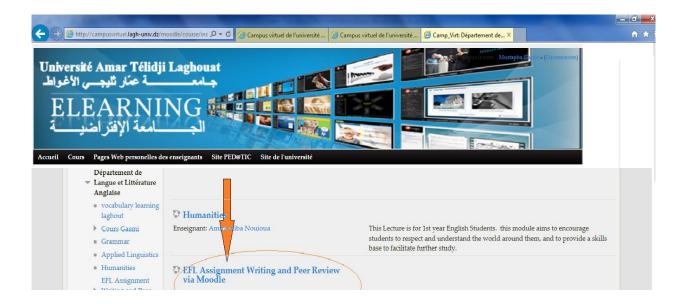


Figure (4.3): Name of the course as it appears online

Through the assignment, the participant is provided with the question (topic), the requirements (essay type and word length) as well as the objectives behind the question (eg: the objectives behind the first task is to enable the students to write a 300-word essay using a variety of present and past tenses) (Figures 4.4 and 4.5). Participants are also invited to comment whatever composition as soon as it is uploaded.

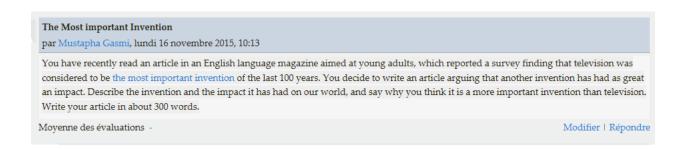


Figure (4.4): The first online writing task

To start composing, the participant just clicks on the title of the task that appears in blue as indicated in Figure (4.5). He/she can either use any texting software such as Microsoft Word then copies and pastes the composition on the space reserved for the text within the platform, or he/she can simply use the platform for this reason.

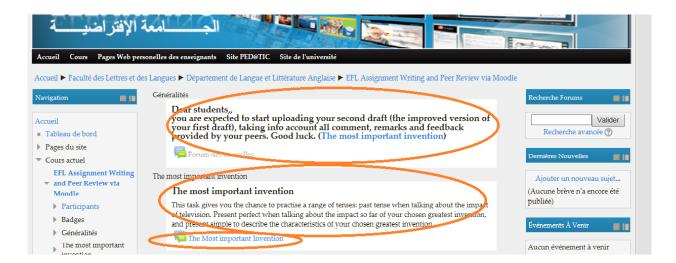


Figure (4.5): The First Online Writing Task: Instructions & Objectives

On October 23<sup>rd</sup>, 2015 participants started working on the first task entitled "The Most Important Invention". Figure (4.6) shows the first composition written by the participant whose username is EFL25. Changes and modifications are allowed, but as soon as peers start commenting and providing feedback, the writer can neither delete nor modify his/her work. The "Répondre" icon is reserved for peers to comment and provide feedback (Figure 4.6).

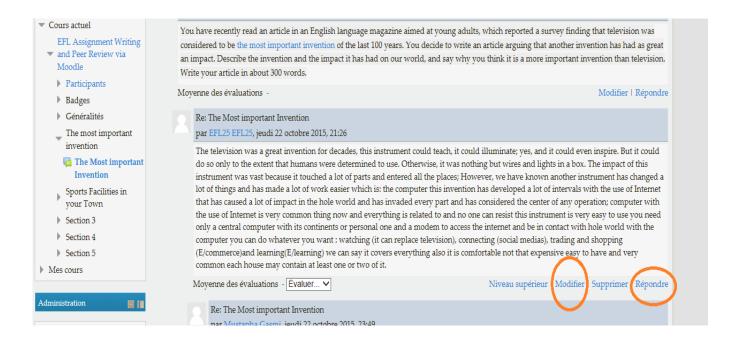
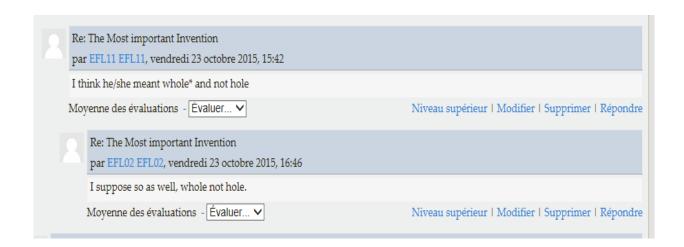


Figure (4.6): Icons reserved for commenting/providing feedback

The same day, October 23<sup>rd</sup>, participants started revising and commenting on EFL25's composition (EFL11 and EFL02's feedback in Figure 4.7).



*Figure* (4.7): *Samples of the first responses provided by participants* 

Some other features of the course are:

## 4.8.3.1 Consciousness-raising Activities and Strategy

- **a.** The course used a process-based approach and taught writing in a straightforward manner. The first sessions consisted of interactive mini lectures including some writing whose aim was to help students see how paragraphs and essays were organized using a specific rhetorical component. Issues of unity, coherence, content and organization were also discussed and enhanced through subsequent practice exercises.
- **b.** The course moved on progressively from the teaching of paragraph into essay structure.
- **c.** In addition to enabling students to use the various strategies of writing, such as, narrowing down a topic, brainstorming, planning, writing and revising drafts, the course aimed at developing students' confidence and making them, eventually, more responsible for their writing.

**d.** Revision strategies were the main focus of the course. Therefore, three types of feedback are used: student self-monitored feedback using annotations; peer feedback and teacher's written comments. There was more focus on the second type, peer feedback, which was new to the students. Teacher written feedback was the only common type of feedback.

**e.** The topics of exemplar texts and tasks were of a current and general nature. The topics of the assignments were assigned by the teacher. However, students were also encouraged to choose their own topics for extra practice.

**f,** Since the focus was on collaborative learning and peer editing within an electronic environment, students were reminded that their production will appear anonymous. No need to be ashamed or to fear from making mistakes while composing.

# 4.8.3.2 Training Students to Give Feedback

Research has shown that when responding to their peers' writing, students tend to focus more on surface and mechanical errors referred to as 'lower order concerns' LOCs, rather than the overall development of ideas and organization, known as 'higher order concerns' (HOCs) (Keh, 1990). It is usually difficult to get students to respond to their peers' texts by focusing on higher order concerns; the activity may not always be successful. Yet, as Keh puts it "the rewards are worth the problems or unsuccessful sessions". (ibid.: 296)

In line with this, some studies (Berg 1999) have confirmed that by training students to be good peer feedback providers the rewards would be even greater. A study carried out by Stanley demonstrated that the participants who received 'coaching' showed a substantial amount of involvement in the peer evaluation task; they produced good communication about writing, and clear guidelines for the revision of drafts (Stanley, 1992). Students in this study

were exposed to a fairly lengthy coaching procedure, which consisted of role playing and analyzing peer evaluation sessions, discovering the characteristics of effective communication, and studying the genre of student writing (Stanley, 1992). In order to analyze the effectiveness of the coaching, peer evaluation sessions and student writings were analyzed. It should be noted, however, that this coaching is time-consuming and might not be possible in contexts where time constraint is a factor.

#### 4.8.3.3 Other Features of the Course

- a. The role of grammar in writing accurately is recognized, but because of the time limit, students were encouraged to make use of what they learned in their grammar course in their writings.
  - b. A review of transition words was made.
- c. A review of punctuation marks use was done and exercises were provided for students to do as homework.
- d. A written form of peer feedback was employed as a basis for discussion and in order to facilitate the students' task of active exchange of feedback, they were given paragraph and essay feedback sheets to use in responding to their peer writing.

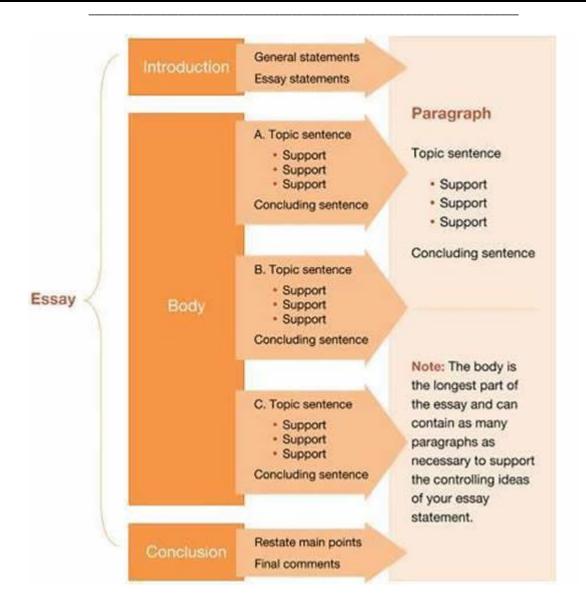
#### 4.8.4 Essay Writing

The aim of the writing course in this study was to prepare students for their academic university studies for which they would have to produce expository and argumentative writing. Students started with writing a paragraph in which they were taught to make their standpoint clear in the topic sentence i.e. they had to show whether they were for or against a given issue.

In developing the topic sentence students were expected to use at least one counter-argument which they presented in a clearly stated supporting point, which was in turn developed through the use of supporting details. Then, students presented at least two supporting points in which they argue "for" a certain idea by elaborating and providing enough supporting details with a view to convincing the reader. Then, a concluding sentence was written in which the writer made sure once more that his/her standpoint was clearly stated either by summarizing the points made in the paragraph or by paraphrasing the topic sentence.

The type of writing students were exposed to in this program can be best explained in terms of what Axelrod and Cooper call "reasoned argument" (2002: 445) in which student writers learn to support their positions rather than just state them. Writers also learn to respect others' right to disagree with them as they may themselves disagree with others. Moreover, students are asked to write about controversial issues which have no "right" or "wrong" definite answers.

Paragraph writing was meant to provide students with adequate preparation for essay writing. Students were made aware of the fact that if they managed to write a good paragraph, writing an essay would be an easier task. Student attention was drawn to the similarities between paragraph and essay writing. The following diagram, which was adapted from Oshima and Hogue (1999), was distributed to the students in order to show them the relationship between paragraph and essay writing. Worth to be noted, students were reminded that the basic constituents of a paragraph and those of an essay are the same (Figure 4.8):



*Figure (4.8): Constituents of a paragraph/essay* 

Prior to the study, preliminary data were collected. The chairs of the English departments made student essays on file available to the researcher. This material was analyzed for writing quality on the dimensions of content, organization, structure and wording. In addition to this, a number of third year students wrote two compositions on topics suggested by the researcher. Third year curricula were obtained from the administration, and the knowledge, objectives and skills to be taught were incorporated into the programme of study designed for the

investigation. Finally, the researcher held meetings with English faculty to explain the purpose, characteristics and importance of the study, and exchange information.

#### 4.9 Procedures

This section deals with procedures that officially pave the way for carrying out surveys and interviews on one hand and surveying the different steps followed while administering research tools.

#### 4.9.1 Official Procedures

One of the formalities of the research project was to get formal approvals from the educational body where the study was conducted. From an administrational perspective, the researcher was required to obtain formal consent from the English Department, University of Laghouat, where the study was planned to take place before conducting the actual study. The formal procedures generally take a considerable amount of time, but since the researcher is a permanent teacher at the same department, he fortunately has contacts in the department who were willing to speed this process.

#### 4.9.2 Procedures for Pre-Treatment Questionnaires

As already stated, the first questionnaire was distributed to a wider research population of EFL students. This comprised 69 students, all of whom were attending and/or have attended a writing course. The questionnaire was carried out at an early stage of the study and more closed in nature. It involved participants from the experimental group (n=36, none of whom were rejected) and because of the limited number of subjects, more qualitative open-ended questions were used. The criteria for choosing subjects for both questionnaires was straightforward and simple; as already explained, every third year student in the English

Department who was registered in at least one specialized EFL writing course was a potential subject.

The researcher, with the help of two instructors from the Department, distributed the questionnaire in paper-based format. It was more comprehensive and addressed a range of issues mostly related to the subject of the study, teacher and peer feedback in ESL writing classes. The questionnaire items came in different forms including the Likert scale, dichotomous and multiple-choice questions. The questionnaire was non-standardized, structured, and it was in English. As the researcher was aware that some concepts were probably new to the students, detailed definitions and explanations were provided to accompany the questionnaire.

As for the interview, it was concise and focused on the topic of the research which was about the students' experience of collaborative writing and peer feedback. In other words, no additional questions, apart from peer feedback and teachers'/peers' comments were included. As noted already, because of the limited number of participants, more qualitative measures were used by means of more open-ended questions. The interview was designed to serve two purposes:

- 1) to report on any difference in attitude towards both teachers' and students' peer correction, as compared to the findings of the first questionnaire; and
- 2) to find out more about students' experience of incorporating peer feedback and collaborative writing, and how they performed and responded to each other during the experiment, an aspect which was further investigated using interviews (Appendix 10) with selected representatives from the group.

## 4.9.3 Entry and Exit Tests

As part of the study, the researcher taught 90-minute composition classes, which all of the subjects of the experimental group were part of. These were taught for 3 times a week for about four weeks, totaling just over 12 classes. In these classes the students were introduced to peer feedback techniques, as well as the typical teaching methods they and their counterparts in the control group were exposed to by default. Students of both the control and the experimental group were distributed two sections of the same module. However, to sideline any undesired interference from the class, a decision has been made not to make the students aware that a research project was in progress until a later stage of the research, when some of them were interviewed about their experience. At the start of the project, I was introduced to the students as their teacher. My duties as a teacher included all the usual teaching workload, such as planning classroom activities, grading the students' assessed work, deciding on which topics to be covered, and for providing feedback. Teaching was frequently monitored by another teacher in the Department whose role was to continue the job when I finish my study.

The pretest was conducted during the first week of the course, when students of both sections (i.e. C1 and C2, n=69) were asked to write an essay in which they compare / contrast two individuals they know or have met and observed (Appendix 3). They were notified that this was not an assessed task but one which aims to identify any writing problem they might have had. The students were also told that they could consult their dictionaries and textbooks if they wished but they could not exchange ideas or consult one another during the test. Students were also given the chance to receive detailed comments on their paragraphs, either in printed form or via e-mails if they preferred. The comments covered both form and content issues and another writing instructor reviewed them before handing them back to the students (see

Appendices 3 and 4). Taking the checklist (adapted from Cohen, 1994) (Appendix 13) participants were provided with into consideration, specific types of errors were identified and were used for assessment purposes, as well as for measuring any changes between this task and the forthcoming exit test. These factors (Table 4.4) included content, rhetorical organization, and organization from a 'content' perspective, and spelling, grammar, punctuation and run-on sentences as far as 'form' was concerned, which provides an 'analytic scoring approach' as defined by Weigle (2002). The content comments provided by the researcher were qualitative in nature, and hence might be occasionally inconsistent and both the researcher and the other teacher had to reach a decision. In order to minimize any possible interference caused by bias or subjectivity on the part of the assessor, the other teacher reviewed and approved the comments the researcher provided. Local errors, on the other hand, were easier to identify and account for in a quantifiable way.

- ✓ Content: depth and breadth of coverage
- ✓ Rhetorical structure: clarity and unity of the thesis
- ✓ Organization: sense of pattern for the development of ideas
  - ✓ Register: appropriateness of level of formality
- ✓ Style: sense of control and grace
- ✓ Economy: efficiency of language use
  - ✓ Accuracy of meaning: selection and use of vocabulary
  - ✓ Appropriateness of language conventions: grammar, spelling, punctuation
  - ✓ Reader's understanding: inclusion of sufficient information to allow meaning to be conveyed
  - ✓ Reader's acceptance: efforts made in the text to solicit the reader's agreement, if so desired

*Table (4.4) Features to be considered in assessing writing ability, from: Cohen (1994: 307)* 

As for the exit test (Appendix 4), students from both groups were told in advance that this was an assessed writing task that would be part of their overall score. More time was given to complete the task, i.e. 45 minutes compared to 30 minutes for the entry test (Appendix 3). The question was again taken from the textbook which was again mainly argumentative. It

required students to compare and contrast two people they know or have met, and it clearly required them to support their ideas with proper examples, reasons, and evidence.

## 4.9.4 Procedures for Conducting the Experiment

The Experimental group followed a programme designed by the researcher. Students worked collaboratively to edit, respond to, and rate their own compositions and those of their peers. Sessions were devoted for teaching them the components of the operation, how to use the platform (Moodle) for editing, responding, commenting and providing feedback. The Control group was taught the same objectives, but followed the traditional method: students working individually and receiving feedback from their teacher. In other words, students sometimes also worked in groups, but their compositions were evaluated by their teachers.

For the Experimental group, one essay went through various drafts (Process approach to writing) and was evaluated by the group using the edit/comment option in Moodle platform. The essay at the end of the unit was graded by the teacher using the same rating scale. This was the basic plan for all units.

#### 4.9.4.1 Experimental Group's Activities

During the first week, a writing sample and objective tests in grammar and mechanics were collected from both groups. After this, preliminary work was done to develop a sense of audience. Students wrote and read paragraphs of their own to their peers within the classes. This enabled all group members to be familiar with the rating scale. Then, the Experimental group worked on the assignments, but once the flow of communication started, students only shared their production if they wished. The upload of essays continued throughout the programme; in all students were able to upload four essays. The programme really started from

the second week. The unit on content was composed of four phases. During the first phase, students were taught the criteria for essay evaluation. During the second phase, students learned to distinguish between well and bad evaluated compositions. During the third phase, students rated sample papers in groups. Students made oral and written comments on each paper in workshop fashion. Writers could then rewrite papers to improve their production. A rating for each paper was determined by the group, and the teacher observed and guided his students. His guidelines became part of the final grade for the course. During phase four, participants started using the software (the Moodle platform). They internalized the criteria, wrote and uploaded their compositions and responded to their peers' compositions. They revised compositions for two qualities: first for organization and then for content. For the unit on structure, students were encouraged to edit peers' essays for grammatical and mechanical errors. Students worked also on wording.

The experiment ended with a post-test conducted during the last week of the programme. Students wrote a final composition.

# 4.9.4.2 Control Group's Activities

During this period, the Control group wrote the same pretests as the Experimental group. Then teachers reviewed the writing process, and students did writing awareness exercises. Students did a unit on content. They worked through the various phases of the writing process, writing and rewriting drafts. They built and displayed their production. For the unit on organization, students completed exercises, and had their teacher observe the work. Later, students did freewriting exercises. Work continued on the use of transitional devices and exercises to improve student composition skills. Students then did sentence-combining

exercises and a test on vocabulary. The final unit was on wording. Students wrote descriptions of persons, and participated in palm-reading exercises to sharpen their observation skills. They wrote essays and did exercises in grammar. During the last week, students wrote alternate forms of the tests in grammar, mechanics, and a writing sample as post-tests.

#### 4.10 Fieldwork

Gall et al. (1996) and Cohen et al. (2000) highlight a number of issues involved in dealing with the inclusion of an experiment and control group in a study. The participants are subjected to different treatment conditions and thus should not be treated equally. The treatment group is likely to receive special training, while the control group receives either nothing or a conventional programme. In this research project, the experiment group will be trained to adopt the relatively new online peer feedback technique in their writing sessions, while the control group will receive normal teaching sessions and feedback from their language teachers. Some researchers suggest that the control group subjects will be treated unfairly by not receiving special training, and thus will not benefit from the perceived advantages of the training programme. However, subjects of the control group can benefit from the perceived advantages of the special training once the data collection stage is completed.

## 4.10.1 The Design of the Writing Tasks

Two issues were addressed when the researcher decided to include writing tests as data collection tools, which were what topics to choose, and what assessment procedures to follow. As for the former, it was an easy decision because on both occasions the topics students were asked to write about were predetermined by the syllabus in hand (see appendix 11). For the latter, however, the researcher applied a number of scientific measures to ensure that the

assessment was conducted in a way that first of all provided the necessary information required in this research project, and secondly gave a fair and accurate grade to the respondents.

## 4.10.1.1 Peer Feedback Group Training

In order to prepare the students for the upcoming task, and also to better qualify them to actively engage in online peer feedback sessions, an extensive induction week was dedicated to familiarize them with the upcoming peer feedback sessions. More details about the significance of this procedure and what points to consider have been discussed in section 3.2.2.6 (introducing peer feedback) in the literature review chapter. Preparation procedures followed similar examples by Lundstorm and Baker (2009) and Min (2006). They included the tasks of briefing students about collaborative activities, forming groups, introducing the types of activities and methods to be used, and introducing checklists (Appendix 13). Students were also given better access to the researcher than just during fixed formal office hours (i.e. via emails and more office hours during that week), in case they had queries or other issues before they began peer sessions. Part of the briefing procedure included informing students about different types of peer responses which are prescriptive, interpretive, and collaborative (Min, 2006). They were also made aware of different types of errors they will be dealing with which, in crude terms, are local issues as compared to global ones. Finally, the attitude of their comments was also brought to students' attention, which basically requires balancing praise and criticism at both ends of the scale. However, as Lockhart and Ng (1993 and 1995) maintain, peer training should be a constant development process, hence the researcher repeatedly encouraged students to raise any issues via e-mails or face-to-face meetings as they progressed in their writing class. Students' performances were closely-monitored, and if issues that could affect peer response were identified, they were addressed as soon as possible.

## 4.11 Methodological Issues

Like every scientific research, this research project rigorously follows ethical considerations throughout its different parts in their entirety. It is especially important to stick to such considerations when it comes to dealing with human participants. It is crucial to mention all of these ethical issues, which can all be grouped under this heading, but in order to make ethical concerns easier to spot; they are presented in the designated sections of the data collection methods, along with recommended solutions to minimize possible negative effects.

Generally speaking, the data collection methods (questionnaires and interviews), are always considered as an intrusion into the lives of the respondents in terms of the time taken to complete the task, the level of sensitivity of the questions, and/or the possible invasion of privacy (Cohen et al., 2000). It is very important therefore to assure the privacy and anonymity of participants involved in the study when possible. Participants should provide their informed consent before participating in the study, which is what the researcher tried to adhere to throughout the research.

## 4.11.1 Validity and Reliability

The validity and reliability aspects of any data collection method used are of great significance to the findings of any scientific research. Moreover, validity and reliability issues serve as guarantees of the results of the participants' performances. Weir (2005) mentions that the educational bodies that provide language-testing services, such as Cambridge ESOL and Educational Testing Service (ETS) TOEFL have seriously and constantly addressed the reliability and validity aspects of their tests. They have also started addressing the legitimacy of the socio-cognitive elements of validity as much as they devoted attention to other reliability

aspects. Weir (ibid:11) declares that: "...the provision of any satisfactory evidence of validity is indisputably necessary for any serious test."

The concept of validity has been of great concern to language researchers. Mertens (1998) argues that validity is the most essential consideration in test evaluation. According to Messick (1992: 742) "validity in its broader context can be defined as "nothing less than an evaluative summary of both the evidence for and the actual – as well as potential – consequences of score interpretation and use.", However, the more conventional definition of the validity of an instrument according to Mertens (1998: 292) is: "the extent to which [the instrument] measures what it was intended to measure."

As for content, it is worth mentioning the words used by Meterns as he mentions that:

Content validity is especially important in studies that purport to compare two (or more) different curricula, teaching strategies, or school placements. If all students are taking the same test but all the students were not exposed to the same information, the test is not equally content valid for all the groups. (1998: 294)

This study actually investigates two different treatments of ESL students where the control group receives typical teaching while the experiment group is introduced to modern teaching methods, namely collaborative learning, to prompt them to produce peer feedback.

Gall et al. (1994) mention that one of the criteria for judging experiments is population validity. By definition, population validity is: "...the extent to which the results of an experiment can be generalized from the sample that participated in it to a larger group of individuals, that is, a population." (Gall et al., 1994: 217)

The concept of population validity is closely related to the process of sampling in different types of quantitative research. In this research project, the researcher selected the sample randomly to correspond with the defined population for which the generalization of results is required. The sample should be sufficient in size, which in turn reduces the probability of having different characteristics from the population from which it was drawn. The sample error in the case of the first questionnaire should be very low, and in the case of subsequent tools almost nil, because all of the participants were included.

Scoring procedures for writing assessments followed recommendations by Weigle (2002), an analytic assessment-based rating procedure used by Lundstorm and Baker (2009), and the grading rubric used by Paulus (1999), to ensure the reliability and validity of the rating practice. That includes defining the rating scale, and ensuring raters use the scale appropriately and consistently. Rating followed an 'analytic scoring approach' which, compared to the other two approaches commonly referred to in the literature ('primary trait scoring' and 'holistic scale'), look at the scripts from a range of features including, in my case, content, organisation, cohesion, vocabulary, grammar, and mechanics, in addition to the final overall score.

In terms of reliability, Wiegle (2002) mentions that an analytic scale is more reliable than the holistic scale. Additionally, this type of assessment is more suitable for L2 writers, as different writing abilities develop at different rates. On the negative side, an analytical approach is usually more time-consuming and expensive, but in my case it was possible to implement this measure primarily because of the small number of participating papers involved. Even with a higher number of papers, modern electronic programmes that quantify and categorize different errors would ease the performance of an analytic scale rating.

As a reliability measure, all essays were graded by two experienced raters, the researcher and another writing teacher in the department, and the different overall scores were then

averaged if possible. In most cases, the difference in the scores did not exceed one point, and in the few cases where the difference was greater than one point, the two raters discussed the disputed aspects for giving a particular grade before agreeing on one.

At the department, students were assigned to regular classes by computer at the beginning of the school year. The two groups were regular classes and thus randomization was assured.

Attempts were made to schedule classes at the same time to reduce the effect of external events on the results of the experiment. Both groups met at the same time, so that events that affected one group would, presumably, have affected the other group.

Students responded to standardized tests administered under formal conditions by the testing officer of the local university, assisted by the classroom teachers. The following efforts were made to minimize the influence of testing.

- First, the class teachers were present during each administration of the tests and served as proctors.
- Second, there were attempts to make conditions as normal as possible in order to reduce test anxiety.
- Third, post-testing was incorporated into the normal examination period of the schools. In fact, the post-tests for the programme were the school examinations for the two classes, and the compositions and exercises done during the study were the components of the grade for the course. -Pre-test scores also counted in the determination of the final grade.

Both programme and control group students and teachers were aware that they were taking part in the testing of a new programme. The importance and the relevance of the study were explained to both groups. This was an attempt to control for a possible undesired effect. Since the programme classes used specially prepared materials and wrote essays, this special attention could, by itself, have had some positive effect on student performance. The programme materials were to be treated as confidential and were not to be shared with other teachers or students. The Control group teacher displayed much enthusiasm. He kept the researcher informed about class progress and was eager to discuss techniques and methodologies. Here, the John Henry effect seemed to be operating.

#### **4.12 Data Collection and Analysis**

In this section, the procedures performed at every stage of the data collection process are briefly described. This is followed by a description of the methods and tools used to analyze the data. The following graph (Figure 4.9) gives a visual idea of who were involved at which stage followed by more specific sections on each stage.

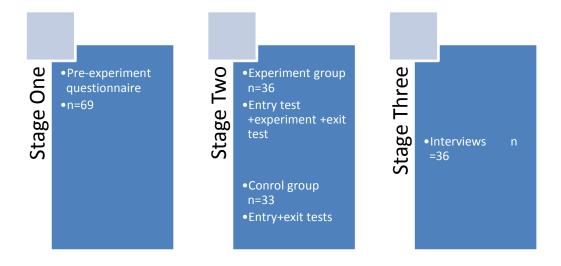


Figure (4.9) Data Collection Tools and Stages

The researcher sought the cooperation of the English department in laghouat University, particularly from instructors who teach writing courses in it. All students registered in all writing classes were contacted via their respective instructors in the first questionnaire and were asked for their voluntary participation in the study. Students were assured that the information they provide would be made available only to the researcher and for the purpose of the study.

As for the experiment, students who registered in the course were divided into two groups. There has been no influence of the teacher as to which group a student chose, i.e. students chose their sections according to their preference of the time each class starts. Out of the 69 total registered students, 36 chose section C2 (which later became the experiment group) and the remaining 33 chose section C1 (the control group). Some students from both groups eventually dropped the course so section C1 ended up with 29 while 26 completed the course in the other section.

Students in the experiment group received feedback from two sources which were the teacher and their peers in a form of comments via Moodle platform. Students worked collaboratively within this online environment. They in fact worked in an anonymous atmosphere, no one knew who was who since they were given by the researcher the usernames and passwords to have access to the platform. Members of the groups played different roles at different sessions. In each assignment, students wrote and uploaded their composition while the others provided their comments to their peers' writing leading synchronous discussions. They had to respect deadlines set by the moderator (researcher). In each assignment, the procedure was similar to that of the previous session. Most sessions lasted between 6-10

days, including time required to write, revise, reconstruct, comment and produce the final draft in a paper form to be delivered to the teacher.

During the training period, the teacher handed out checklists (Appendix 13) to the students to provide feedback. Filling out the checklist was not a requirement and no marks were assigned to this task but students nevertheless were encouraged to follow the guidelines in order to keep their comments consistent with what is expected from the course. The checklist also provided evaluators with a platform on which they can justify their decisions about their peers' writing. The checklists also provided a material of discussion for the groups. Both local and global errors were looked at in every session although students reported that they focused more on linguistic errors whether they give or receive feedback. As for the moderator (teacher), he most of the time logged in to control and guide the operation. He also gave comments to encourage participants.

The exit test (Appendix 4) of both groups was the product of individual work and students did not receive feedback from their peers nor their instructors. This was a marked task and students were aware of this. The subsequent interviews (Appendix 10) were individual, one-to-one that lasted between 20 –30minutes each. They were all conducted shortly after the exit test (Appendix 4) and included students from the experiment group. To make the interviews as natural and as relaxing as possible, they were carried out in both languages English and Arabic (see section 3.2.3).

# 4.12.1 The Treatment of Online Peer Feedback Group

When the students who registered for the course had been distributed into two sections, the researcher randomly chose section C1 as the experimental group, while the other section,

C2, was taken by another instructor from the Department, and was considered to be the control group. It is important to note that the choice of sections was left to the students themselves (i.e. students were not chosen based on their age, proficiency or any other factor that might later affect their performance). It has already been mentioned that the researcher and the instructor of the other section had to cover the same material and meet the same course objectives, although how each instructor did that was left to them. This included choosing the teaching methods and approaches. This was an important factor that the researcher exploited, to integrate peer feedback within the experimental group.

The online peer feedback group received special training as part of the research project. For example, their peer-reviewed exercises were completed with the help of peer assessment grid. Students were also trained to provide feedback using a checklist (see appendix 13) that was adopted from Miao et al. (2006) and Min (2006). The use of the checklist in the peer feedback group is a common practice in ESL writing classrooms (Hyland, 2003).

Although some studies have raised questions about the use of checklists in peer feedback activities (c.f. Al-Hazmi & Scholfield, 2008), arguing that it actually imposes the teacher's agenda on the students' responses, students at lower levels will certainly need some guidance which, in this case, comes in the form of a checklist.

#### **4.12.2 Interviews Treatment**

As already stated, the main purpose of the interviews was used to supplement the findings and to provide an indepth insight into the data. Qualitative data generated by interviews provides the depth of understanding questionnaires may lack (Cohen et al., 2000; Tierney & Dilley, 2001). To some extent, these interviews compensate for possible

shortcomings of the questionnaires, mainly due to the fact of not being able to ask follow-up questions, the interviews were less structured and hence more opportunity to explain and discuss various issues was available. As far as participants were concerned, representative students were selected from the experimental group based on the results of their exit test (Appendix 4).

All students were essentially asked similar questions about the same topics but, bearing in mind the flexibility required in these interviews. All interviews took place in the Department, and all were conducted shortly after the exit test (Appendix 4) and the second questionnaire. Interviews lasted between 20 to 30 minutes in English with little use of Arabic.

## 4.12.3 Data Processing and Analysis

This section reports on the processing of data collected in the study and the analysis tools used. As with the preceding section, this section is merely descriptive. The interpretation and inferences of the data are presented in the following chapter.

As mentioned in a previous section, following Weigle's (2002) analytic scoring approach, the researcher identified specific categories of errors, both local and global, in order to respond to students' compositions equally and consistently. The analysis also considered Cohen's (1994) list of errors, and Jacobs et al.'s (1998) ESL Composition Profile. Each type of error was assigned an abbreviation/symbol such as hyphens, brackets and slashes. Students were invited to freely comment on their peers' production using long sentences.

SPSS 15.0 was used to help analyze and process the data. SPSS should help obtain percentages, means, associations, and reliability values from a descriptive point of view, in

addition to other quantitative measures including parametric and nonparametric tests (Figure 4.10).

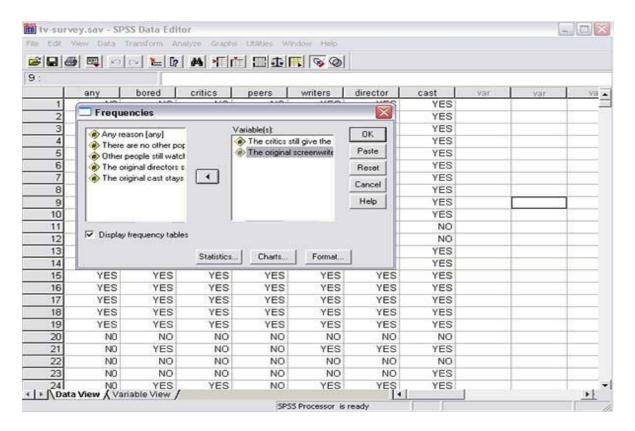


Figure (4.10): Data Analysis Software: SPSS, version 15.0

For further clarification, it might be a good case in point to add interviews in addition to questionnaires as a continuing attempt to understand more about the teaching of composition writing with reference to peer review strategies. To this extent, we are in line with Cohen and Manion's view which states: "An interview can be conducted at an appropriate speed whereas questionnaires are often filled in hurriedly." (1981: 254)

So, we can gain further information through interviewing students and not relying only on questionnaires. Sharing the same point of view, Bell declared: "The interview can yield rich material and can often put flesh on the bones of questionnaire responses". (1987: 70). The

qualitative data obtained from the interviews were subject to analysis (Appendix 10). The researcher made some efforts to analyze the content in an objective way.

As already mentioned, the interviews were designed to supplement and give an in-depth insight into the results of mainly the questionnaires. The results of the interviews were also compared against qualitative results of other tools used (i.e. content comments from writing tasks and unstructured comments from the questionnaires) when possible (Appendix 10).

As the interviews (Appendix 10) were intentionally less structured than the preceding questionnaire (Appendix 1), the data gathered was expectedly qualitative in nature and hence qualitative modes of analysis were used. These measures were identified and developed by following recommendations of Corbin and Strauss (2008).

### **4.13 Conclusion**

This chapter served as an endeavor from the part of the researcher to provide its readers with in-depth information about the methodology that governed the work. It also provided details about the population of the study. A preamble of the research tools used in the present work and the reasons as well as the theories behind the choice of such instruments is viewed. The chapter ended with presentation of the ways and techniques used while analyzing and interpreting the results of the study.

•	"Moodle-based Peer Review as a Tool to Enhance and Improve EFL Learners' Writing Performance	,,,

CHAPTER FIVE

DATA ANALYSIS AND INTERPRETATION

"Moodle-based Peer Review as a Tool to Enhance and Improve EFL Learners' Writing Performance"

#### 5.0 Introduction

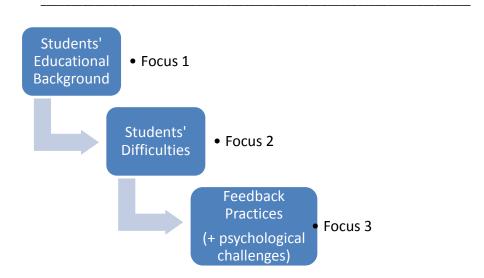
This chapter presents the results as emerged from the data collection tools which are the pre-experiment questionnaires (Appendix 1), the writing tasks (entry and exit tests) (Appendices 3 and 4), the experiment (Moodle-based peer editing writing activity) and finally interviews (Appendix 10) with members of the peer feedback group.

The interpretation of the results is also included in this chapter; In fact, the researcher decided to keep the two parts together mainly in order to enable the reader to associate what has been found to their interpretation, relate the findings of the study to previous research works and enable the reader to compare both findings and their interpretation in an easy way.

As stated earlier in chapter four (see section 4.12.3.2), the researcher used SPSS version 15.0 to help analyze and process the data. This software helps obtain percentages, means, associations, and reliability values from a descriptive point of view, in addition to other quantitative measures including parametric and nonparametric tests. As for interviews, the researcher relied on the analysis of content focusing on cues relating to the theme of the present research work (Radnor, 1994).

#### **5.1 Pre-Experiment Questionnaire**

This section highlights the findings related to the pre-experiment questionnaire, dealing with the participants' educational background. It focuses on teaching essay writing for Algerian third year English department students at the faculty of letters and foreign languages in Laghouat, Algeria. The main focuses are divided into three sub-focuses (Figure 5.1).



*Figure (5.1): Main focuses of the pre-experiment questionnaire* 

As illustrated in Figure (5.1), the main focuses are students' educational background, the students' difficulties (mechanics/language, vocabulary, content, structure, and layout), as perceived by students and feedback practices. The last section sheds light also on the psychological challenges and issues related to feedback practices.

### 5.1.1 Focus One: Educational Background

**Question 1**in the pre-experiment questionnaire is about participants' age and gender. All students are aged 20-27; 39 of them are aged 21 (Figure 5.2). The experimental group comprises 36 students with only 6 male students whereas the control group comprises only 4 male and 29 female students. Thus, for the peer review group, n=36 whereas for the control group, n=33.

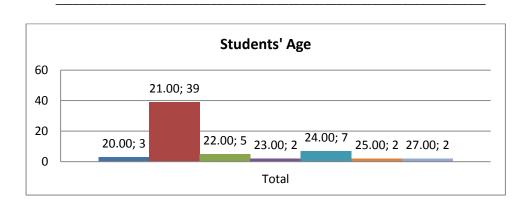


Figure (5.2): Students' Age

**Question 2** comprises 5 sub-questions (Table 6.1). All students have successfully completed four (4) writing courses at university (one per semester).

2.1	How many English writing courses have you successfully completed?
2.2	How much do you think you have benefited from these courses?
2.3	Rate yourself as an English learner in general.
2.4	Rate yourself as an ESL writer.
2.5	Do you face any difficulties in writing.

*Table (5.1): sub-questions of focus one in the pre-experiment questionnaire* 

For question 2, items 2.3 and 2.4, students were asked to rate themselves as English learners in general and as ESL writers. They had three options: very good, good or not good. As illustrated in Table (5.3), 27 students (39.13%) reported that they benefited in a very good way from the writing courses they had completed, 24 of them (34.78%) in a good way and only 18 out of 69 (26.08%) felt that their benefit had been little (Table 5.3).

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Item 2.2	Very good	27	39.13%	
	Good	24	34.78%	0.433
	Little	18	26.08%	
Item 2.3	Not good	29	42.02%	0.180
	Good	40	57.97%	
Item 2.4	Not good	42	60.86%	0.354
	Good	27	39.13%	
Item 2.5	Yes	55	79.71%	0.354
	No	14	20.28%	

*Table (5.3): T.Test results for focus one in the pre-experiment questionnaire* 

For item 2.3, 57.97% of participants rated themselves as below average English learners. And nearly the same number (42%) rated themselves as struggling writers. This reality is revealed and supported by the high number of students (79.71%), in item 2.5, who declared that they really suffered with writing and faced difficulties when practicing this skill (Table 5.3).

#### **5.1.2** Focus Two: Students' Writing Difficulties

This section addresses the essay writing difficulties as perceived by our sample students. A semi-structured in-depth questionnaire was the research instrument used to answer this question. Figure (5.3) below clarifies the fact that our participants do encounter different essay writing difficulties. These findings support the literature that suggests that students experience writing difficulties, and this can lead to less writing apprehension and less confidence (Watanabe & Swain, 2007).

Question 3 in the pre-experiment questionnaire (How difficult are the following to you in writing your essay?) relates to aspects of mechanics and language. According to the findings

of the current study, this category includes three sub-focuses: grammar, punctuation, spelling and style as shown in Figure 5.3.

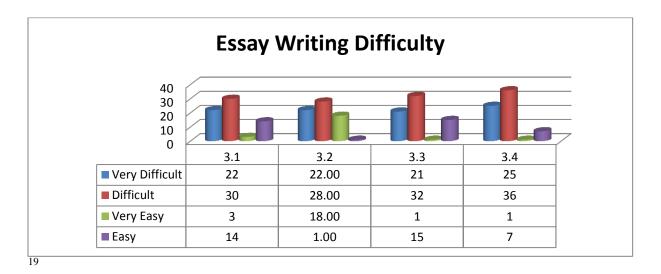


Figure (5.3): Students' Essay Writing Difficulties

Analysis of the data revealed that all of grammar, punctuation, spelling and style were the focuses reported by the study participants. Analysis of this questionnaire item in Figure (5.3) shows that 21-25 of the students indicated that these aspects of language seem very difficult for them, and 28-36 students indicated that these same aspects are difficult.

Questions 4/5 in the pre-experiment questionnaire relate to the main steps of writing (brainstorming, generating, planning...) as well as the main components of a paragraph or an essay (a good thesis statement, relevant topic/ supporting sentences, good concluding sentences and choice of suitable linking words).

Data analysis yielded very important themes representing the essay writing difficulties that our students encounter. In sum, they seemed struggling mainly with topics of writing, coherence

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<sup>&</sup>lt;sup>19</sup> (3.1 = grammar), (3.2= punctuation); (3.3= spelling); (3.4= style)

·\_\_\_\_

and cohesion, stylistic and lexical difficulties and technical difficulties with special focus on grammar, punctuation and spelling. But for the majority, revision and editing seemed very difficult. Besides, in this section, the researcher attempts to shed light on some major emerging themes that are directly related to the teaching and learning of essay writing: psychological challenges and some social issues. In short, according to the statistics obtained, students encounter a variety of difficulties in their essay writing. Data analysis indicated that students encountered some coherence difficulties related to writing the introduction, the thesis statement, the topic sentences, writing relevant sentences to the topic sentence, relating the topic sentences to the thesis statement, writing about one main idea only in each paragraph, developing paragraphs, writing concluding sentences and writing the conclusion.

Table (5.3) below shows the percentages of students' responses concerning the essay writing difficulties encountered by students mainly in style, layout and structure issues. These percentages are arranged according to the three main parts (see Table 5.4) that constituted question 7, in which students were required to respond to the given set of statements by ticking the box that best expressed their opinion about EFL essay writing from a frequency point of view (always, often, sometimes, rarely or never).

	Part 1 (%)	Part 2 (%)	Part 3 (%)	Mean
Always	39.13	27.54	5.80	24.15
Often	11.59	21.74	11.59	14.98
Sometimes	37.68	27.54	36.23	33.82
Rarely	0.00	17.39	20.29	12.56
Never	11.59	5.80	28.99	15.46
Mean	20.00	20.00	20.58	

Table (5.3): The percentages of students responses concerning the essay writing difficulties

N°	Item
7.1	I plan my essay using pre writing activities
7.2	The topics I write about express my own interest
7.3	I'm taught how to write the different parts of an essay
7.4	I'm taught how to write different genres of essays
7.5	I'm taught how to organize my essay coherently
7.6	I'm given a copy of the self-correction code and know how to use it.
7.7	I'm given a copy of peer editing worksheet.
7.8	I'm given a handout of the punctuation and spelling rules
7.9	I use dictionaries to help me while writing
7.10	I get formative feedback during my essay writing
7.11	I use the computer to assist me in editing the essay
7.12	I use the handout of the punctuation and spelling rules.
7.13	My tutor gives mini-lessons on aspects of difficulty in writing
7.14	My tutor sets us in /pairs groups to work collaboratively.
7.15	I get immediate tutor's feedback after writing my essay
7.16	My classmate reviews my essay.
7.17	My tutor discusses the most common essay writing mistake
7.18	I collect all my marked pieces of essay writing in a portfolio till the end of the
	year.
7.19	I practice essay writing once a week
7.20	My essays are peer edited
7.21	I enjoy being edited by my peers.
7.22	I don't feel at ease when my essay is read by my peers.
7.23	My essays are discussed among group
7.24	My tutor uses only chalk board and white board
7.25	My tutor uses computer technologies

*Table (5.4): The 3 main parts of question 7 concerning the essay writing difficulties* 

## **5.1.3 Focus Three: Peer Review Practices**

Data analysis revealed that prewriting constituted some difficulties in students' learning of essay writing, related to the topics of writing, topic prior knowledge, and topic ideas. With regards to the topics of writing, planning and perception of the different stages of writing, a number of difficulties were revealed as shown in Table 5.4 above (see items 7.1-7.8). First,

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11.59% of students mentioned that they **never** plan/are taught the stages of writing/are given a self-correction sheet/are given grammar and punctuation rules handout/ are taught how to organize their essay. And only 37.69% of participants claimed that they are **sometimes** taught these issues. Similarly, responses to items 7.9-7.14 in the questionnaire highlighted very important responses. The statistical results confirmed that students have difficulty in while-writing strategies. This is confirmed by 21 to 27% of students who reported that while writing they **rarely** use dictionaries, are **rarely** given formative feedback, are rarely taught how to use punctuation and grammar rules sheets, **never** use computers to assist them in editing their composition, and most important they are **rarely** set in groups or pairs to work collaboratively. However, as stated in previous chapters, in writing classes, some recent studies have called attention to the benefits of collaborative writing tasks, which require learners to work in pairs throughout the entire writing process (e.g., Storch, 2004, Tapper & Storch, 2007).

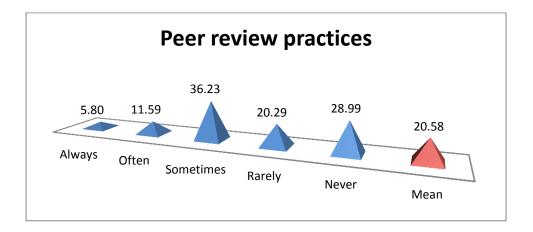


Figure (5.4): Results of items 7315-7.25 relating to peer review practices

As shown in Figure (5.4) relating to peer editing and in reference to items 7.15-7.25 in question 7 in the questionnaire, the mean is 20.58. According to the results, most students never get

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immediate teacher's feedback after writing an essay; classmates never review each other's essay, and one's production is almost never peer edited. Moreover, most students confirmed the nonuse of technology by their writing teachers. As far as feelings and emotions are concerned, most students confirmed that they don't feel at ease when their work is read by their peers.

#### **5.2 Writing Tests Analysis**

There were three separate sets of results from the writing tasks, the first of which included the participants' compositions from the treatment and control groups for sections C1 and C2, control and experimental groups respectively, and will be considered as the entry tests for both groups. The second set however included the Moodle-based writing activities of the experimental group that are referred to as the experiment. The third set included the writing tasks of both groups and it was carried out shortly after subjects were involved in the experiment. Finally, the last writing task included the writing texts of both groups and it was carried out almost simultaneously as that of the treatment group. (See Procedures Section in the chapter five: Methodology).

#### **5.2.1 Entry Test Results**

The entry test results were as follows: The total number of participating texts was 69 distributed between the two groups, 36 for the treatment group and 33 for the control group. On average, texts were 91 word-long. In fact, papers ranged between 35 to 164 word-long as shown in the Table (5.5) and Figure (5.5).

# (Chapter Five: DATA ANALYSIS AND INTERPRETATION)

Experimental Group	Word length	Grammar	Spelling	Punctuation	R O Sentences
Mean	90.44	9.53	7.42	6.17	7.42
Standard Deviation	26.02	3.19	2.93	2.48	2.80
Assymetry Coefficient	0.79	0.12	0.36	0.93	0.63

Control Group	Word length	Grammar	Spelling	Punctuation	R O Sentences
Mean	92.27	9.85	8.39	7.00	2.52
Standard Deviation	24.09	3.59	2.98	2.91	1.47
Assymetry Coefficient	0.88	0.24	0.38	0.97	0.66

Table (5.5): Entry test results for control and experimental group

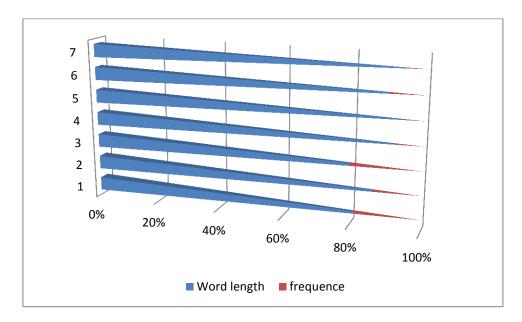


Figure (5.5): Histogram Chart of Texts' Length of the Entry Test

Students were actually expected to write around 150-word long texts (see Appendix 3) but it is safe to say that all texts were below this limit. The word length did not count in the overall score and it served like a guideline rather than a requirement.

As far as local issues are concerned, the most commonly occurring type of errors was grammatical (including subject-verb agreement, tenses, plural –s, and word-choice. That equals about 9.85 errors per text, though with a high standard deviation of 3.59 reflecting the fact that many students committed considerably more grammatical errors than others.

The second most commonly occurring type of errors was spelling with a high standard deviation value 2.92 and a high mean 8.39. Students seemed struggling a lot not only with grammar rules but also with spelling and punctuation. The results indicate a great failure from the part of students in terms of punctuation respect; the standard deviation for this issue is 2.48 and the mean is 6.17 as indicated in Table (6.5). Other types of errors were recorded with a high frequency. For example, the standard deviation 2.80 indicates the students' non-mastery of style: their writings included a great number of run-on sentences, 1-7 run-on sentences per student of the control group, and 2 to 11 per each of the experimental group students (Figures 5.6 and 5.7).

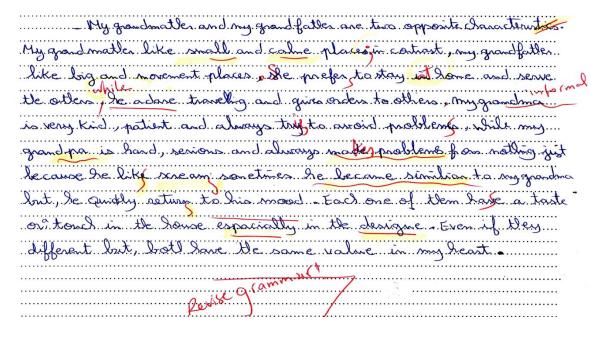


Figure (5.6): Sample of grammatical errors during the Entry Test

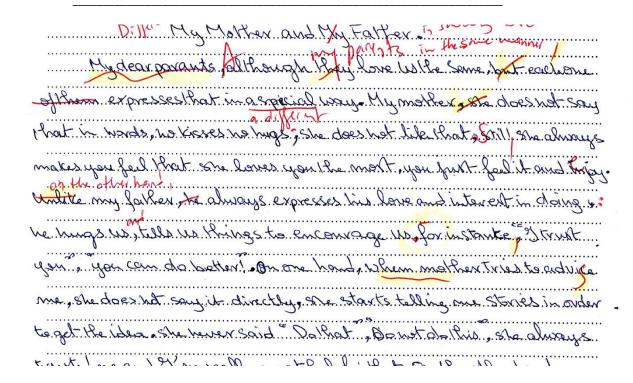


Figure (5.7): Sample of spelling/punctuation errors during the Entry Test

However, as for global issues (rhetoric, organisation and logic), texts were assessed and commented on by the researcher .The comments were intended to achieve two purposes; 1) to inform students about the level of their writing and 2) to justify the overall grade given (see Appendix 3: entry test) Students were given four (4) different grades to assess their writing which were: D poor, C acceptable, B good, and A very good.

						Nbr
	Grade A	Grade B	Grade C	<b>Grade D</b>	Mean	Errors
Control Group						
	6.00	11.00	11.00	5.00	17.90	591.00
<b>Experimental Group</b>						
	7.00	14.00	10.00	5.00	26.44	952.00

*Table (5.6): Grades obtained by Students during Entry Test* 

Most texts, using the criteria set by the researcher, in both groups were graded either B or C. For error frequency, the mean for the experimental group is higher 26.44 compared to 17.90 obtained by the control group. For more clarification, the total number of errors committed by the experimental group students is a little bit higher 952 compared to 591 errors by the control group, bearing in mind that n=36 for experimental group and n=33 for control group (Table 5.6).

# **5.2.2** While Writing Phase:

This section surveys the tasks that were dealt with as writing assignment in which students were expected to have more opportunities to practice the theories they covered during the training stage. Therefore, it was time to practice Peer Review in an online setting.

### 5.2.2.1 Task One

When students were informed that the first online writing task was launched, only a few started working on the assignment, while the majority remained passive and kept logging in from time to another just for the sake of viewing their peers' production. Most students took around 10-15 minutes doing so. This can be seen clearly through the daily reports viewed and printed for analysis reasons by the researcher (see Table 5.7). In fact the researcher can daily observe the reports that can be downloaded either in an excel or html format. A complete detailed report is included as an appendix (see Appendix 12). As illustrated in Table (5.7), the researcher is provided with in-depth details that allow him observe and analyze access frequency and even with detailed actions by whoever participant.

For example in the table below (Table 5.7), student whose username is EFL 26 logged in on November 15<sup>th</sup> at 3:36 pm with id 144 and viewed the forum with course module id 506

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(the technical reference of the course). This "1.16.56" stands for the total amount of time of access that EFL 26 spent within the site.

EFL11, another student, logged in on November 19<sup>th</sup> at 5.35 pm and viewed the forum, having a total amount of time of access of 4h07mn11ss. Later, he logged in again the same day at 5:57 pm, but this time he updated his post. This time, the access amount of time increased (4h31mn06ss) as illustrated in the table.

		Forum: The	The user with id '144'		
		Most	viewed the 'forum'		
19 nov. 15,	EFL26	important	activity with course		
15:36	EFL26	Invention	module id '506'.	web	1.16.56
		Forum: The	The user with id '118'		
		Most	viewed the 'forum'		
19 nov. 15,	Mustapha	important	activity with course		
15:39	G	Invention	module id '506'.	web	17.16.5.6
		Forum: The	The user with id '129'		
		Most	viewed the 'forum'		
19 nov. 15,	EFL11	important	activity with course		
17:35	EFL11	Invention	module id '506'.	web	4.07.11
			The user with id '129'		
		Forum: The	updated the post in		
		Most	the 'forum' activity		
19 nov. 15,	EFL11	important	with course module		
17:57	EFL11	Invention	id '506'.	web	4.31.06

Table (5.7): Sample of Website Access Frequency Report

As stated above, in the first task, students were asked to write a 300-word essay. The main functions of the target essay were describing and giving reasons. They were supposed to describe the invention they chose and then describe its impacts. As for the objectives behind the task, students were expected to show mastery of using a series of tenses: the simple present tense for describing the invention and the present perfect for describing its impact on their

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lives (Figure 5.7). They were also expected to use linking words that express reason and cause while saying why such an invention is better than television.

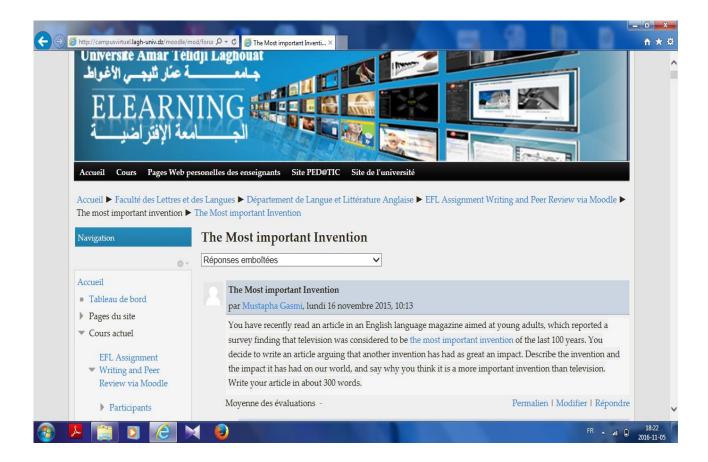


Figure (5.8): The First Online Writing Task: Instruction & Objectives

Figure 6.9 presents the first participation by EFL 25, dated October 22<sup>nd</sup> at 9:26 pm. As illustrated, it is one block-paragraph. It is a 260-word paragraph, in which the student wrote about the internet. He started by describing it (using a variety of structures and tenses), then he tried to compare it to television, giving a series of reasons justifying his choice.

The first one to edit and provide comments and feedback was the moderator (teacher). In fact, the teacher (researcher) chose to be the first to give comments because he noticed that most

students kept passive, may be because it was their first online experience. For this reason, students needed someone to push and motivate them begin the adventure. Another reason was that the student writer of the first participation was eager to know whether his work was read, and expected for sure feedback from the part of his peers. This can be deduced from the daily access reports viewed and observed by the teacher. In fact, EFL 25 logged in many times, of course looking for feedback. No doubt, the motivation to learn is a complex issue, and it can be reinforced by teacher's strategies. Peer-assisted learning aims to enable the doubts and problems of students to be expressed openly and to establish a safe environment of cooperative learning and mutual support (Charles, 1990).

# Re: The Most important Invention

par EFL25 EFL25, jeudi 22 octobre 2015, 21:26

The television was a great invention for decades, this instrument could teach, it could illuminate; yes, and it could even inspire. But it could do so only to the extent that humans were determined to use. Otherwise, it was nothing but wires and lights in a box. The impact of this instrument was vast because it touched a lot of parts and entered all the places; However, we have known another instrument has changed a lot of things and has made a lot of work easier which is: the computer this invention has developed a lot of intervals with the use of Internet that has caused a lot of impact in the hole world and has invaded every part and has considered the center of any operation; computer with the use of Internet is very common thing now and everything is related to and no one can resist this instrument is very easy to use you need only a central computer with its continents or personal one and a modem to access the internet and be in contact with hole world with the computer you can do whatever you want: watching (it can replace television), connecting (social medias), trading and shopping(E/commerce)and learning(E/learning) we can say it covers everything also it is comfortable not that expensive easy to have and very common each house may contain at least one or two of it.

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*Figure (5.9): The First Online Participation by EFL 25.* 

Re: The Most important Invention

par Mustapha Gasmi, jeudi 22 octobre 2015, 23:49

Great! You are the first to start. Would you please reconsider your punctuation? For example sentence one. Also what do you mean by the word "hole" which is used twice?

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Figure (5.10): Teacher's First Comments on EFL 25's Composition

The above figure (5.10) presents the first reaction to EFL 25's composition. It was as stated earlier the teacher's. In fact, the teacher used an encouraging expression "Great, you are the first to start!" The aim behind was to encourage and motivate not only the writer but also the other participants either to respond to EFL 25's piece of writing or to upload their works for revision. Moreover, the teacher invited EFL 25 to reconsider the punctuation of the paragraph without spotting the errors, as an endeavor to encourage self-correction and peer review, saying "Would you please reconsider your punctuation?" The teacher also tried to push EFL 25 to revise his own production by asking the question "What do you mean by the word "hole"?" In fact the student wanted to say "whole", but it was a spelling mistake.

While monitoring the students, I noticed that most of them wrote few specific remarks in the 'add or 'change' sections of the peer-editing form. Most students took around 40-50 minutes to peer-edit an essay. Moreover, they always conversed in English when they were seeking or giving clarifications. However, at the very beginning of the experience, the students did not take peer-editing seriously. Accordingly, their comments were either general or vague.

In order to motivate editors to take this activity seriously, I decided to interfere from time to time and try to edit some compositions.

As made clear in the figure below (see figure 5.11), students took their time reading the first participation by EFL 25, then some of them reacted by providing their own comments. Student one (EFL 11), showed a high level of positive thinking and care for his peers by responding to the spelling issue raised by the teacher: "I think she/he meant whole not hole." For me, the fact that EFL 11 used both pronouns "she/he" proved anonymity of the task and gave his peers more confidence in taking part in the task. Later, another student (EFL 02) added a comment in the same respect "I suppose so as well, whole not hole." (Figure 5.11)



Figure (5.11): Peers' feedback on the first writing task

Students in the experiment group received feedback from peers. Based on the reports, there were peer feedback interventions ranging between 10 – 40 minutes each. Members of the group played different roles at different sessions, sometimes as writers and often as editors. In every class session, the teacher reminded the students to make use of the checklists to provide

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feedback. Both local and global errors were looked at although students reported that they focused more on linguistic errors whether they give or receive feedback. Students were also given the chance to receive detailed comments on their paragraphs. The comments covered both form and content issues.

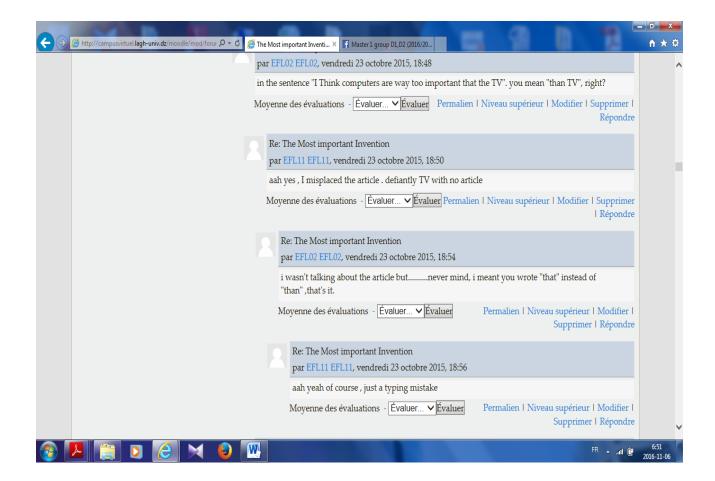


Figure (5.12): More Comments by Peers

It has been mentioned earlier that students kept passive for a long time after the first upload had been done by the first participant. The teacher (researcher) thought that students needed someone to push and motivate them, but he came to conclude that because most of the participants (96%) came from far away areas and lived in the campus where the Wi-fi

technology isn't available, they waited till the weekend to log in from home and be able to

take part in the experiment. Few students could access to the net using their 3G sim cards, but

this cost them a lot. Figure (5.12) presents the first comments sent by participants. Most of

them are dated Friday, a weekly day off. Most students go home on weekends.

The above mentioned comments (Figure 5.12) show that the majority of students made a combination of 'constructive criticism' and 'praise', or simply 'constructive criticism' alone. In fact, this strategy gave more courage and confidence to students to participate in the coming tasks, a fact which is reflected in the access report (see Appendix 12). Moreover, some students went beyond the limits of revision, they didn't only focus on form, but they commented their peers' frequency of writing, too. In his/her comments, EFL 18 expressed his joy reading his peer's piece of writing (Figure 5.13).

Re: The Most important Invention
par EFL18 EFL18, vendredi 30 octobre 2015, 17:03

I really enjoyed redading your peace of writing. Well done! you wrote "each single day". I think "every single day" would be more appropriate.

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Figure (5.13): Sample of Peer's Motivating Feedback

It is common that all learners, whatever their mode of learning, bring their own 'baggage' to the learning process and this encompasses a wide spectrum of individual differences that influence and are influenced by the learning process. For Gu (2003: 3): "Person, task, context, and strategy are interrelated and work together to form the chemistry

of learning". While a strong correlation between metacognitive strategies and effective language learning has been found in a number of research studies (Griffiths, 2004), Ehrman et al. (2003: 319) contend that "it is at least as important to manage feelings as it is to use more cognitive strategies, since negative feelings reduce the effectiveness of most learning activities". For learners in independent contexts, affective considerations are likely to be more pressing than in classroom settings (Sussex, 1991).

#### **5.2.2.2 Task Two**

As stated in the previous chapter, access to each task is allowed within a period of 08 days (duration set by the teacher moderator). The ninth day, access isn't allowed; participants can only view posts without adding or deleting whatever data. Thus comments aren't welcome anymore when the duration is over.

The second task entitled "Sports Facilities in Your Town" was launched on November 22<sup>nd</sup>. This task allows students, as stated in the instruction, to talk about groups and organizations. In other words, students are given the chance to practice types of nouns (countable and mass nouns), rates and percentages, quantifiers and phrases expressing quantities and amounts. This time, students are required to write a 200-250 word paragraph (Figure 5.14).

#### Sports Facilities in your Town

par Mustapha Gasmi, dimanche 22 novembre 2015, 08:51

The Council wants to improve the facilities in your town. You have been asked to conduct a survey of the opinions of local people and prepare a report suggesting which facilities to focus on. In your report: 1- Say what sports are most popular among the people surveyed. 2- Say what people think about the facilities available now. 3- Suggest what new sports facilities should be provided to encourage interest in sports. Write your report in 200-250 words.

This task gives you the chance to talk about groups and organisations (types of nouns / subject-verb agreement), percentages (for example 90%) and parts of a group (for example: a number, majority...).

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Figure (5.14): Second Writing Task: entitled Sports Facilities

As soon as the task is launched, participants started immediately responding and uploading their pieces of production. Frequency this time is higher. As illustrated in EFL 11's piece of writing, the student responded to the instruction by writing a 280-word paragraph in which he/she made use of a variety of quantifiers and phrases expressing amounts (most / 7% / In total / 30%). He/she also used various ways to express his/her opinion (think / suggest / use of modals) (see Figure). In other words, they seemed anxious and afraid of the new experience. Now they seem as if they got more confidence. In fact, language anxiety and motivation are both considered to be highly influential in facilitating or inhibiting SLA, and have become central to any examination of factors contributing to the learning process and learner achievement (Ellis, 1994). A longitudinal study of affect carried out with distance language learners investigated both anxiety (Hurd, 2007) and motivation (Hurd, 2006). After four months of study, 21.3% of participants said they were more anxious learning in distance mode and 51.7% felt that there was no difference in terms of anxiety between learning at a distance and learning face-to-face. In our study, among the strategies used for coping with anxiety were risk-taking, self-encouragement, relaxation techniques, sharing worries with tutor and other students, ticking off completed tasks, revision and repetition to build confidence.

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Re: Sports Facilities in your Town par EFL11 EFL11, mardi 24 novembre 2015, 16:49

The main objectives of this survey are to describe the current sports facilities in our town, and what facilities people suggest to focus on . I will present results of a survey I conducted by questioning people of various age categories about the most popular sports among them , and what do they think about the facilities available now . In final section I'll include suggestions about the new sport facilities that should be provided to embolden interest in sports . Firstly , people were asked which sports they preferred , and how often they were doing their sports . The most popular sport is football with 7% of people questioned confirming that they do this sport at least once a week . The runner-up is volleyball with 4% , and the third ranked tennis with 3.5% . Some other popular sports include basketball 2% . In total 30% of people interviewed do some sport at least once a week. Those people responding to the survey were almost split between being satisfied with the current state of our facilities , and between being dissatisfied with them . To put things into perspective 38% of people who took the survey are satisfied . Whereas 59% have a very negative opinion of these facilities . Clearly more could be done to improve our sports facilities and to encourage interest in sports therefore , I would make the following recommendations . We should consider building a proper football field considering the incredible demand for it . Also more stuff should be hired to look after the facilities .

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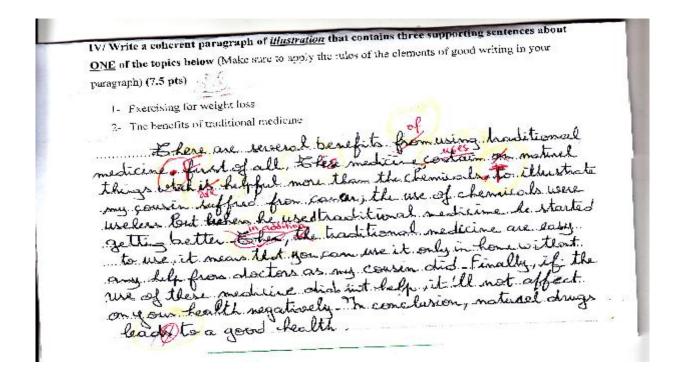
*Figure (5.15): Student's response to task two (piece of writing)* 

#### **5.2.3 Exit Test Results**

The post-test results show that the members of the Experimental group wrote 98 word long texts on average with a relatively high SD of 24.2 due to variations in individual texts. In other words, texts were considerably different in length ranging between 63 to 144 words per paper. Students were expected to write between 100 – 150-word long texts, so some texts might have fallen short in terms of length. This guideline should have been made a requirement in order to make students stick to it, possibly by making text length a contributor to the overall score if papers were to be graded.

Considering students' pieces of writing during the post-test that followed the experiment, the researcher analyzed the papers using the same criteria that were used while evaluating students' texts during the pre-test phase. Students were asked to write a paragraph about one of the given two topics (Figure 5.16):

- a) Topic one: Exercising for weight loss
- b) The benefits of traditional medicine



*Figure* (5.16) : A sample student's answer (post-test)

As stated earlier most students wrote paragraphs respecting the instructions. As for the control group students, the mean word length was 93.91 with a very slight increase in word number compared to the post test word length mean 92.27.

By applying T.test to the results obtained by the control group students, we came to conclude that there is a non-significant a standard deviation between both tests, the pre-and post-tests, in terms of word-length, grammar, spelling, punctuation and stylistic errors (see Table 5.8).

		Word				
		length	Grammar	Spelling	Punctuation	R O Sentences
Pre test	Moyen	92.27	9.85	8.39	7.00	2.52
	Mediane	85.00	9.00	9.00	6.00	2.00
	Ecart Type	24.09	3.59	2.98	2.91	1.47
	Moyen	93.91	9.18	7.70	5.67	2.23
Post test	Mediane	90.00	9.00	8.00	5.00	2.00
	Ecart Type	24.12	2.26	2.21	2.26	1.53
T.Test pre test		0.03	0.41	0.27	0.03	0.03
T.Test post test		0.03	0.39	0.24	0.24	0.04

Table (5.8): Entry and Exit Test Results for the Control Group

When the T.test was applied on the results obtained by the experimental group students, it was concluded that there is a significant difference between the experimental and control group students' results on one hand (0.25 versus 0.46), and most important the experimental group students' results during the entry and exit tests on the other (Error Frequency: 17.9 versus 24.9) (Table 5.9).

	Grade	Grade	Grade	Grade		
	Α	В	С	D	Err M	T.Test
Contr Grp Pre T	6	11	11	5	17.9	0.4636
Contr Grp Pos T	3	13	9	7	24.72	
Exp Grp Pre T	6	11	11	5	17.9	0.2541
Exp Grp Pos T	3	13	9	7	24.72	

*Table* (5.9): Students' Grades during Entry and Exit Tests

The linguistic (local) errors recorded according to their repetition per paper were; grammatical (9.8), spelling (8.3), punctuation (7) and almost no run-on sentences. It is noteworthy to mention that the minimum number of every type of error is 'nil' as the table above shows which in other words means that many papers did not actually commit certain types of errors at all. To be more precise, a great number of papers did not contain run-on sentences, punctuation and spelling errors respectively. The average overall grade the

experimental group reached an SD of 0.25 which shows that the result is more consistent than that of the other group.

Analysis of the peer-editing forms revealed that the editors had little difficulty at the beginning of the experiment. Worth to be noted, responses in general were relevant as they addressed the spotted errors and corresponded to the checklists the students were provided with. Also, the students sometimes indicated the existence of some fallacies but did not mention their line numbers in the essays. With respect to many responses, the spotted problems involved missing of some sentence components that needed to be added. Editors often asked writers to change a certain idea, example, or statement without explaining why it needed to be changed; they sometimes even offered a suggestion as to how to change it.

#### **5.3 Interview Results**

As indicated in the methodology chapter, the tests and the questionnaire instruments were considered central to the design of the study. Interviews were conducted in order to obtain either supportive or supplementary information about the students' attitudes towards and perceptions of technology-supported peer review. The interview was directed only at students in the experimental group because of their experience of using the new experience for eight weeks. Based on their scores in the pre- and post-tests, sample students were chosen (a student from each category. All questions in the interviews were used to explore students' attitudes towards particular points related to peer editing and its use in a technology-shaped environment.

Seven students of the experimental group responded to interview questions (see Appendix 10). Most students declared that the process and rationale of editing were well-explained in class.

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(Question 1). Is it the first time you experience peer-editing? If yes, have you ever practices it in an online classroom?

Most students answered that it was the first time to practice editing their peers' writing production. Few of them have experienced it but never in an online environment. One student said 'It's not the first time I correct someone's work, but it is always a new experience. I feel as if I am correcting my work through the others' work."

## (Question 2). Explain in a few words what you have been doing.

All interviewees responded positively and showed a very good understanding of the objectives set beforehand. Thus, the peer review training gave positive results. One student said:" We were commenting on our classmates' pieces of writing, and we have discussed some mistakes." Another interviewee said: "We have been reading and analyzing paragraphs written by our classmates. We also commented on mistakes." Another one added: "We worked as a group." "As a group, we were spotting errors and mistakes by our peers."

## (Question 3). How did you find the experience?

There was a common answer to the third question; all liked and enjoyed the experience. It was fruitful according to them. One interviewee answered: "The first time I felt as a real teacher." "We reviewed the process of writing." Another one said. For some students, peer editing is a tool of future self-correction: "I think it is good because we will learn of their mistakes." It's like correcting one's own paragraph according to one of the interviewees. Another one declared that they felt they were benefitting of sharing views and of the mistakes they found in their peers' works. According to another student, the experience was so enjoyable and beneficial

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when editing a friend's production. Two students said they were a bit confused about the procedure when they made the first attempts; however, they felt more confident when they proceeded to edit the second essay. A fourth student said she did not believe in the process of peer editing at first, but when she attempted to her first essay, she felt that new experience helped her a great deal. Moreover, most students also found self-editing a successful revision method that helped them improve their drafts. "Really reading my mates' works helped me revise grammar and spelling." One student said.

## **5.4 Conclusion**

All in all, there was a general agreement upon the usefulness of the experience. For students, working anonymously in an online group makes one discover many things and leads one to share knowledge with the others. To conclude, the findings of the interview questions give support to the efficacy of technology-supported peer editing in improving the quality of students' revised and new essays, thus encouraging teachers to use this technique in their writing classrooms.

The study also reveals that trained peer-editing is better for promoting writer awareness of good writing skills, which indicates the importance of collaborative interaction in bringing about learning development. However, it is recommended that future research replicate this study to find out if another researcher would achieve similar results that promote the generalization of its findings.

GENERAL CONCLUSION	
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## GENERAL CONCLUSION

Today, addressing the needs of students, particularly those who struggle with writing in English is one of the most complex problems in education. Several factors interact to make it difficult to help this community of students become good and effective writers, which include the fact that writing is typically not given the importance it deserves by EFL teachers at many institutions. Besides, according to the findings by Ericson (2001) and Biancarosa & Snow (2004), ,most teachers of English are newly appointed graduates who lack experience in this specialized field and do not consider the teaching of writing as their prior responsibility.

When learners attempt to write in a foreign language, they often encounter difficulties. The factors that are obstacles to students' writing can be addressed through changes in classroom instruction, according to the findings of the present research. These obstacles should be addressed through writing strategies and classroom instruction that promote achievement. Struggling writers deserve special attention and support by creating well-designed learning environments that are supported with technological tools. Good writing should be implemented, focusing both on the skill itself that needs to be dealt with as a process and the way we acquire it, that is the learning environment.

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In this respect, technology-supported instruction emerged as an approach to teaching students not only what but also how to learn. This approach is highly recommended by educators and is supported by a great number of researchers. Specialists of the field state that technology-supported instruction is a key factor that enhances students' motivation which, in turn, promotes achievement not only in English but also in all content subjects.

If writing were dealt with as a process and technology-supported instruction were implemented, students would be provided with the needed motivation that would help them overcome their writing difficulties.

The objective of the present study was to examine the relationship between implementing peer review within a technology-supported environment (Moodle in our case) and students' motivation as well as achievement in terms of writing competences. In other words, the main objective was to see whether training and use of Moodle-based peer review makes a difference in terms of motivation and achievement or not. The data was collected using a variety of research tools: classroom instruction, writing skill questionnaire, writing performance tests and online writing assignments. The present research was a mixture of two types of statistics, descriptive and inferential. A t-test was applied in order to test the hypotheses. The latter assesses whether the means

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of two groups (experimental and control) are statistically different from each other. To achieve this end, the researcher opted for a two-tailed test.

The study addressed the following research question: How can EFL learners be trained to review and evaluate their peers' written production (essays and reports) effectively? To what extent is Moodle software an enhancement tool conducive to effective peer review? Does peer review have any effects, whether negative or positive, on EFL learners' writing performance? Are there any differences on EFL learners' writing attainments between the effects of Moodle-based peer review and those of peer review led in traditional classrooms? Peer review and classroom practices (whether f2f or online) are very important factors of students' motivation and achievement.

This section includes the conclusions to the study. It comprises the following points: recommendations for future research and conclusions. The interpretation of the results is also included in this chapter. As stated in earlier sections, results of study showed that students' ability to write new better quality essays has improved. The question worth to be asked is whether this improvement is the result of training them in editing essays and having them receive peer feedback in an online environment?

In fact students' responses to the interview questions revealed that students enjoyed the experience, showed interest in it and seemed very satisfied because of the

many benefits gained and reflected in their performances. The intervention (online peer review practice) the researcher used helped bring about a change in students' attitudes towards peer-editing as well as improve some students' peer-editing skills and even writing skills.

Interview questions results revealed that the students who engaged in peer-editing revised not only their essays but also their grammar notes better than those who only received feedback from their teacher. Moreover, the interviewees' responses showed that peer-editing allows the students to experience what it feels like working in groups; thing, according to them, that helps collaborate and share knowledge better than those who have not received peer feedback. These results seem to vouch for the usefulness of peer-editing as a technique in developing good writing skills and creating a motivating atmosphere among peers.

As stated above, the purpose of the study was to determine whether or not putting into practice peer editing within a technology (Moodle)-supported environment would be more effective for EFL writers in the English language department at Ammar Telidji University than practicing editing in a face-to-face teacher-led classroom. Thus, Central to this present research work is the main question: To what extent can Moodle-based peer review instruction help improving students' writing ability? In other words, how can educators secure the teaching ground for students' motivation and implication

to the task at hand (in our case, peer review) that would render the learners'

performance purposeful? Four sub-questions were used to answer the main research questions, as follows: How can EFL learners be trained to review and evaluate their peers' written production (essays and reports) effectively? To what extent is Moodle software an enhancement tool conducive to effective peer review? Does peer review have any effects, whether negative or positive, on EFL learners' writing performance? Are there any differences on EFL learners' writing attainments between the effects of Moodle-based peer review and those of peer review led in traditional classrooms? These sub-questions were answered through the following questions: Is there a difference between the experimental CL group and the control TL group at pre-test? Does the experimental CL group change from pre-test to post-test? Does the control TL group change from pre-test to post-test? Is the experimental peer training group different from the control teacher-led group at post-test? The study results were obtained from the students' scores for their written essays (pre and post-tests), the experiment (online peer editing practice), and from their responses in questionnaires and interviews.

In chapter five the analysis of the findings with reference to the above research questions was presented. Various hypotheses were developed to answer the sub-research questions. 'How can EFL learners be trained to review and evaluate their

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peers' written production (essays and reports) effectively? "Does peer review have any effects, whether negative or positive, on EFL learners' writing performance?"

In line with previous studies (eg: Berg 1999, Hedgcock and Lefkowitz 1992, Paulus 1999) which confirmed that by training students to be good peer feedback providers, the results would be greater provided that students in the preset study be exposed to a fairly lengthy coaching procedure. This would consist of role playing and participating in peer evaluation sessions, discovering the effective strategies, and studying the genre of student writing. In order to analyze the effectiveness of the training sessions, peer review sessions and student writings were analyzed. It should be noted that students of the experimental peer review training group had the chance to practice the new experiment in the language laboratories where internet connexion is available. They wrote essays on specific topics in the first week of the study and uploaded their production using Moodle platform. Teacher provided students with coaching and guidance during all sessions. The findings presented in the previous chapter revealed differences between both groups, the experimental peer review training group and the control group concerning hypothesis 1( "students who are trained on this specific cooperative study skill would be better reviewers in peer review and evaluation of their peers' drafts.") and hypothesis 3(when a peer review approach is applied, EFL teaching will be more learner-centered and will positively impact learners' writing performance.) were highly significant; thus hypotheses 1 and 3 were

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confirmed. The participants in the experimental group who were trained on this collaborative online peer review practice performed better as peer-editors and evaluators of their peers' drafts.

"To what extent is Moodle software an enhancement tool conducive to effective peer review?" "Are there any differences on EFL learners' writing achievements between the effects of Moodle-based peer review and those of peer review led in traditional classrooms?"

A comparison between the pre- and post-test essays of students in the experimental online peer review group in terms of the mean difference found that the involvement in evaluation and review of peers' drafts within the Moodle platform had positive effects on collaboration and the development of writing skills. The findings suggest that there was some improvement in the editing stage of writing (checking mechanics and revising) after involvement in the new experience. Moreover, It could thus be suggested that students needed a motivating atmosphere which was guaranteed by the electronic-based environment. This result showed that the experience benefited the students a great deal in terms of motivation. These findings are similar to earlier studies that have investigated the impact of the practice of peer review using technology on improving students' writing skills, such as that of Kaminski (2005). In line with this, an analysis of the students' essays indicated that the Moodle-based peer review strategy had helped the students to

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improve their writing skills effectively. Besides, during the interviews, the students in the experimental group expressed their joy, interest and high motivation to the new practices; thus hypothesis 2 ("peer review, with its attending sense of a wider audience and stronger social support, will be preferred over teacher review, which engages no audience and generates no social support." and hypothesis 4 (if students were instructed within a Moodle-based peer review framework, those learners' writing achievement in FL would be better.) were confirmed.

In summary, with regard to the findings for the research questions, the present study has provided additional insights to those of other studies that have investigated the effectiveness of Moodle-based peer review in enhancing and improving students' writing skills.

The findings of the humble research work reveal that peer-review when exercised within a technology-supported environment may have positive effects on EFL learners' writing skills. This quality in writing, based on the findings, may result from teacher-led feedback practice in physical classrooms but at lesser rates. However, teachers' skills may well be a decisive factor in how successful peer-editing is. Thus, to help students engage seriously and successfully in peer review, teachers are recommended to observe the following guidelines when introducing peer-editing in their classrooms.

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To start with, before expecting students to accept the idea of peer-editing as a revision technique, perhaps ESL teachers need to expose their students to the new experience and explain the advantages that peer revision could hold for them. Raising student awareness about the importance of the strategy and its benefits could help reduce their anxiety towards a technique they may not know much about. Teachers may need to encourage students revise their peers' drafts to see how it helps them engage and practice a variety of skills (critical reading and writing, gaining more knowledge, sharing views, revising previous knowledge, experiencing less anxiety...). All this can be achieved through the use, for example, of video recordings. Teachers can show their students a video where students are practicing peer editing (input & output) with focus on process. These sessions have to be followed by class reflection and discussion of procedures and strategies employed

Moodle platform proved to be very effective not only in languages teaching but also in teaching all subjects. It has a variety of features that make it easy to be adopted by teachers and students and adapted to whatever learning and teaching situation. However it proved to be new to students. For this reason, teachers need to ensure enough training to make their students familiar with the new platform.

Students need to receive training in giving proper feedback. Stanley (1992) points out that students cannot be expected to give effective comments on their peers' papers

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if they have not been well-trained in that art. Thus, teachers are recommended to allot a few class periods to teach students how to provide constructive feedback. With the current movement towards learner-centered instruction, the way is paved for the teacher to target learner autonomy.

It is also recommended that teachers grade students' peer-editing forms, giving extra grades to student editors who give clear and content-specific feedback. No matter how proficient students are, without motivation to do their task, they may not engage whole-heartedly in it. Considering the above factors when incorporating peer-editing in the writing classroom could promote harmonious and positive interaction among group members and increase their chances of constructing new knowledge, thus paving their way to independent learning.

It is worthwhile to consider carrying out more extensive research that includes other possible factors likely to affect the final results of the present study. Such a study could be executed in environments different from the one it was carried out in. It is also possible to have a wider range of students involved in the project, students of different ages, levels and backgrounds. In geographical terms, participants can be drawn from different contexts to help generalize the findings of the research. In other words, the fact that most participants were students who lived in the campus and had no internet facilities may have affected the final results at least the access frequency.

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It could be equally important to make use of other different research tools such as classroom observation which enables to deeply observe and investigate how students interact and perform during peer feedback sessions. As far as assessment procedures are concerned, the researcher wishes that future studies would use the Moodle platform not only for peer review practice but also as an electronic means of writing assessment.

To end with, a professor and dean at the Massachusetts Institute of Technology took a leave to start a radical, new nonprofit university that she says will have no majors, no lectures, and no classrooms. The basic idea is to start a university from scratch for today's needs and with today's technology. Then it's high time we thought of an educational revolution that aims at modernizing the system by adopting new innovations and adapting them to our context.

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# **Annotated Bibliography**

#### Introduction

This section of the thesis provides an abbreviated version of a briefly annotated bibliography of major works concerning peer review practice within a Moodle-supported environment. In general, these citations reflect work done over the past 5 years with special focus on post-2000 studies. The citations listed here have been compiled from a variety of sources such as books, e-books available by various e-libraries, websites and journals.

Few of the works cited in earlier chapters are annotated here as well. We would like to mention that while we are familiar with some of the works in this section, in many cases our keywords and summaries have been taken solely from abstracts. Works of an exploratory, critical, and/or theoretical nature are often summarized more broadly. The abbreviated list of references included here focuses on distance and mainly online learning.

**Addisson, J., & McGee, S.J.** 2010. "Writing in high school/writing in college: Research trends and future directions." *College Composition and Communication*, 62(1). 147–179. Print.

In this study, 544 faculty and 1,412 students in three high schools were surveyed in two community colleges and five universities regarding use of pre-writing activities, instructor feedback, clear expectations, use of higher-order writing assignments, collaborative writing, reviewing sample writing, writing practice, and integration of multimedia. High school and college faculty were aligned in terms of use of prewriting, clear expectations, and use of collaborative writing, reviewing sample writing, and writing practice.

**Al-Bataineh**, **A.**, **Anderson**, **S.**, **Toledo**, **C.** & **Wellinski**, **S.** 2008. "A study of technology integration in the classroom." *International Journal of Instructional Media*, *35*(4). 381-387.

The study is conducted on implementation and integration of technology into the classroom. A lot of pros and cons of integrating technology into the classroom are described by Al-Bataineh. The findings of the survey used in the study show how hard it is to integrate technology into the classroom when you have teachers that are not trained or interested in doing so.

**Allen, K.** 2005. "Online learning: Constructivism and conversation as an approach to learning." *Innovations in Education and Teaching International*, 42(3). 247-256. Print.

The current research of creating an online research-based degree course for undergraduate students is the fruit of nine-ear research on learning and technology. The author focuses on the benefits of using the software program Talk 2 Learn in building learning communities which fosters a constructivist approach to teaching.

**Beauvais, C., Olive, T., & Passerault, J. M.** 2011. "Why are some texts good and others not? Relationship between text quality and management of the writing processes." *Journal of Educational Psychology*, 103(2), 1–14. Print.

The study examines whether text quality is related to management of the writing process. Two experiments were conducted—one examining the relationship between online management and text quality in narrative and argumentative texts, and one investigating how this relationship is affected by a goal emphasizing text quality. Findings show that students use different strategies in composing narrative and argumentative texts, and that students compose better texts when a quality-based goal had been set. Text quality was found to be related to an increase of the prewriting phase and of planning processes.

**Beldarrain, Y.** 2006. "Distance education trends: Integrating new technologies to foster student interaction and collaboration." *Distance Education*, 27(2), 139-153. Print.

Web 2.0 technologies such as blogs, wikis, and podcasts, have the potential to promote interaction in online learning thereby enhancing the learning environment. In this paper, Beldarrain explores examples of current uses of social software in distance education. The paper offers a look at how each of these tools could be applied in the classroom. One of the affordances of these new technologies is student social interaction and collaborative knowledge construction.

**Borham-Puyal, Miriam, and Susana Olmos-Migueláñez.** 2011. "Improving The Use Of Feedback In An Online Teaching-Learning Environment: An Experience Supported By Moodle." *US-China Foreign Language* 9.6. 371-382. Print.

This article reports on a study conducted at the University of Salamanca that analyzed the role of technology-supported learning and assessment (ICT: Information and Communication Technologies) in providing feedback in a competency-based teaching-learning process in an online environment. The study was conducted in online English and cultural courses using

Moodle. Tools included questionnaires, databases, glossaries, written assignments, and wikis that allowed for instructor feedback. Moodle allowed for immediate (formative) feedback and created space for students to conduct their own self-assessment.

**Butler, J.A., & Britt, M.A.** 2011. "Investigating instruction for improving revision of argumentative essays." *Written Communication*, 28(1), 70–96. Print.

The work examines the effectiveness of two tutorials for improving college students' writing of argumentative essays: one aimed at informing students about global and local revision and one aimed at teaching basic argument structure. Students were asked to write an argumentative essay on a controversy, based on articles, and then to revise their draft. Findings show that both tutorials were effective in improving revision performance and the quality of students' essays.

**Chen, Chao-Hsiu** .2008. "Why do teachers not practice what they believe regarding technology integration." *The Journal of Educational Research*, 102, 65-75. Print.

According to the author, Integration of technology into the classroom depends on teacher's beliefs. The author also states again that the teachers need to be aware of the learning theories and be able to practice as a constructivist. This learning theory seems to come up again and again in the research of integrating technology in the curriculum.

**D'anielle Nicole DeVoss, Elyse Eidman-Aadahl and Troy Hicks**. 2010. Because Digital Writing Matters: Improving Student Writing in Online and Multimedia Environments. John Wiley & Sons, Inc. San Fransisco. Print.

The authors of the book argue for the irreducible importance of writing. Writing is still an important act and an essential tool for learning and social participation. Skill in writing is still crucial inside and outside of our schools. Writing is still recognized as a socially situated act of great complexity. And writing is still understood to be hard work. Social networking and collaborative writing technologies have taken hold, if not always in our schools, certainly among our students. Bandwidth has increased in many locations, along with wireless access. Spaces and devices for creating, sharing, and distributing writing have become more robust and more accessible. Not only does writing matter, but digital writing matters.

**Desai, M., Hart, J., & Richards, T.** 2008. "E-learning: paradigm shift in education." *Education*, 129 (2), 327-334. Print.

This article explores the change in education, both theory and practice, with the advancement of technology. Online learning is explored and dissected bringing to light strengths and weaknesses. Theoretically, much of the research and observation supporting e-learning have aspects of constructivism.

**Elbow, Peter.** 1997. *High Stakes and Low Stakes Assignments and Responding to Writing*. Writing to Learn. San Francisco, Jossey-Bass. 5-13. Print.

Elbow suggests that instructors employ both low stakes and high stakes writing in their classrooms, and he explains that low stakes writing is intended to get students to think, learn, and understand the material, while high stakes writing is typically polished writing that is graded. Elbow argues that low stakes writing improves the quality of later high-stakes pieces, gives a view of how students are understanding the material in a low pressure environment, and encourages students to keep up with assigned reading.

**Kate Grenville**. 2001. Writing from Start to Finish: A six-step-guide. Allen & Unwin. Australia. Print.

This book is about what to do when you've chewed the pen down to the ink and you still haven't got any ideas. The way the author suggests to approach writing is to start by letting one's mind roam around the topic in a free-form way. One makes notes and writes little bits and pieces, exploring many different ways into the topic.

The author also explains that the process of creating and the process of judging are separate. Once you've got something written, you can invite that nasty little voice back in to evaluate what you've got and make changes. Instead of being caught up inside the machinery of your own thinking, you can stand outside it, and see the process happening one step at a time. This book is based on the idea that you can use the same process for any kind of writing. Short stories, essays, reports—they all look very different, and they're doing different jobs, but you can go about them all in the same way using these same six steps.

**Kuteeva, M.** 2010. "Wikis and academic writing: Changing the writer–reader relationship." *English for Specific Purposes*, 30(1), 44–57. Print.

Using a case study approach, the study focuses on the use of wikis in the course "Effective Communication in English." It describes how the course wiki was used to teach writing for academic and professional purposes and to analyze the impact of the wiki on the reader-writer relationship. The case study employed several research techniques, including participant observation, text analysis, and a self-report questionnaire. The texts published by students on the wiki were examined for reader-oriented features and interactional metadiscourse resources. The results indicate that using the wiki for writing activities caused students to pay close attention to grammatical correctness and structural coherence and to consider their audience in writing.

**Rosa M. Manchon.** 2009. Writing in Foreign Language Contexts: Learning, Teaching, and Research. Edited by Multilingual Matters. Bristol. Buffalo. Toronto. Print.

The first two chapters present the insights obtained in two programs of research conducted with Japanese English as a foreign language (EFL) writers. This reanalysis of their empirical findings leads them to several observations in three main areas. First, their research reveals the significant influence that the writers' prior L1 and L2 writing experience and instruction exerts on both the development of writing ability and the shaping of the L2 writer's attitudes towards writing. At the level of theory, they claim that past writing experience should be included as a major factor in a theoretical model of developing writing competence, whereas at the level of pedagogy, they emphasize the centrality of writing students' prior training in pedagogical decision making. In Chapter 2, Miyuki Sasaki first guides us through the dynamics of her disciplinary inquiry into FL writing in the last 10 years in terms of the issues she has looked into, the methodology she has employed, and the theoretical frameworks that have informed her research.

**Smith, Pauline**. 1997. Writing an Assignment: How to Improve Your Research and Presentation Skills. How To Books, Ltd. Print.

This is a practical book explaining how one can really succeed in the skill of writing assignments essays, reports and dissertations. Each chapter covers a different stage of assignment writing. Each is illustrated with examples and mini case studies to show the readers the results of both good and bad practices.

Summary checklists are included to help the reader, and each chapter ends with self-evaluation questions to ensure that the readers are on the right lines.

Sommers, Nancy. 1982. Responding to Student Writing.. CCC 33.2 (May 1982): 148-156. Print.

Sommers' advice grows from a study of the commenting styles of 35 teachers. She recommends focusing on a few substantive issues and not commenting on errors in usage, diction, or style, as attending to surface errors tends to diminish the effect of teacher comments on more substantive issues (when both are provided). Sommers also notes that teacher comments need to be specific to the particular student's paper and should provide strategies for responding to the critiques offered. Sommers provides examples from student papers to illustrate her points.

**Speck, Bruce W**. 2000. Constructing Writing Assignments. Grading Students. Classroom Writing: Issues and Strategies. Washington, DC: Graduate School of Education and Human Development. The George Washington University. 11-26.Print.

Speck claims that three main concepts guide the construction of good writing assignments. First, he suggests carefully determining the purpose and audience, and he notes that faculty members might consider having students write for audiences that they specify.such as their other class members, other members of the discipline, or audiences in the nonacademic world. Speck also suggests clarifying what is essential and what is optional in the assignment, and not assuming that students know particular disciplinary conventions. Finally, Speck advocates that instructors clearly articulate what standards are used in evaluating the assignment, and he warns against over-focusing on grammar conventions and using vague terminology.

**Tan, Fujuan.** 2009. "Tri-fold Transformation: An International Adult Student's Reflections on Online Learning." *Adult Learning* 20.3/4. 38-40. Print.

The article describes the changes that an ESL graduate student from China studying in the USA experienced when taking the first online learning course. The multi-fold transformation affected three areas, language, culture, and technology. In regard to the language transformation, the author considers that online learning favors two basic language skills, reading and writing. The online learning environment lacked being able to listen and speak which caused lack of confidence and uneasiness.

**Turner, K. H., & Katic, E. K.** 2009. "The influence of technological literacy on students' writing." *Journal of Educational Computing Research*, 41(3), 253–270. Print.

The study examines the role of technology in high school students' writing processes and products. Research findings indicate that for these students, the influence of technology contributed more to the students' writing than hindered it. The authors recommend that writing instruction should not always be based on a linear model, and that technology should be incorporated into writing instruction.

**Wang, Q.** 2008. "A generic model for guiding the integration of ICT into teaching and learning." *Innovations of Education and Teaching International*, 45(4), 411-419. Print.

Wang presents a generic model of integrating information and communication technology into teaching and learning. This model includes three domains: pedagogy, social interaction, and technology. The theoretical influences for this model come from constructivism and the interactivity design model. Wang provide specific examples of the generic model in practice through the online learning platform, Moodle. The data related the impact and propellant effect technology has had on emerging learning theories through the author's newly developed learning model.

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	APPENDI	CES	

"Moodle-based Peer Review as a Tool to Enhance and Improve EFL Learners' Writing Performance"

#### Introduction

This questionnaire is designed with the aim of investigating impact of online peer review within a technology-shaped environment on EFL learners' writing competence. I kindly request you to answer this questionnaire fully. All the answers you provide will be confidential and for study purposes only. Thanks very much in advance for your help and collaboration.

Please respond to the following statements by putting a tick (V) into the box that best expresses your opinions about EFL essay writing.

1- Ba	1- Background Information:							
Age			Gender					
2- Ec	ducationa	l Back	ground:					
2.1	How mai	ny Eng	lish writing courses have you successfully completed?					
2.2	How mu	ch do y	you think you have benefited from these courses?					
2.3	Rate you	ırself a	s an English learner in general.					
2.4	Rate you	ırself a	s an ESL writer.					
2.5	Do you fa	ace an	y difficulties in writing.					

## 3- How difficult are the following to you in writing your essay?

N°	Item	Very difficult	Difficult	Neither Difficult nor Easy	Easy	Very Easy
3.1	Writing grammatically correct sentences					
3.2	Applying the correct punctuation rules in writing					
3.3	Writing correctly spelled words					
3.4	Writing in a clear, correct and simple style.					

### 4- How difficult are the following to you while writing your essay?

N°	Item	Very	Difficult	Neither Difficult	Easy	Very
		difficult		nor Easy		Easy
4.1	Brainstorming the topic of writing					
4.2	Generating relevant /consistent ideas					
4.3	Planning interesting and relevant topics					
4.4	Planning unfamiliar topics					

### 5- How difficult are the following to you while writing your essay?

N°	Item	Very difficult	Difficult	Neither Difficult nor Easy	Easy	Very Easy
5.1	Writing a good introduction to the essay					
5.2	Writing a good thesis statement to the essay					
5.3	Developing topic sentences into paragraphs					
5.4	Writing a good concluding sentence					
5.5	Linking sentences and paragraphs					

6- How difficult are the following to you while writing your essay?

N°	Item	Very difficult	Difficult	Neither Difficult nor Easy	Easy	Very Easy
6.1	Using the most appropriate vocabulary					
6.2	Using word synonyms in English writing					
6.3	Using idioms and word collocations					

7- Please respond to the following statements by putting a tick (V) into the box that best expresses your opinions about EFL essay writing.

N°	Item	Always	Often	Sometimes	Rarely	Never
7.1	I plan my essay using pre writing activities					
7.2	The topics I write about express my own interest					
7.3	I'm taught how to write the different parts of an essay					
7.4	I'm taught how to write different genres of essays					
7.5	I'm taught how to organise my essay coherently					
7.6	I'm given a copy of the self-correction code and know how to use it.					
7.7	I'm given a copy of peer editing worksheet.					
7.8	I'm given a handout of the punctuation and spelling rules					
7.9	I use dictionaries to help me while writing					
7.10	I get formative feedback during my essay writing					
7.11	I use the computer to assist me in editing the essay					
7.12	I use the handout of the punctuation and spelling rules.					
7.13	My tutor gives mini-lessons on aspects of difficulty in writing					
7.14	My tutor sets us in /pairs groups to work collaboratively.					
7.15	I get immediate tutor's feedback after writing my essay					
7.16	My classmate reviews my essay.					
7.17	My tutor discusses the most common essay writing mistake					
7.18	I collect all my marked pieces of essay writing in a portfolio till the end of the year.					
7.19	I practice essay writing once a week					
7.20	My essays are peer edited					
7.21	I enjoy being edited by my peers.					
7.22	I don't feel at ease when my essay is read by my peers.					
7.23	My essays are discussed among group					
7.24	My tutor uses only chalk board and white board					
7.25	My tutor uses computer technologies					
					•	•

Would y	ou please p	provide us	with your	personal	l e-mail	address?	
e-mail: _							

# **The Pre-test Question**

Ammar Télidji University Laghouat Faculty of Lettres & Foreign Languages Departement of English



Third Year Module: Writing Semester: S<sub>5</sub> SC: Salle de conférences

Write an essay in which you compare / contrast two individuals you know or you have met and observed.

NB: (grammar, spelling, punctuation, unity and coherence are taken into consideration)

Ammar Télidji University Laghouat Faculty of Lettres & Foreign Languages Departement of English



Third Year	Module: Writing	Semester: $S_5$	SC: Salle de conférences
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Write a coherent essay of illustration that contains two supporting paragraphs about one of the topics below:

- Exercising for weight loss
- The benefits of traditional medicine

NB: (grammar, spelling, punctuation, unity and coherence are taken into consideration)

IV/Write a coherent paragraph of illustration that contains three supporting sentences about ONE of the topics below (Make sure to apply the rules of the elements of good writing in your paragraph) (7.5 pts) 1- Exercising for weight loss 2- The benefits of traditional medicine Exercising for weight loss has two sides con be freets on the person who do it ? 24 It needs rewriting). - Exercising every day with specific program an be usful space ?? four the body to mo by it in good shape and also to live in healthy like , especially when we the statistical in the news, it's horible numbers mor thon 85% of the people in the world doesn't make regular exercising to loss weight having problems with patners. In other hond, some people do this exercise in every by hower they make their bodys weaker expecially with the hard daite, they loss a let of give to them servouse healthy problems.
??? We can say that the exercise is a usful way to loss weight, butithos also a negative side.

e a conerent paragraph of illustration that contains three supporting sentences about ONE of the topics below (Make sure to apply the rules of the elements of good writing in your paragraph) (7.5 pts)

- 1- Exercising for weight loss
- 2- The benefits of traditional medicine

Indentation Exercising for weight lost instructions are anguaingle in the internet now a days & because there are too man lose weight. Firstly they have to avoid restant and s foods, healthy food love fully the making reget a daily meals , This last

This is a good paragraph, but it does not use illustration

IV/Write a coherent paragraph of illustration that contains three supporting sentences about ONE of the topics below (Make sure to apply the rules of the elements of good writing in your paragraph) (7.5 pts) 1- Exercising for weight loss 2- The benefits of traditional medicine Exercising for weight loss has two sides con be freets on the person who do it ? 24 It needs rewriting). - Exercising every day with specific program an be usful space ?? four the body to mo by it in good shape and also to live in healthy like , especially when we the statistical in the news, it's horible numbers mor thon 85% of the people in the world doesn't make regular exercising to loss weight having problems with patners. In other hond, some people do this exercise in every by hower they make their bodys weaker expecially with the hard daite, they loss a let of give to them servouse healthy problems.
??? We can say that the exercise is a usful way to loss weight, butithos also a negative side.

IV/ Write a coherent paragraph of illustration that contains three supporting sentences about ONE of the topics below (Make sure to apply the rules of the elements of good writing in your paragraph) (7.5 pts)

- 1- Exercising for weight loss
- 2- The benefits of traditional medicine

Ehere are reveral benefits from using traditional medicine first of all, the medicine contain on maturel things which it helpful more than the chemicals to illustrate my courin suffred from content the we of chemicals were welces but behen he used traditional medicine le started getting better the traditional medicine are laby. to we it means that you can use it only in home without. my help from doctors as my consen did finally, if the ruse of there medicine did not belp it ill not affect. on your health negatively. In conclusion, natural drugs leady to a good health

#### **Categories of Enquiry:**

- A. Your new experience of moodle-based essay writing
- B. Technology-shaped Peer-review practices
- C. Advantages/Disadvantages of the experience

The interview has been designed to further explore some of the categories of enquiry from the fieldwork in more depth. This interview aims at getting your spontaneous views and perceptions about the peer-review challenges and difficulties that you encounter in your learning of the essay writing course.

#### A) Your new experience of moodle-based essay writing

Can you tell me about your new experience in learning how to write English composition/essays within moodle-shaped environment?

- Did you like it? Why? Why not?
- What are the things that you liked most about it?
- What are the things that you didn't like about it?
- Did you feel encouraged to participate and continue to do till the end of the experience?
- How did you feel about the feedback given to you by your mates?
- Do you think/feel that your writing has improved after this experience?

### **B) Essay Writing Practices**

- Q2. What do you think is your teacher's focus in teaching essay writing?
- Q3. In what way are the new teaching practices (of the new experience) different from those your essay writing teachers do in class?
- Q4. What kind of teacher support have you received in this experience? How often do you receive the same support in class?
- Q5. What kind of feedback do you receive?

#### **Revision/Editing Checklist**

Dear Students,

Before submitting any of your first or final drafts, please make sure you have thoroughly checked each of the following questions stated in the checklist below:

### **I- Structure & Layout**

- 1- Does your essay have the following structure:
  - a) Introductory paragraph
  - b) 2-5 Developmental paragraphs
  - c) Conclusion

#### **II- Coherence & Unity**

### Have you used any of the following to make your essay coherent?

- a) a good introduction to the essay
- b) a good thesis statement
- c) a number of topic sentences that are relevant to my thesis statement
- d) a good topic sentence for each paragraph in my essay
- e) logically developed paragraphs
- f) expressing each main idea in one paragraph only (Paragraph Unity)
- g) a good concluding/transitional sentence for each supporting paragraph
- h) an effective conclusion.

#### **III- Cohesion**

#### Have you used any of the following to make your essay cohesive?

- a) different cohesive devices
- b) reference devices(Pronouns, demonstratives ...etc)
- c) substitution /ellipsis

#### **IV- Mechanics & Accuracy**

- 1- Are your sentences free from grammatical mistakes?
- 2- Have you corrected all your punctuation mistakes?
- 3- Have you checked all your spelling mistakes?

#### V- Style & Lexis

- 1. Is your essay written in a clear style?
- 2. Is your essay written in a proper academic style by avoiding informality?
- 3. Are the words in your essay clear and precise?
- 4. Do you use a variety of repertoire?
- 5. Does your essay maintain a consistent tone?
- 6. Are your paragraphs balanced in length?

### Appendix 12

Heure	Nom complet	Utilisateur touché	Contexte de l'événement	Composant	Nom de l'événement	Description	Origine	Adresse IP
1 nov. 15, 10:08	EFL11 EFL11	Otilisateur touche	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '129' viewed the 'forum' activity with course module id '506'.	web	41.107.116.78
1 nov. 15, 10:08	EFL19 EFL19		Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '137' viewed the 'forum' activity with course module id '506'.	web	41.107.116.78
11 nov. 15, 12:17	EFL25 EFL25		Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '143' viewed the forum' activity with course module id '506'.	web	41.107.46.233
12 nov. 15, 16:49			Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '129' viewed the forum' activity with course module id '506'.	web	41.107.40.233
	EFL17 EFL17		Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '135' viewed the 'forum' activity with course module id '506'.	web	41.107.90.231
13 nov. 15, 22:39			Forum: The Most important Invention	Forum		The user with id '135' viewed the 'forum' activity with course module id '506'.	web	41.107.93.41
14 nov. 15, 02:20			Forum: The Most important Invention	Forum	Module de cours consulté  Module de cours consulté	The user with id '135' viewed the 'forum' activity with course module id '506'.	web	41.107.93.41
	EFL17 EFL17	-					web	41.107.93.41
	1	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '135' viewed the 'forum' activity with course module id '506'.		+
14 nov. 15, 02:21	EFL17 EFL17	-	Forum: The Most important Invention	Forum	Message créé	The user with id '135' has created the post with id '119' in the discussion with id '9' in the forum with course module id '506'.	web	41.107.93.41
14 nov. 15, 02:21	EFL17 EFL17	-	Forum: The Most important Invention	Forum	Contenu posté	The user with id '135' has posted content in the forum post with id '119' in the discussion '9' located in the forum with course module id '506'.	web	41.107.93.41
,	EFL12 EFL12	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '130' viewed the 'forum' activity with course module id '506'.	web	41.107.54.21
14 nov. 15, 15:59	EFL12 EFL12	-	Forum: The Most important Invention	Forum	Message créé	The user with id '130' has created the post with id '120' in the discussion with id '9' in the forum with course module id '506'.	web	41.107.54.21
14 nov. 15, 15:59	EFL12 EFL12	-	Forum: The Most important Invention	Forum	Contenu posté	The user with id '130' has posted content in the forum post with id '120' in the discussion '9' located in the forum with course module id '506'.	web	41.107.54.21
·	EFL12 EFL12	- 	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '130' viewed the 'forum' activity with course module id '506'.	web	41.107.54.21
14 nov. 15, 18:32	EFL03 EFL03	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '121' viewed the 'forum' activity with course module id '506'.	web	213.140.59.146
15 nov. 15, 11:02	Mustapha Gasmi	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '118' viewed the 'forum' activity with course module id '506'.	web	172.16.5.6
15 nov. 15, 14:21	Admin Utilisateur	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '2' viewed the 'forum' activity with course module id '506'.	web	172.16.5.6
	EFL25 EFL25	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '143' viewed the 'forum' activity with course module id '506'.	web	41.107.2.40
15 nov. 15, 17:48	EFL25 EFL25	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '143' viewed the 'forum' activity with course module id '506'.	web	41.107.2.40
15 nov. 15, 17:55	EFL25 EFL25	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '143' viewed the 'forum' activity with course module id '506'.	web	41.107.2.40
15 nov. 15, 17:55	EFL25 EFL25	-	Forum: The Most important Invention	Forum	Message créé	The user with id '143' has created the post with id '121' in the discussion with id '9' in the forum with course module id '506'.	web	41.107.2.40
15 nov. 15, 17:55	EFL25 EFL25	-	Forum: The Most important Invention	Forum	Contenu posté	The user with id '143' has posted content in the forum post with id '121' in the discussion '9' located in the forum with course module id '506'.	web	41.107.2.40
15 nov. 15, 17:56	EFL25 EFL25	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '143' viewed the 'forum' activity with course module id '506'.	web	41.107.2.40
15 nov. 15, 17:56	EFL25 EFL25	-	Forum: The Most important Invention	Forum	Message modifié	The user with id '143' has updated the post with id '121' in the discussion with id '9' in the forum with course module id '506'.	web	41.107.2.40
15 nov. 15, 17:56	EFL25 EFL25	-	Forum: The Most important Invention	Forum	Contenu posté	The user with id '143' has posted content in the forum post with id '121' in the discussion '9' located in the forum with course module id '506'.	web	41.107.2.40
15 nov. 15, 17:56	EFL25 EFL25	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '143' viewed the 'forum' activity with course module id '506'.	web	41.107.2.40
15 nov. 15, 17:56	EFL25 EFL25	-	Forum: The Most important Invention	Forum	Message modifié	The user with id '143' has updated the post with id '121' in the discussion with id '9' in the forum with course module id '506'.	web	41.107.2.40
15 nov. 15, 17:56	EFL25 EFL25	-	Forum: The Most important Invention	Forum	Contenu posté	The user with id '143' has posted content in the forum post with id '121' in the discussion '9' located in the forum with course module id '506'.	web	41.107.2.40
15 nov. 15, 17:57	EFL25 EFL25	-	Forum: The Most important Invention	Forum	Discussion consultée	The user with id '143' has viewed the discussion with id '9' in the forum with course module id '506'.	web	41.107.2.40
15 nov. 15, 17:59	EFL25 EFL25	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '143' viewed the 'forum' activity with course module id '506'.	web	41.107.2.40
15 nov. 15, 17:59	EFL25 EFL25	-	Forum: The Most important Invention	Forum	Message modifié	The user with id '143' has updated the post with id '121' in the discussion with id '9' in the forum with course module id '506'.	web	41.107.2.40
15 nov. 15, 17:59	EFL25 EFL25	-	Forum: The Most important Invention	Forum	Contenu posté	The user with id '143' has posted content in the forum post with id '121' in the discussion '9' located in the forum with course module id '506'.	web	41.107.2.40
15 nov. 15, 18:01	EFL25 EFL25	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '143' viewed the 'forum' activity with course module id '506'.	web	41.107.2.40
15 nov. 15, 18:01	EFL25 EFL25	-	Forum: The Most important Invention	Forum	Message modifié	The user with id '143' has updated the post with id '121' in the discussion with id '9' in the forum with course module id '506'.	web	41.107.2.40
15 nov. 15, 18:01	EFL25 EFL25	-	Forum: The Most important Invention	Forum	Contenu posté	The user with id '143' has posted content in the forum post with id '121' in the discussion '9' located in the forum with course module id '506'.	web	41.107.2.40
15 nov. 15, 18:01	EFL25 EFL25	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '143' viewed the 'forum' activity with course module id '506'.	web	41.107.2.40
15 nov. 15, 18:01	EFL25 EFL25	-	Forum: The Most important Invention	Forum	Message modifié	The user with id '143' has updated the post with id '121' in the discussion with id '9' in the forum with course module id '506'.	web	41.107.2.40
15 nov. 15, 18:01	EFL25 EFL25	-	Forum: The Most important Invention	Forum	Contenu posté	The user with id '143' has posted content in the forum post with id '121' in the discussion '9' located in the forum with course module id '506'.	web	41.107.2.40
15 nov. 15, 18:07	EFL25 EFL25	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '143' viewed the 'forum' activity with course module id '506'.	web	41.107.2.40
15 nov. 15, 18:07	EFL25 EFL25	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '143' viewed the 'forum' activity with course module id '506'.	web	41.107.2.40
15 nov. 15, 18:07	EFL25 EFL25	-	Forum: The Most important Invention	Forum	Message modifié	The user with id '143' has updated the post with id '121' in the discussion with id '9' in the forum with course module id '506'.	web	41.107.2.40
15 nov. 15, 18:07	EFL25 EFL25	-	Forum: The Most important Invention	Forum	Contenu posté	The user with id '143' has posted content in the forum post with id '121' in the discussion '9' located in the forum with course module id '506'.	web	41.107.2.40
15 nov. 15, 18:08	EFL25 EFL25	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '143' viewed the 'forum' activity with course module id '506'.	web	41.107.2.40
15 nov. 15, 18:08	EFL25 EFL25	-	Forum: The Most important Invention	Forum	Message modifié	The user with id '143' has updated the post with id '121' in the discussion with id '9' in the forum with course module id '506'.	web	41.107.2.40
15 nov. 15, 18:08	EFL25 EFL25	-	Forum: The Most important Invention	Forum	Contenu posté	The user with id '143' has posted content in the forum post with id '121' in the discussion '9' located in the forum with course module id '506'.	web	41.107.2.40
16 déc. 15, 14:55	EFL11 EFL11	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '129' viewed the 'forum' activity with course module id '506'.	web	197.118.207.18
16 nov. 15, 09:27	Admin Utilisateur	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '2' viewed the 'forum' activity with course module id '506'.	web	172.16.5.6
16 nov. 15, 09:29	Admin Utilisateur	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '2' viewed the 'forum' activity with course module id '506'.	web	172.16.5.6
16 nov. 15, 09:31	Admin Utilisateur	_	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '2' viewed the 'forum' activity with course module id '506'.	web	172.16.5.6
16 nov. 15, 09:35	Admin Utilisateur	_	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '2' viewed the Forum' activity with course module id '506'.	web	172.16.5.6
10 1104. 15, 09:35	Aumini Othisateur	<u> </u>	rorum. The Wost Important invention	FOLUIII	iviouule de cours consulte	The user within 2 viewed the forum activity with course module in 500.	web	1/2.10.3.0

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	Admin Utilisateur	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '2' viewed the 'forum' activity with course module id '506'.	web	172.16.5.6
16 nov. 15, 09:38	Admin Utilisateur	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '2' viewed the 'forum' activity with course module id '506'.	web	172.16.5.6
16 nov. 15, 10:00	Admin Utilisateur	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '2' viewed the 'forum' activity with course module id '506'.	web	172.16.5.6
16 nov. 15, 10:09	Admin Utilisateur	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '2' viewed the 'forum' activity with course module id '506'.	web	172.16.5.6
16 nov. 15, 10:11	Admin Utilisateur	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '2' viewed the 'forum' activity with course module id '506'.	web	172.16.5.6
16 nov. 15, 10:12	Mustapha Gasmi	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with Id '118' viewed the 'forum' activity with course module Id '506'.	web	172.16.5.6
16 nov. 15, 10:13	Mustapha Gasmi	=	Forum: The Most important Invention	Forum	Module de cours consulté	The user with Id '118' viewed the 'forum' activity with course module Id '506'.	web	172.16.5.6
16 nov. 15, 10:13	Mustapha Gasmi	=	Forum: The Most important Invention	Système	Module de cours modifié	The user with id '118' updated the 'forum' activity with course module id '506'.	web	172.16.5.6
16 nov. 15, 10:21	Mustapha Gasmi	=	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '118' viewed the 'forum' activity with course module id '506'.	web	172.16.5.6
16 nov. 15, 16:01	Mustapha Gasmi	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '118' viewed the 'forum' activity with course module id '506'.	web	172.16.5.6
16 oct. 16, 21:52	Mustapha Gasmi	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '118' viewed the 'forum' activity with course module id '506'.	web	41.107.40.225
17 nov. 15, 17:01	EFL25 EFL25	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '143' viewed the 'forum' activity with course module id '506'.	web	41.107.24.72
17 nov. 15, 17:19	EFL25 EFL25	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '143' viewed the 'forum' activity with course module id '506'.	web	41.107.24.72
17 oct. 16, 13:44	Mustapha Gasmi	=	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '118' viewed the 'forum' activity with course module id '506'.	web	172.16.5.6
18 nov. 15, 17:26	EFL32 EFL32		Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '158' viewed the 'forum' activity with course module id '506'.	web	154.121.5.237
18 nov. 15, 20:40	Mustapha Gasmi	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '118' viewed the 'forum' activity with course module id '506'.	web	41.111.3.220
18 nov. 15, 21:52	EFL29 EFL29	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '147' viewed the 'forum' activity with course module id '506'.	web	105.108.13.166
18 nov. 15, 22:04	EFL29 EFL29	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '147' viewed the 'forum' activity with course module id '506'.	web	105.108.13.166
18 nov. 15, 22:04	EFL29 EFL29	=	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '147' viewed the 'forum' activity with course module id '506'.	web	105.108.13.166
18 nov. 15, 22:04	EFL29 EFL29		Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '147' viewed the 'forum' activity with course module id '506'.	web	105.108.13.166
18 nov. 15, 22:05	EFL29 EFL29	-	Forum: The Most important Invention	Forum	Discussion consultée	The user with id '147' has viewed the discussion with id '9' in the forum with course module id '506'.	web	105.108.13.166
18 nov. 15, 22:06	EFL29 EFL29	-	Forum: The Most important Invention	Forum	Discussion consultée	The user with id '147' has viewed the discussion with id '9' in the forum with course module id '506'.	web	105.108.13.166
19 nov. 15, 00:12	EFL10 EFL10	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '128' viewed the 'forum' activity with course module id '506'.	web	105.109.89.164
19 nov. 15, 15:33	Mustapha Gasmi	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '118' viewed the 'forum' activity with course module id '506'.	web	172.16.5.6
19 nov. 15, 15:36	EFL26 EFL26	_	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '144' viewed the 'forum' activity with course module id '506'.	web	172.16.5.6
19 nov. 15, 15:36	FFL26 FFL26	_	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '144' viewed the 'forum' activity with course module id '506'.	web	172.16.5.6
19 nov. 15, 15:39	Mustapha Gasmi	_	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '118' viewed the 'forum' activity with course module id '506'.	web	172.16.5.6
h	EFL11 EFL11		Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '129' viewed the 'forum' activity with course module id '506'.	web	41.107.114.117
19 nov. 15, 17:57	EFL11 EFL11		Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '129' viewed the 'forum' activity with course module id '506'.	web	41.107.114.117
2 nov. 15, 08:31	Mustapha Gasmi		Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '118' viewed the 'forum' activity with course module id '506'.	web	41.107.58.14
2 nov. 15, 08:32	Mustapha Gasmi		Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '118' viewed the 'forum' activity with course module id '506'.	web	154.121.5.252
2 nov. 15, 08:32	Mustapha Gasmi		Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '118' viewed the 'forum' activity with course module id '506'.	web	154.121.5.252
,	Admin Utilisateur	EFL46 EFL46		Forum	Abonnement créé		web	<b>†</b>
2 nov. 15, 09:13		EFL46 EFL46	Forum: The Most important Invention			The user with id '2' subscribed the user with id '168' to the forum with course module id '506'.		172.16.5.6
2 nov. 15, 14:05	Mustapha Gasmi	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '118' viewed the 'forum' activity with course module id '506'.	web	41.107.58.14
2 nov. 15, 14:09	Mustapha Gasmi	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '118' viewed the 'forum' activity with course module id '506'.	web	41.107.58.14
2 nov. 15, 14:09	Mustapha Gasmi	÷	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '118' viewed the 'forum' activity with course module id '506'.	web	41.107.58.14
2 nov. 15, 14:09	Mustapha Gasmi	=	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '118' viewed the 'forum' activity with course module id '506'.	web	41.107.58.14
2 nov. 15, 14:09	Mustapha Gasmi	-	Forum: The Most important Invention	Forum	Message créé	The user with id '118' has created the post with id '89' in the discussion with id '9' in the forum with course module id '506'.	web	41.107.58.14
2 nov. 15, 14:09	Mustapha Gasmi	-	Forum: The Most important Invention	Forum	Contenu posté	The user with id '118' has posted content in the forum post with id '89' in the discussion '9' located in the forum with course module id '506'.	web	41.107.58.14
2 nov. 15, 14:17	Mustapha Gasmi	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '118' viewed the 'forum' activity with course module id '506'.	web	41.107.58.14
2 nov. 15, 14:17	Mustapha Gasmi	=	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '118' viewed the 'forum' activity with course module id '506'.	web	41.107.58.14
2 nov. 15, 14:17	Mustapha Gasmi	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '118' viewed the 'forum' activity with course module id '506'.	web	41.107.58.14
2 nov. 15, 14:17	Mustapha Gasmi	-	Forum: The Most important Invention	Forum	Message créé	The user with id '118' has created the post with id '90' in the discussion with id '9' in the forum with course module id '506'.	web	41.107.58.14
2 nov. 15, 14:17	Mustapha Gasmi	-	Forum: The Most important Invention	Forum	Contenu posté	The user with id '118' has posted content in the forum post with id '90' in the discussion '9' located in the forum with course module id '506'.	web	41.107.58.14
2 nov. 15, 14:22	Mustapha Gasmi	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '118' viewed the 'forum' activity with course module id '506'.	web	41.107.58.14
2 nov. 15, 14:22	Mustapha Gasmi	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '118' viewed the 'forum' activity with course module id '506'.	web	41.107.58.14
2 nov. 15, 14:22	Mustapha Gasmi	=	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '118' viewed the 'forum' activity with course module id '506'.	web	41.107.58.14
2 nov. 15, 14:22	Mustapha Gasmi	-	Forum: The Most important Invention	Forum	Message créé	The user with id '118' has created the post with id '91' in the discussion with id '9' in the forum with course module id '506'.	web	41.107.58.14
2 nov. 15, 14:22	Mustapha Gasmi	-	Forum: The Most important Invention	Forum	Contenu posté	The user with id '118' has posted content in the forum post with id '91' in the discussion '9' located in the forum with course module id '506'.	web	41.107.58.14
2 nov. 15, 14:26	Mustapha Gasmi	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '118' viewed the 'forum' activity with course module id '506'.	web	41.107.58.14
2 nov. 15, 14:26	Mustapha Gasmi	-	Forum: The Most important Invention	Forum	Message créé	The user with id '118' has created the post with id '92' in the discussion with id '9' in the forum with course module id '506'.	web	41.107.58.14
2 nov. 15, 14:26	Mustapha Gasmi	Ē	Forum: The Most important Invention	Forum	Contenu posté	The user with id '118' has posted content in the forum post with id '92' in the discussion '9' located in the forum with course module id '506'.	web	41.107.58.14
2 nov. 15, 14:54	Mustapha Gasmi	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '118' viewed the 'forum' activity with course module id '506'.	web	41.107.58.14
20 déc. 15, 17:59	EFL18 EFL18	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '136' viewed the 'forum' activity with course module id '506'.	web	41.107.48.181
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20 déc. 15, 17:59	EFL18 EFL18	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with Id '136' viewed the 'forum' activity with course module Id '506'.	web	41.107.48.181
20 déc. 15, 17:59	EFL18 EFL18	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with Id '136' viewed the 'forum' activity with course module Id '506'.	web	41.107.48.181
20 déc. 15, 17:59	EFL18 EFL18	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with Id '136' viewed the 'forum' activity with course module Id '506'.	web	41.107.48.181
20 nov. 15, 10:37	EFL11 EFL11	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with Id '129' viewed the 'forum' activity with course module Id '506'.	web	197.119.16.182
20 nov. 15, 17:49	EFL11 EFL11	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with Id '129' viewed the 'forum' activity with course module Id '506'.	web	41.107.92.207
20 nov. 15, 18:29	EFL14 EFL14	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with Id '132' viewed the 'forum' activity with course module Id '506'.	web	41.107.73.252
21 nov. 15, 21:35	EFL26 EFL26	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '144' viewed the 'forum' activity with course module id '506'.	web	41.107.33.251
21 nov. 15, 21:42	EFL26 EFL26	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '144' viewed the 'forum' activity with course module id '506'.	web	41.107.33.251
21 oct. 15, 10:51	Admin Utilisateur	-	Forum: The Most important Invention	Système	Module de cours créé	The user with id '2' created the 'forum' activity with course module id '506'.	web	172.16.5.6
21 oct. 15, 10:52	Admin Utilisateur	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '2' viewed the 'forum' activity with course module id '506'.	web	172.16.5.6
21 oct. 15, 10:52	Admin Utilisateur	-	Forum: The Most important Invention	Système	Module de cours modifié	The user with id '2' updated the 'forum' activity with course module id '506'.	web	172.16.5.6
21 oct. 15, 10:52	Admin Utilisateur	-	Forum: The Most important Invention	Forum	Contenu posté	The user with id '2' has posted content in the forum post with id '11' in the discussion '9' located in the forum with course module id '506'.	web	172.16.5.6
21 oct. 15, 10:52	Admin Utilisateur	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '2' viewed the 'forum' activity with course module id '506'.	web	172.16.5.6
21 oct. 15, 10:53	Admin Utilisateur	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '2' viewed the 'forum' activity with course module id '506'.	web	172.16.5.6
21 oct. 15, 10:53	Admin Utilisateur	=	Forum: The Most important Invention	Système	Module de cours modifié	The user with id '2' updated the 'forum' activity with course module id '506'.	web	172.16.5.6
21 oct. 15, 10:53	Admin Utilisateur	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '2' viewed the 'forum' activity with course module id '506'.	web	172.16.5.6
21 oct. 15, 10:53	Admin Utilisateur	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '2' viewed the 'forum' activity with course module id '506'.	web	172.16.5.6
21 oct. 15, 10:54	Admin Utilisateur	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '2' viewed the 'forum' activity with course module id '506'.	web	172.16.5.6
21 oct. 15, 10:54	Admin Utilisateur	Mustapha Gasmi	Forum: The Most important Invention	Forum	Abonnement créé	The user with id '2' subscribed the user with id '118' to the forum with course module id '506'.	web	172.16.5.6
21 oct. 15, 10:54	Admin Utilisateur	EFL36 EFL36	Forum: The Most important Invention	Forum	Abonnement créé	The user with id '2' subscribed the user with id '154' to the forum with course module id '506'.	web	172.16.5.6
21 oct. 15, 10:54	Admin Utilisateur	EFL35 EFL35	Forum: The Most important Invention	Forum	Abonnement créé	The user with id '2' subscribed the user with id '155' to the forum with course module id '506'.	web	172.16.5.6
21 oct. 15, 10:54	Admin Utilisateur	EFL34 EFL34	Forum: The Most important Invention	Forum	Abonnement créé	The user with id '2' subscribed the user with id '156' to the forum with course module id '506'.	web	172.16.5.6
21 oct. 15, 10:54	Admin Utilisateur	EFL33 EFL33	Forum: The Most important Invention	Forum	Abonnement créé	The user with id '2' subscribed the user with id '157' to the forum with course module id '506'.	web	172.16.5.6
21 oct. 15, 10:54	Admin Utilisateur	EFL32 EFL32	Forum: The Most important Invention	Forum	Abonnement créé	The user with id '2' subscribed the user with id '158' to the forum with course module id '506'.	web	172.16.5.6
21 oct. 15, 10:54	Admin Utilisateur	EFL31 EFL31	Forum: The Most important Invention	Forum	Abonnement créé	The user with id '2' subscribed the user with id '148' to the forum with course module id '506'.	web	172.16.5.6
21 oct. 15, 10:54	Admin Utilisateur	EFL30 EFL30	Forum: The Most important Invention	Forum	Abonnement créé	The user with id '2' subscribed the user with id '149' to the forum with course module id '506'.	web	172.16.5.6
21 oct. 15, 10:54	Admin Utilisateur	EFL29 EFL29	Forum: The Most important Invention	Forum	Abonnement créé	The user with id '2' subscribed the user with id '147' to the forum with course module id '506'.	web	172.16.5.6
21 oct. 15, 10:54	Admin Utilisateur	EFL28 EFL28	Forum: The Most important Invention	Forum	Abonnement créé	The user with id '2' subscribed the user with id '146' to the forum with course module id '506'.	web	172.16.5.6
21 oct. 15, 10:54	Admin Utilisateur	EFL27 EFL27	Forum: The Most important Invention	Forum	Abonnement créé	The user with id '2' subscribed the user with id '145' to the forum with course module id '506'.	web	172.16.5.6
21 oct. 15, 10:54	Admin Utilisateur	EFL26 EFL26	Forum: The Most important Invention	Forum	Abonnement créé	The user with id '2' subscribed the user with id '144' to the forum with course module id '506'.	web	172.16.5.6
21 oct. 15, 10:54	Admin Utilisateur	EFL25 EFL25	Forum: The Most important Invention	Forum	Abonnement créé	The user with id '2' subscribed the user with id '143' to the forum with course module id '506'.	web	172.16.5.6
21 oct. 15, 10:54	Admin Utilisateur	EFL24 EFL24	Forum: The Most important Invention	Forum	Abonnement créé	The user with id '2' subscribed the user with id '142' to the forum with course module id '506'.	web	172.16.5.6
21 oct. 15, 10:54	Admin Utilisateur	EFL23 EFL23	Forum: The Most important Invention	Forum	Abonnement créé	The user with id '2' subscribed the user with id '141' to the forum with course module id '506'.	web	172.16.5.6
21 oct. 15, 10:54	Admin Utilisateur	EFL22 EFL22	Forum: The Most important Invention	Forum	Abonnement créé	The user with id '2' subscribed the user with id '140' to the forum with course module id '506'.	web	172.16.5.6
21 oct. 15, 10:54	Admin Utilisateur	EFL21 EFL21	Forum: The Most important Invention	Forum	Abonnement créé	The user with id '2' subscribed the user with id '139' to the forum with course module id '506'.	web	172.16.5.6
21 oct. 15, 10:54	Admin Utilisateur	EFL20 EFL20	Forum: The Most important Invention	Forum	Abonnement créé	The user with id '2' subscribed the user with id '138' to the forum with course module id '506'.	web	172.16.5.6
21 oct. 15, 10:54	Admin Utilisateur	EFL19 EFL19	Forum: The Most important Invention	Forum	Abonnement créé	The user with id '2' subscribed the user with id '137' to the forum with course module id '506'.	web	172.16.5.6
21 oct. 15, 10:54	Admin Utilisateur	EFL18 EFL18	Forum: The Most important Invention	Forum	Abonnement créé	The user with id '2' subscribed the user with id '136' to the forum with course module id '506'.	web	172.16.5.6
21 oct. 15, 10:54	Admin Utilisateur	EFL17 EFL17	Forum: The Most important Invention	Forum	Abonnement créé	The user with id '2' subscribed the user with id '135' to the forum with course module id '506'.	web	172.16.5.6
21 oct. 15, 10:54	Admin Utilisateur	EFL16 EFL16	Forum: The Most important Invention	Forum	Abonnement créé	The user with id '2' subscribed the user with id '134' to the forum with course module id '506'.	web	172.16.5.6
21 oct. 15, 10:54	Admin Utilisateur	EFL15 EFL15	Forum: The Most important Invention	Forum	Abonnement créé	The user with id '2' subscribed the user with id '133' to the forum with course module id '506'.	web	172.16.5.6
21 oct. 15, 10:54	Admin Utilisateur	EFL14 EFL14	Forum: The Most important Invention	Forum	Abonnement créé	The user with id '2' subscribed the user with id '132' to the forum with course module id '506'.	web	172.16.5.6
21 oct. 15, 10:54	Admin Utilisateur	EFL13 EFL13	Forum: The Most important Invention	Forum	Abonnement créé	The user with id '2' subscribed the user with id '131' to the forum with course module id '506'.	web	172.16.5.6
21 oct. 15, 10:54	Admin Utilisateur	EFL12 EFL12	Forum: The Most important Invention	Forum	Abonnement créé	The user with id '2' subscribed the user with id '130' to the forum with course module id '506'.	web	172.16.5.6
21 oct. 15, 10:54	Admin Utilisateur	EFL11 EFL11	Forum: The Most important Invention	Forum	Abonnement créé	The user with id 2' subscribed the user with id '129' to the forum with course module id '506'.  The user with id '2' subscribed the user with id '129' to the forum with course module id '506'.	web	172.16.5.6
21 oct. 15, 10:54 21 oct. 15, 10:54	Admin Utilisateur	FFL10 FFL10	Forum: The Most important Invention	Forum	Abonnement créé	The user with id '2' subscribed the user with id '128' to the forum with course module id '506'.	web	172.16.5.6
21 oct. 15, 10:54 21 oct. 15, 10:54	Admin Utilisateur	EFL09 EFL09	Forum: The Most important Invention	Forum	Abonnement créé	The user with id 2' subscribed the user with id '127' to the forum with course module id '506'.  The user with id '2' subscribed the user with id '127' to the forum with course module id '506'.	web	172.16.5.6
21 oct. 15, 10:54 21 oct. 15, 10:54	Admin Utilisateur	EFLOS EFLOS	Forum: The Most important Invention	Forum	Abonnement créé	The user with id '2' subscribed the user with id '126' to the forum with course module id '506'.	web	172.16.5.6
21 oct. 15, 10:54 21 oct. 15, 10:54	Admin Utilisateur	EFLO7 EFLO7	Forum: The Most important Invention	Forum	Abonnement créé	The user with id '2' subscribed the user with id '125' to the forum with course module id '506'.	web	172.16.5.6
21 oct. 15, 10:54 21 oct. 15, 10:54	Admin Utilisateur	EFL07 EFL07	Forum: The Most important invention	Forum	Abonnement créé	The user with id-2 subscribed the user with id-125 to the forum with course module id-506.  The user with id-12 subscribed the user with id-124 to the forum with course module id-506.	web	172.16.5.6
21 oct. 15, 10:54 21 oct. 15, 10:54	Admin Utilisateur	EFLOS EFLOS	Forum: The Most important Invention	Forum	Abonnement créé	The user with id 2' subscribed the user with id '123' to the forum with course module id '506'.	web	172.16.5.6
	Admin Utilisateur	EFLOS EFLOS EFLO4 EFLO4	Forum: The Most important Invention Forum: The Most important Invention		Abonnement créé	The user with id '2' subscribed the user with id '122' to the forum with course module id '506'.		
21 oct. 15, 10:54 21 oct. 15, 10:54	Admin Utilisateur	EFL04 EFL04 EFL03 EFL03	Forum: The Most important Invention Forum: The Most important Invention	Forum	Abonnement créé	The user with id '2' subscribed the user with id '121' to the forum with course module id '506'.  The user with id '2' subscribed the user with id '121' to the forum with course module id '506'.	web web	172.16.5.6 172.16.5.6
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21 oct. 15, 10:54	Admin Utilisateur	EFL02 EFL02	Forum: The Most important Invention	Forum	Abonnement créé	The user with id '2' subscribed the user with id '120' to the forum with course module id '506'.	web	172.16.5.6

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21 oct. 15, 10:54	Admin Utilisateur	EFL01 EFL01	Forum: The Most important Invention	Forum	Abonnement créé	The user with id '2' subscribed the user with id '119' to the forum with course module id '506'.	web	172.16.5.6
21 oct. 15, 10:54	Admin Utilisateur	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '2' viewed the 'forum' activity with course module id '506'.	web	172.16.5.6
21 oct. 15, 10:54	Admin Utilisateur	-	Forum: The Most important Invention	Forum	Liste d'abonnés consultée	The user with id '2' has viewed the subscribers list for the forum with course module id '506'.	web	172.16.5.6
21 oct. 15, 10:55	Admin Utilisateur	-	Forum: The Most important Invention	Forum	Liste d'abonnés consultée	The user with id '2' has viewed the subscribers list for the forum with course module id '506'.	web	172.16.5.6
21 oct. 15, 10:55	Admin Utilisateur	=	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '2' viewed the 'forum' activity with course module id '506'.	web	172.16.5.6
21 oct. 15, 10:56	Admin Utilisateur	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '2' viewed the 'forum' activity with course module id '506'.	web	172.16.5.6
21 oct. 15, 10:57	Admin Utilisateur	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '2' viewed the 'forum' activity with course module id '506'.	web	172.16.5.6
21 oct. 15, 10:57	Admin Utilisateur	-	Forum: The Most important Invention	Système	Module de cours modifié	The user with id '2' updated the 'forum' activity with course module id '506'.	web	172.16.5.6
21 oct. 15, 11:34	Admin Utilisateur	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '2' viewed the 'forum' activity with course module id '506'.	web	172.16.5.6
21 oct. 15, 11:35	Admin Utilisateur	=	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '2' viewed the 'forum' activity with course module id '506'.	web	172.16.5.6
21 oct. 15, 11:35	Admin Utilisateur	-	Forum: The Most important Invention	Forum	Message créé	The user with id '2' has created the post with id '12' in the discussion with id '9' in the forum with course module id '506'.	web	172.16.5.6
21 oct. 15, 11:35	Admin Utilisateur	-	Forum: The Most important Invention	Forum	Contenu posté	The user with id '2' has posted content in the forum post with id '12' in the discussion '9' located in the forum with course module id '506'.	web	172.16.5.6
21 oct. 15, 11:36	EFL02 EFL02	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '120' viewed the 'forum' activity with course module id '506'.	web	172.16.5.6
21 oct. 15, 11:39	EFL02 EFL02	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '120' viewed the 'forum' activity with course module id '506'.	web	172.16.5.6
21 oct. 15, 11:48	EFL26 EFL26	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '144' viewed the 'forum' activity with course module id '506'.	web	172.16.5.6
21 oct. 15, 11:49	EFL26 EFL26	-	Forum: The Most important Invention	Forum	Discussion consultée	The user with id '144' has viewed the discussion with id '9' in the forum with course module id '506'.	web	172.16.5.6
21 oct. 15, 11:49	EFL26 EFL26	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '144' viewed the 'forum' activity with course module id '506'.	web	172.16.5.6
21 oct. 15, 11:56	Mustapha Gasmi	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '118' viewed the 'forum' activity with course module id '506'.	web	172.16.5.6
21 oct. 15, 11:57	Mustapha Gasmi	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '118' viewed the 'forum' activity with course module id '506'.	web	172.16.5.6
21 oct. 15, 11:58	Mustapha Gasmi	_	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '118' viewed the 'forum' activity with course module id '506'.	web	172.16.5.6
21 oct. 15, 11:58	Mustapha Gasmi	Admin Utilisateur	Forum: The Most important Invention	Forum	Message supprimé	The user with id '118' has deleted the post with id '12' in the discussion with id '9' in the forum with course module id '506'.	web	172.16.5.6
21 oct. 15, 11:58	Mustapha Gasmi	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '118' viewed the 'forum' activity with course module id '506'.	web	172.16.5.6
21 oct. 15, 11:30	FFL11 FFL11		Forum: The Most important Invention	Forum	Module de cours consulté	The user with id 129' viewed the 'forum' activity with course module id '506'.	web	105.102.89.146
21 oct. 15, 14:34	EFLO2 EFLO2		Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '120' viewed the 'forum' activity with course module id '506'.	web	197.115.16.233
	EFL02 EFL02	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '120' viewed the 'forum' activity with course module id '506'.	web	197.115.16.233
21 oct. 15, 14:36		=				· · · · · · · · · · · · · · · · · · ·		
21 oct. 15, 19:31	EFL26 EFL26 Mustapha Gasmi	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '144' viewed the 'forum' activity with course module id '506'.	web	197.202.153.136
21 oct. 15, 19:37		-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '118' viewed the 'forum' activity with course module id '506'.	web	197.202.153.136
22 nov. 15, 08:38	Mustapha Gasmi	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '118' viewed the 'forum' activity with course module id '506'.	web	172.16.5.6
22 nov. 15, 08:43	Mustapha Gasmi	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '118' viewed the 'forum' activity with course module id '506'.	web	172.16.5.6
22 nov. 15, 08:43	Mustapha Gasmi	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '118' viewed the 'forum' activity with course module id '506'.	web	172.16.5.6
22 nov. 15, 08:48	Mustapha Gasmi	=	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '118' viewed the 'forum' activity with course module id '506'.	web	172.16.5.6
22 nov. 15, 08:49	Mustapha Gasmi	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '118' viewed the 'forum' activity with course module id '506'.	web	172.16.5.6
22 oct. 15, 09:29	EFL11 EFL11	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '129' viewed the 'forum' activity with course module id '506'.	web	105.102.102.234
22 oct. 15, 12:20	EFL25 EFL25	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '143' viewed the 'forum' activity with course module id '506'.	web	105.102.32.7
22 oct. 15, 12:43	EFL13 EFL13	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '131' viewed the 'forum' activity with course module id '506'.	web	197.202.156.19
22 oct. 15, 14:14	EFL02 EFL02	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '120' viewed the 'forum' activity with course module id '506'.	web	197.115.9.179
22 oct. 15, 14:39	EFL02 EFL02	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '120' viewed the 'forum' activity with course module id '506'.	web	197.115.9.179
22 oct. 15, 15:05	EFL19 EFL19	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '137' viewed the 'forum' activity with course module id '506'.	web	105.102.53.105
22 oct. 15, 15:41	Mustapha Gasmi	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '118' viewed the 'forum' activity with course module id '506'.	web	105.102.52.156
22 oct. 15, 19:22	EFL25 EFL25	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '143' viewed the 'forum' activity with course module id '506'.	web	105.102.57.177
22 oct. 15, 19:23	EFL25 EFL25	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '143' viewed the 'forum' activity with course module id '506'.	web	105.102.57.177
22 oct. 15, 21:23	EFL25 EFL25	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '143' viewed the 'forum' activity with course module id '506'.	web	105.102.57.177
22 oct. 15, 21:26	EFL25 EFL25	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '143' viewed the 'forum' activity with course module id '506'.	web	105.102.57.177
22 oct. 15, 21:26	EFL25 EFL25	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '143' viewed the 'forum' activity with course module id '506'.	web	105.102.57.177
22 oct. 15, 21:26	EFL25 EFL25	-	Forum: The Most important Invention	Forum	Message créé	The user with id '143' has created the post with id '13' in the discussion with id '9' in the forum with course module id '506'.	web	105.102.57.177
22 oct. 15, 21:26	EFL25 EFL25	=	Forum: The Most important Invention	Forum	Contenu posté	The user with id '143' has posted content in the forum post with id '13' in the discussion '9' located in the forum with course module id '506'.	web	105.102.57.177
22 oct. 15, 22:53	Mustapha Gasmi	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '118' viewed the 'forum' activity with course module id '506'.	web	197.202.128.155
22 oct. 15, 23:39	Mustapha Gasmi	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '118' viewed the 'forum' activity with course module id '506'.	web	105.102.58.130
22 oct. 15, 23:47	Mustapha Gasmi	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '118' viewed the 'forum' activity with course module id '506'.	web	105.102.58.130
22 oct. 15, 23:47	Mustapha Gasmi	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '118' viewed the 'forum' activity with course module id '506'.	web	105.102.58.130
22 oct. 15, 23:47	Mustapha Gasmi	-	Forum: The Most important Invention	Forum	Message créé	The user with id '118' has created the post with id '14' in the discussion with id '9' in the forum with course module id '506'.	web	105.102.58.130
22 oct. 15, 23:47	Mustapha Gasmi	_	Forum: The Most important Invention	Forum	Contenu posté	The user with id '118' has posted content in the forum post with id '14' in the discussion '9' located in the forum with course module id '506'.	web	105.102.58.130
22 oct. 15, 23:47	Mustapha Gasmi	_	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '118' viewed the 'forum' activity with course module id '506'.	web	105.102.58.130
22 oct. 15, 23:49	Mustapha Gasmi		'	Forum	Message modifié	The user with id '118' has updated the post with id '14' in the discussion with id '9' in the forum with course module id '506'.	web	105.102.58.130
22 UCT. 15, 23:49	iviustapna Gasmi	l <sup>-</sup>	Forum: The Most important Invention	rorum	iviessage modifie	The user with id-116 has updated the post with id-14 in the discussion with id-9 in the forum with course module id-506.	web	105.102.58.130

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22 oct. 15, 23:49	Mustapha Gasmi	-	Forum: The Most important Invention	Forum	Contenu posté	The user with id '118' has posted content in the forum post with id '14' in the discussion '9' located in the forum with course module id '506'.	web	105.102.58.130
22 oct. 15, 23:51	Mustapha Gasmi	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '118' viewed the 'forum' activity with course module id '506'.	web	105.102.58.130
22 oct. 15, 23:51	Mustapha Gasmi	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '118' viewed the 'forum' activity with course module id '506'.	web	105.102.58.130
22 oct. 15, 23:51	Mustapha Gasmi	-	Forum: The Most important Invention	Forum	Message créé	The user with id '118' has created the post with id '15' in the discussion with id '9' in the forum with course module id '506'.	web	105.102.58.130
22 oct. 15, 23:51	Mustapha Gasmi	-	Forum: The Most important Invention	Forum	Contenu posté	The user with id '118' has posted content in the forum post with id '15' in the discussion '9' located in the forum with course module id '506'.	web	105.102.58.130
22 oct. 15, 23:57	Mustapha Gasmi	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '118' viewed the 'forum' activity with course module id '506'.	web	105.102.58.130
22 oct. 15, 23:57	Mustapha Gasmi	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '118' viewed the 'forum' activity with course module id '506'.	web	105.102.58.130
22 oct. 15, 23:57	Mustapha Gasmi	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '118' viewed the 'forum' activity with course module id '506'.	web	105.102.58.130
22 oct. 15, 23:57	Mustapha Gasmi	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '118' viewed the 'forum' activity with course module id '506'.	web	105.102.58.130
22 oct. 15, 23:57	Mustapha Gasmi	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '118' viewed the 'forum' activity with course module id '506'.	web	105.102.58.130
22 oct. 15, 23:57	Mustapha Gasmi	-	Forum: The Most important Invention	Forum	Message créé	The user with id '118' has created the post with id '16' in the discussion with id '9' in the forum with course module id '506'.	web	105.102.58.130
22 oct. 15, 23:57	Mustapha Gasmi	-	Forum: The Most important Invention	Forum	Contenu posté	The user with id '118' has posted content in the forum post with id '16' in the discussion '9' located in the forum with course module id '506'.	web	105.102.58.130
23 nov. 15, 08:46	EFL26 EFL26	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '144' viewed the 'forum' activity with course module id '506'.	web	172.16.5.6
23 oct. 15, 06:07	EFL13 EFL13	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '131' viewed the 'forum' activity with course module id '506'.	web	105.102.46.74
23 oct. 15, 06:08	EFL13 EFL13	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '131' viewed the 'forum' activity with course module id '506'.	web	105.102.46.74
23 oct. 15, 06:08	EFL13 EFL13	-	Forum: The Most important Invention	Forum	Message créé	The user with id '131' has created the post with id '17' in the discussion with id '9' in the forum with course module id '506'.	web	105.102.46.74
23 oct. 15, 06:08	EFL13 EFL13	-	Forum: The Most important Invention	Forum	Contenu posté	The user with id '131' has posted content in the forum post with id '17' in the discussion '9' located in the forum with course module id '506'.	web	105.102.46.74
23 oct. 15, 06:09	EFL13 EFL13	-	Forum: The Most important Invention	Forum	Discussion consultée	The user with id '131' has viewed the discussion with id '9' in the forum with course module id '506'.	web	105.102.46.74
23 oct. 15, 06:12	EFL13 EFL13	=	Forum: The Most important Invention	Forum	Message modifié	The user with id '131' has updated the post with id '17' in the discussion with id '9' in the forum with course module id '506'.	web	105.102.46.74
23 oct. 15, 06:12	EFL13 EFL13	=	Forum: The Most important Invention	Forum	Contenu posté	The user with id '131' has posted content in the forum post with id '17' in the discussion '9' located in the forum with course module id '506'.	web	105.102.46.74
23 oct. 15, 06:13	EFL13 EFL13	=	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '131' viewed the 'forum' activity with course module id '506'.	web	105.102.46.74
23 oct. 15, 06:16	EFL13 EFL13	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '131' viewed the 'forum' activity with course module id '506'.	web	105.102.46.74
23 oct. 15, 06:16	EFL13 EFL13	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '131' viewed the 'forum' activity with course module id '506'.	web	105.102.46.74
23 oct. 15, 06:17	EFL13 EFL13	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '131' viewed the 'forum' activity with course module id '506'.	web	105.102.46.74
23 oct. 15, 11:41	Mustapha Gasmi	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '118' viewed the 'forum' activity with course module id '506'.	web	105.102.58.130
23 oct. 15, 11:46	Mustapha Gasmi	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '118' viewed the 'forum' activity with course module id '506'.	web	105.102.58.130
23 oct. 15, 12:44	Mustapha Gasmi	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '118' viewed the 'forum' activity with course module id '506'.	web	105.102.58.130
23 oct. 15, 13:11	Mustapha Gasmi	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '118' viewed the 'forum' activity with course module id '506'.	web	105.102.58.130
23 oct. 15, 13:17	Mustapha Gasmi	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '118' viewed the 'forum' activity with course module id '506'.	web	105.102.58.130
23 oct. 15, 13:17	Mustapha Gasmi	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '118' viewed the 'forum' activity with course module id '506'.	web	105.102.58.130
23 oct. 15, 13:17	Mustapha Gasmi	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '118' viewed the 'forum' activity with course module id '506'.	web	105.102.58.130
23 oct. 15, 13:17	Mustapha Gasmi	-	Forum: The Most important Invention	Forum	Message créé	The user with id '118' has created the post with id '18' in the discussion with id '9' in the forum with course module id '506'.	web	105.102.58.130
23 oct. 15, 13:17	Mustapha Gasmi	-	Forum: The Most important Invention	Forum	Contenu posté	The user with id '118' has posted content in the forum post with id '18' in the discussion '9' located in the forum with course module id '506'.	web	105.102.58.130
23 oct. 15, 13:20	EFL13 EFL13	=	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '131' viewed the 'forum' activity with course module id '506'.	web	105.102.37.93
23 oct. 15, 13:22	EFL13 EFL13	=	Forum: The Most important Invention	Forum	Discussion consultée	The user with id '131' has viewed the discussion with id '9' in the forum with course module id '506'.	web	105.102.37.93
23 oct. 15, 13:30	EFL02 EFL02	=	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '120' viewed the 'forum' activity with course module id '506'.	web	197.115.18.77
23 oct. 15, 13:30	EFL18 EFL18	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '136' viewed the 'forum' activity with course module id '506'.	web	197.202.131.150
23 oct. 15, 13:32	EFL02 EFL02	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '120' viewed the 'forum' activity with course module id '506'.	web	197.115.18.77
23 oct. 15, 13:32	EFL02 EFL02	=	Forum: The Most important Invention	Forum	Message créé	The user with id '120' has created the post with id '19' in the discussion with id '9' in the forum with course module id '506'.	web	197.115.18.77
23 oct. 15, 13:32	EFL02 EFL02	=	Forum: The Most important Invention	Forum	Contenu posté	The user with id '120' has posted content in the forum post with id '19' in the discussion '9' located in the forum with course module id '506'.	web	197.115.18.77
23 oct. 15, 13:32	EFL18 EFL18	=	Forum: The Most important Invention	Forum	Discussion consultée	The user with id '136' has viewed the discussion with id '9' in the forum with course module id '506'.	web	197.202.131.150
23 oct. 15, 13:33	EFL02 EFL02	=	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '120' viewed the 'forum' activity with course module id '506'.	web	197.115.18.77
23 oct. 15, 13:33	EFL02 EFL02	=	Forum: The Most important Invention	Forum	Message modifié	The user with id '120' has updated the post with id '19' in the discussion with id '9' in the forum with course module id '506'.	web	197.115.18.77
23 oct. 15, 13:33	EFL02 EFL02	=	Forum: The Most important Invention	Forum	Contenu posté	The user with id '120' has posted content in the forum post with id '19' in the discussion '9' located in the forum with course module id '506'.	web	197.115.18.77
23 oct. 15, 13:34	EFL18 EFL18	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '136' viewed the 'forum' activity with course module id '506'.	web	197.202.131.150
23 oct. 15, 13:36	EFL18 EFL18	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '136' viewed the 'forum' activity with course module id '506'.	web	197.202.131.150
23 oct. 15, 13:36	EFL02 EFL02	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '120' viewed the 'forum' activity with course module id '506'.	web	197.115.18.77
23 oct. 15, 13:36	EFL02 EFL02	-	Forum: The Most important Invention	Forum	Message modifié	The user with id '120' has updated the post with id '19' in the discussion with id '9' in the forum with course module id '506'.	web	197.115.18.77
23 oct. 15, 13:36	EFL02 EFL02	-	Forum: The Most important Invention	Forum	Contenu posté	The user with id '120' has posted content in the forum post with id '19' in the discussion '9' located in the forum with course module id '506'.	web	197.115.18.77
23 oct. 15, 13:38	EFL02 EFL02	-	Forum: The Most important Invention	Forum	Message modifié	The user with id '120' has updated the post with id '19' in the discussion with id '9' in the forum with course module id '506'.	web	197.115.18.77
23 oct. 15, 13:38	EFL02 EFL02	-	Forum: The Most important Invention	Forum	Contenu posté	The user with id '120' has posted content in the forum post with id '19' in the discussion '9' located in the forum with course module id '506'.	web	197.115.18.77
23 oct. 15, 13:39	EFL02 EFL02	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '120' viewed the 'forum' activity with course module id '506'.	web	197.115.18.77
23 oct. 15, 13:41	EFL02 EFL02		Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '120' viewed the 'forum' activity with course module id '506'.	web	197.115.18.77
23 oct. 15, 14:16	EFL11 EFL11		Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '129' viewed the 'forum' activity with course module id '506'.	web	105.102.102.7
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23 oct. 15, 14:37	Mustapha Gasmi	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '118' viewed the 'forum' activity with course module id '506'.	web	105.102.58.130
23 oct. 15, 15:24	EFL11 EFL11	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '129' viewed the 'forum' activity with course module id '506'.	web	105.102.102.7
23 oct. 15, 15:38	EFL11 EFL11	-	Forum: The Most important Invention	Forum	Message créé	The user with id '129' has created the post with id '20' in the discussion with id '9' in the forum with course module id '506'.	web	105.102.102.7
23 oct. 15, 15:38	EFL11 EFL11	-	Forum: The Most important Invention	Forum	Contenu posté	The user with id '129' has posted content in the forum post with id '20' in the discussion '9' located in the forum with course module id '506'.	web	105.102.102.7
23 oct. 15, 15:39	EFL11 EFL11	-	Forum: The Most important Invention	Forum	Discussion consultée	The user with id '129' has viewed the discussion with id '9' in the forum with course module id '506'.	web	105.102.102.7
23 oct. 15, 15:42	EFL11 EFL11	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with Id '129' viewed the 'forum' activity with course module Id '506'.	web	105.102.102.7
23 oct. 15, 15:42	EFL11 EFL11	-	Forum: The Most important Invention	Forum	Message créé	The user with id '129' has created the post with id '21' in the discussion with id '9' in the forum with course module id '506'.	web	105.102.102.7
23 oct. 15, 15:42	EFL11 EFL11	-	Forum: The Most important Invention	Forum	Contenu posté	The user with id '129' has posted content in the forum post with id '21' in the discussion '9' located in the forum with course module id '506'.	web	105.102.102.7
23 oct. 15, 15:43	EFL02 EFL02	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '120' viewed the 'forum' activity with course module id '506'.	web	197.115.18.77
23 oct. 15, 15:46	EFL11 EFL11	_	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '129' viewed the 'forum' activity with course module id '506'.	web	105.102.102.7
23 oct. 15, 15:46	EFL11 EFL11	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '129' viewed the 'forum' activity with course module id '506'.	web	105.102.102.7
23 oct. 15, 15:46	EFL11 EFL11	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '129' viewed the 'forum' activity with course module id '506'.	web	105.102.102.7
23 oct. 15, 15:46	EFL11 EFL11	-	Forum: The Most important Invention	Forum	Message modifié	The user with id '129' has updated the post with id '20' in the discussion with id '9' in the forum with course module id '506'.	web	105.102.102.7
23 oct. 15, 15:46	EFL11 EFL11	=	Forum: The Most important Invention	Forum	Contenu posté	The user with id '129' has posted content in the forum post with id '20' in the discussion '9' located in the forum with course module id '506'.	web	105.102.102.7
23 oct. 15, 15:46	EFL02 EFL02		Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '120' viewed the 'forum' activity with course module id '506'.	web	197.115.18.77
23 oct. 15, 15:51	EFL02 EFL02	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '120' viewed the 'forum' activity with course module id '506'.	web	197.115.18.77
23 oct. 15, 15:59	EFL02 EFL02	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '120' viewed the 'forum' activity with course module id '506'.	web	197.115.18.77
23 oct. 15, 15:59	EFL02 EFL02	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '120' viewed the 'forum' activity with course module id '506'.	web	197.115.18.77
23 oct. 15, 15:59	EFL02 EFL02		Forum: The Most important Invention	Forum	Message créé	The user with id '120' has created the post with id '22' in the discussion with id '9' in the forum with course module id '506'.	web	197.115.18.77
23 oct. 15, 15:59	EFL02 EFL02		Forum: The Most important Invention	Forum	Contenu posté	The user with id '120' has posted content in the forum post with id '22' in the discussion '9' located in the forum with course module id '506'.	web	197.115.18.77
23 oct. 15, 16:04	EFL02 EFL02	_	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '120' viewed the 'forum' activity with course module id '506'.	web	197.115.18.77
23 oct. 15, 16:43	EFL02 EFL02	_	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '120' viewed the 'forum' activity with course module id '506'.	web	197.115.18.77
23 oct. 15, 16:44	EFL02 EFL02		Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '120' viewed the 'forum' activity with course module id '506'.	web	197.115.18.77
23 oct. 15, 16:46	EFL02 EFL02		Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '120' viewed the 'forum' activity with course module id '506'.	web	197.115.18.77
23 oct. 15, 16:46	EFL02 EFL02		Forum: The Most important Invention	Forum	Message créé	The user with id '120' has created the post with id '23' in the discussion with id '9' in the forum with course module id '506'.	web	197.115.18.77
23 oct. 15, 16:46	FFL02 FFL02		Forum: The Most important Invention	Forum	Contenu posté	The user with id '120' has posted content in the forum post with id '23' in the discussion '9' located in the forum with course module id '506'.	web	197.115.18.77
23 oct. 15, 17:15	EFL19 EFL19		Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '137' viewed the 'forum' activity with course module id '506'.	web	105.102.38.118
23 oct. 15, 17:21	EFL02 EFL02		Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '120' viewed the 'forum' activity with course module id '506'.	web	197.115.18.77
23 oct. 15, 17:21	EFL11 EFL11		Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '129' viewed the 'forum' activity with course module id '506'.	web	105.102.102.7
23 oct. 15, 18:08	EFL02 EFL02		Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '120' viewed the 'forum' activity with course module id '506'.	web	197.115.18.77
23 oct. 15, 18:08	EFL11 EFL11		Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '129' viewed the 'forum' activity with course module id '506'.	web	105.102.102.7
23 oct. 15, 18:11	EFL11 EFL11		Forum: The Most important Invention	Forum	Message créé	The user with id '129' has created the post with id '24' in the discussion with id '9' in the forum with course module id '506'.	web	105.102.102.7
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23 oct. 15, 18:11	EFL11 EFL11	7	Forum: The Most important Invention		Contenu posté	The user with id '129' has posted content in the forum post with id '24' in the discussion '9' located in the forum with course module id '506'.	web	105.102.102.7
23 oct. 15, 18:16	EFL11 EFL11	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '129' viewed the 'forum' activity with course module id '506'.	web	105.102.102.7
23 oct. 15, 18:18	EFL11 EFL11	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '129' viewed the 'forum' activity with course module id '506'.	web	105.102.102.7
23 oct. 15, 18:18	EFL11 EFL11	-	Forum: The Most important Invention	Forum	Message créé	The user with id '129' has created the post with id '25' in the discussion with id '9' in the forum with course module id '506'.	web	105.102.102.7
23 oct. 15, 18:18	EFL11 EFL11	3	Forum: The Most important Invention	Forum	Contenu posté	The user with id '129' has posted content in the forum post with id '25' in the discussion '9' located in the forum with course module id '506'.	web	105.102.102.7
23 oct. 15, 18:25	EFL11 EFL11	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '129' viewed the 'forum' activity with course module id '506'.	web	105.102.102.7
23 oct. 15, 18:28	EFL11 EFL11	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '129' viewed the 'forum' activity with course module id '506'.	web	105.102.102.7
23 oct. 15, 18:30	EFL19 EFL19	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '137' viewed the 'forum' activity with course module id '506'.	web	105.102.38.118
23 oct. 15, 18:30	EFL19 EFL19	-	Forum: The Most important Invention	Forum	Message créé	The user with id '137' has created the post with id '26' in the discussion with id '9' in the forum with course module id '506'.	web	105.102.38.118
23 oct. 15, 18:30	EFL19 EFL19	5	Forum: The Most important Invention	Forum	Contenu posté	The user with id '137' has posted content in the forum post with id '26' in the discussion '9' located in the forum with course module id '506'.	web	105.102.38.118
23 oct. 15, 18:31	EFL19 EFL19	-	Forum: The Most important Invention	Forum	Message modifié	The user with id '137' has updated the post with id '26' in the discussion with id '9' in the forum with course module id '506'.	web	105.102.38.118
23 oct. 15, 18:31	EFL19 EFL19	-	Forum: The Most important Invention	Forum	Contenu posté	The user with id '137' has posted content in the forum post with id '26' in the discussion '9' located in the forum with course module id '506'.	web	105.102.38.118
23 oct. 15, 18:31	EFL11 EFL11	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '129' viewed the 'forum' activity with course module id '506'.	web	105.102.102.7
23 oct. 15, 18:31	EFL11 EFL11	-	Forum: The Most important Invention	Forum	Message créé	The user with id '129' has created the post with id '27' in the discussion with id '9' in the forum with course module id '506'.	web	105.102.102.7
23 oct. 15, 18:31	EFL11 EFL11	=	Forum: The Most important Invention	Forum	Contenu posté	The user with id '129' has posted content in the forum post with id '27' in the discussion '9' located in the forum with course module id '506'.	web	105.102.102.7
23 oct. 15, 18:32	EFL19 EFL19	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '137' viewed the 'forum' activity with course module id '506'.	web	105.102.38.118
23 oct. 15, 18:35	EFL02 EFL02		Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '120' viewed the 'forum' activity with course module id '506'.	web	197.115.18.77
23 oct. 15, 18:36	EFL19 EFL19		Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '137' viewed the 'forum' activity with course module id '506'.	web	105.102.38.118
23 oct. 15, 18:36	EFL19 EFL19	-	Forum: The Most important Invention	Forum	Message modifié	The user with id '137' has updated the post with id '26' in the discussion with id '9' in the forum with course module id '506'.	web	105.102.38.118
23 oct. 15, 18:36	EFL19 EFL19	=	Forum: The Most important Invention	Forum	Contenu posté	The user with id '137' has posted content in the forum post with id '26' in the discussion '9' located in the forum with course module id '506'.	web	105.102.38.118
23 oct. 15, 18:37	EFL11 EFL11	_	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '129' viewed the 'forum' activity with course module id '506'.	web	105.102.102.7
23 oct. 15, 18:39	EFL19 EFL19	_	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '137' viewed the 'forum' activity with course module id '506'.	web	105.102.38.118
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23 oct. 15, 18:40		-	Forum: The Most important Invention	Forum	Message créé	The user with id '129' has created the post with id '28' in the discussion with id '9' in the forum with course module id '506'.	web	105.102.102.7
23 oct. 15, 18:40	EFL11 EFL11	-	Forum: The Most important Invention	Forum	Contenu posté	The user with id '129' has posted content in the forum post with id '28' in the discussion '9' located in the forum with course module id '506'.	web	105.102.102.7
23 oct. 15, 18:41	EFL02 EFL02	-	Forum: The Most important Invention	Forum -	Module de cours consulté	The user with id '120' viewed the 'forum' activity with course module id '506'.	web	197.115.18.77
23 oct. 15, 18:41	EFL02 EFL02	-	Forum: The Most important Invention	Forum -	Module de cours consulté	The user with id '120' viewed the 'forum' activity with course module id '506'.	web	197.115.18.77
23 oct. 15, 18:41	EFL02 EFL02	-	Forum: The Most important Invention	Forum -	Message créé	The user with id '120' has created the post with id '29' in the discussion with id '9' in the forum with course module id '506'.	web	197.115.18.77
23 oct. 15, 18:41	EFL02 EFL02	-	Forum: The Most important Invention	Forum -	Contenu posté	The user with id '120' has posted content in the forum post with id '29' in the discussion '9' located in the forum with course module id '506'.	web	197.115.18.77
23 oct. 15, 18:41	EFL11 EFL11	- 	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '129' viewed the 'forum' activity with course module id '506'.	web	105.102.102.7
	EFL11 EFL11	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '129' viewed the 'forum' activity with course module id '506'.	web	105.102.102.7
23 oct. 15, 18:41	EFL11 EFL11	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '129' viewed the 'forum' activity with course module id '506'.	web	105.102.102.7
23 oct. 15, 18:42	EFL11 EFL11	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '129' viewed the 'forum' activity with course module id '506'.	web	105.102.80.112
23 oct. 15, 18:43	EFL02 EFL02	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '120' viewed the 'forum' activity with course module id '506'.	web	197.115.18.77
23 oct. 15, 18:43	EFL02 EFL02	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '120' viewed the 'forum' activity with course module id '506'.	web	197.115.18.77
	EFL02 EFL02	-	Forum: The Most important Invention	Forum	Message créé	The user with id '120' has created the post with id '30' in the discussion with id '9' in the forum with course module id '506'.	web	197.115.18.77
23 oct. 15, 18:43	EFL02 EFL02	-	Forum: The Most important Invention	Forum	Contenu posté	The user with id '120' has posted content in the forum post with id '30' in the discussion '9' located in the forum with course module id '506'.	web	197.115.18.77
23 oct. 15, 18:45	EFL02 EFL02	-	Forum: The Most important Invention	Forum	Message créé	The user with id '120' has created the post with id '31' in the discussion with id '9' in the forum with course module id '506'.	web	197.115.18.77
23 oct. 15, 18:45	EFL02 EFL02	-	Forum: The Most important Invention	Forum	Contenu posté	The user with id '120' has posted content in the forum post with id '31' in the discussion '9' located in the forum with course module id '506'.	web	197.115.18.77
23 oct. 15, 18:45	EFL11 EFL11	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '129' viewed the 'forum' activity with course module id '506'.	web	105.102.80.112
23 oct. 15, 18:46	EFL02 EFL02	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '120' viewed the 'forum' activity with course module id '506'.	web	197.115.18.77
23 oct. 15, 18:48	EFL11 EFL11	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '129' viewed the 'forum' activity with course module id '506'.	web	105.102.80.112
23 oct. 15, 18:48	EFL11 EFL11	-	Forum: The Most important Invention	Forum	Message créé	The user with id '129' has created the post with id '33' in the discussion with id '9' in the forum with course module id '506'.	web	105.102.80.112
23 oct. 15, 18:48	EFL11 EFL11	-	Forum: The Most important Invention	Forum	Contenu posté	The user with id '129' has posted content in the forum post with id '33' in the discussion '9' located in the forum with course module id '506'.	web	105.102.80.112
23 oct. 15, 18:48	EFL02 EFL02	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '120' viewed the 'forum' activity with course module id '506'.	web	197.115.18.77
23 oct. 15, 18:48	EFL02 EFL02	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '120' viewed the 'forum' activity with course module id '506'.	web	197.115.18.77
23 oct. 15, 18:48	EFL02 EFL02	-	Forum: The Most important Invention	Forum	Message créé	The user with id '120' has created the post with id '32' in the discussion with id '9' in the forum with course module id '506'.	web	197.115.18.77
23 oct. 15, 18:48	EFL02 EFL02	-	Forum: The Most important Invention	Forum	Contenu posté	The user with id '120' has posted content in the forum post with id '32' in the discussion '9' located in the forum with course module id '506'.	web	197.115.18.77
23 oct. 15, 18:49	EFL11 EFL11	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '129' viewed the 'forum' activity with course module id '506'.	web	105.102.80.112
23 oct. 15, 18:49	EFL11 EFL11	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '129' viewed the 'forum' activity with course module id '506'.	web	105.102.80.112
23 oct. 15, 18:50	EFL11 EFL11	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '129' viewed the 'forum' activity with course module id '506'.	web	105.102.80.112
23 oct. 15, 18:50	EFL11 EFL11	-	Forum: The Most important Invention	Forum	Message créé	The user with id '129' has created the post with id '34' in the discussion with id '9' in the forum with course module id '506'.	web	105.102.80.112
23 oct. 15, 18:50	EFL11 EFL11	-	Forum: The Most important Invention	Forum	Contenu posté	The user with id '129' has posted content in the forum post with id '34' in the discussion '9' located in the forum with course module id '506'.	web	105.102.80.112
23 oct. 15, 18:51	EFL02 EFL02	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '120' viewed the 'forum' activity with course module id '506'.	web	197.115.18.77
23 oct. 15, 18:51	EFL02 EFL02	-	Forum: The Most important Invention	Forum	Message supprimé	The user with id '120' has deleted the post with id '31' in the discussion with id '9' in the forum with course module id '506'.	web	197.115.18.77
23 oct. 15, 18:52	EFL11 EFL11	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '129' viewed the 'forum' activity with course module id '506'.	web	105.102.80.112
23 oct. 15, 18:52	EFL11 EFL11	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '129' viewed the 'forum' activity with course module id '506'.	web	105.102.80.112
23 oct. 15, 18:52	EFL11 EFL11	-	Forum: The Most important Invention	Forum	Message créé	The user with id '129' has created the post with id '35' in the discussion with id '9' in the forum with course module id '506'.	web	105.102.80.112
	EFL11 EFL11	-	Forum: The Most important Invention	Forum	Contenu posté	The user with id '129' has posted content in the forum post with id '35' in the discussion '9' located in the forum with course module id '506'.	web	105.102.80.112
23 oct. 15, 18:54	EFL02 EFL02	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '120' viewed the 'forum' activity with course module id '506'.	web	197.115.18.77
23 oct. 15, 18:54	EFL02 EFL02	_	Forum: The Most important Invention	Forum	Message créé	The user with id '120' has created the post with id '36' in the discussion with id '9' in the forum with course module id '506'.	web	197.115.18.77
	EFL02 EFL02	-	Forum: The Most important Invention	Forum	Contenu posté	The user with id '120' has posted content in the forum post with id '36' in the discussion '9' located in the forum with course module id '506'.	web	197.115.18.77
23 oct. 15, 18:55	EFL02 EFL02	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '120' viewed the 'forum' activity with course module id '506'.	web	197.115.18.77
23 oct. 15, 18:55	EFLO2 EFLO2	-	Forum: The Most important Invention	Forum	Message créé	The user with id '120' has created the post with id '37' in the discussion with id '9' in the forum with course module id '506'.	web	197.115.18.77
	EFL02 EFL02	-	Forum: The Most important Invention	Forum	Contenu posté	The user with id '120' has posted content in the forum post with id '37' in the discussion '9' located in the forum with course module id '506'.	web	197.115.18.77
23 oct. 15, 18:55	EFL11 EFL11	_	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '129' viewed the 'forum' activity with course module id '506'.	web	105.102.80.112
23 oct. 15, 18:56	EFL11 EFL11	_	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '129' viewed the 'forum' activity with course module id '506'.	web	105.102.80.112
23 oct. 15, 18:56	EFL11 EFL11	_	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '129' viewed the 'forum' activity with course module id '506'.	web	105.102.80.112
	EFL11 EFL11	_	Forum: The Most important Invention	Forum	Message créé	The user with id '129' has created the post with id '38' in the discussion with id '9' in the forum with course module id '506'.	web	105.102.80.112
23 oct. 15, 18:56	FFL11 FFL11	_	Forum: The Most important Invention	Forum	Contenu posté	The user with id '129' has posted content in the forum post with id '38' in the discussion '9' located in the forum with course module id '506'.	web	105.102.80.112
23 oct. 15, 18:56	EFL02 EFL02	_	Forum: The Most important invention	Forum	Module de cours consulté	The user with id 120' viewed the 'forum' activity with course module id '506'.	web	197.115.18.77
	EFL11 EFL11	_	Forum: The Most important invention	Forum	Module de cours consulté	The user with id '129' viewed the 'forum' activity with course module id '506'.	web	105.102.80.112
23 oct. 15, 19:01 23 oct. 15, 19:02	EFL11 EFL11		Forum: The Most important Invention	Forum	Module de cours consulté  Module de cours consulté	The user with id '129' viewed the 'forum' activity with course module id '506'.	web	105.102.80.112
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23 oct. 15, 19:07	EFL11 EFL11		Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '129' viewed the 'forum' activity with course module id '506'.  The user with id '129' viewed the 'forum' activity with course module id '506'.	web	105.102.80.112
23 oct. 15, 19:13	EFL11 EFL11	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '129' viewed the 'forum' activity with course module id '506'.	web	105.102.80.112
	EFL11 EFL11	-	Forum: The Most important Invention	Forum -	Discussion consultée	The user with id '129' has viewed the discussion with id '9' in the forum with course module id '506'.	web	105.102.80.112
23 oct. 15, 19:48	Mustapha Gasmi	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '118' viewed the 'forum' activity with course module id '506'.	web	154.121.5.231

Part   1,170   171   1				ı	1	1			
18.1   18.1	23 oct. 15, 19:51	EFL11 EFL11	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '129' viewed the 'forum' activity with course module id '506'.	web	105.102.80.112
15.00   15.0	23 oct. 15, 19:52	EFL11 EFL11	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '129' viewed the 'forum' activity with course module id '506'.	web	105.102.80.112
2011.15.13.19   The First Print Mark Important control   The American Street   The Ame	23 oct. 15, 19:52	EFL11 EFL11	=	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '129' viewed the 'forum' activity with course module id '506'.	web	105.102.80.112
Section   Continue	23 oct. 15, 20:43		-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '137' viewed the 'forum' activity with course module id '506'.	web	105.102.38.118
1971   1971	23 oct. 15, 20:59	EFL02 EFL02	=	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '120' viewed the 'forum' activity with course module id '506'.	web	197.115.18.77
20. 18. July	23 oct. 15, 21:18	EFL02 EFL02		Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '120' viewed the 'forum' activity with course module id '506'.	web	197.115.18.77
10.00   1.7.00   1.	23 oct. 15, 21:18	EFL02 EFL02	=	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '120' viewed the 'forum' activity with course module id '506'.	web	197.115.18.77
20.1.1.1.2.2.2.2.2.2.2.2.2.2.2.2.2.2.2.2	23 oct. 15, 21:20	EFL02 EFL02	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '120' viewed the 'forum' activity with course module id '506'.	web	197.115.18.77
Part   1, 1971   179	23 oct. 15, 21:59	EFL11 EFL11	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '129' viewed the 'forum' activity with course module id '506'.	web	105.102.80.112
15   15   15   15   15   15   15   15	23 oct. 15, 22:22	EFL19 EFL19	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '137' viewed the 'forum' activity with course module id '506'.	web	105.102.38.118
20.00.00.00.00.00.00.00.00.00.00.00.00.0	23 oct. 15, 22:23	EFL19 EFL19	-	Forum: The Most important Invention	Forum	Message créé	The user with id '137' has created the post with id '39' in the discussion with id '9' in the forum with course module id '506'.	web	105.102.38.118
20.00.00.00.00.00.00.00.00.00.00.00.00.0	23 oct. 15, 22:23	EFL19 EFL19	-	Forum: The Most important Invention	Forum	Contenu posté	The user with id '137' has posted content in the forum post with id '39' in the discussion '9' located in the forum with course module id '506'.	web	105.102.38.118
20.0.0.0.0.0.0.0.0.0.0.0.0.0.0.0.0.0.0.	23 oct. 15, 22:24	EFL19 EFL19	=	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '137' viewed the 'forum' activity with course module id '506'.	web	105.102.38.118
23	23 oct. 15, 22:24	EFL19 EFL19	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '137' viewed the 'forum' activity with course module id '506'.	web	105.102.38.118
20 cm   1,15,155   Suspin Gainer	23 oct. 15, 22:47	EFL19 EFL19	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '137' viewed the 'forum' activity with course module id '506'.	web	105.102.38.118
20.00   1.00	23 oct. 15, 22:47	EFL19 EFL19	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '137' viewed the 'forum' activity with course module id '506'.	web	105.102.38.118
All Col.   1,000   1	23 oct. 15, 23:54	Mustapha Gasmi	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '118' viewed the 'forum' activity with course module id '506'.	web	105.102.32.22
And CLE, 15-993   Contract New Mode of cours consult   And CLE, 15-994   Contract New Mode of cours consult   And CLE, 15-994   Contract New Mode of cours consult   And CLE, 15-994   Contract New Mode of cours consult   And CLE, 15-994   Contract New Mode of cours consult   And CLE, 15-994   Contract New Mode of cours consult   And CLE, 15-994   Contract New Mode of cours consult   And CLE, 15-994   Contract New Mode of cours consult   And CLE, 15-994   Contract New Mode of cours consult   And CLE, 15-994   Contract New Mode of cours consult   And CLE, 15-994   Contract New Mode   And CLE, 15-	24 oct. 15, 02:53	Mustapha Gasmi	=	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '118' viewed the 'forum' activity with course module id '506'.	web	105.102.32.22
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28 cd. 15, 99.7 Mustaphs Gasmi   Forum: The Most important invention   Forum   Module de cours consulté   The user with id '115' wewed the 'forum' activity with course module id '506'. web   05,102,32.22   24 cd. 15, 90.74 Mustaphs Gasmi   Forum: The Most important invention   Forum   Module de cours consulté   The user with id '115' wewed the 'forum' activity with course module id '506'. web   105,102,32.22   24 cd. 15, 90.94 Mustaphs Gasmi   Forum: The Most important invention   Forum   Module de cours consulté   The user with id '115' was posted content in the forum post with id '45' in the discussion with our with course module id '506'. web   105,102,32.22   24 cd. 15, 90.94 Mustaphs Gasmi   Forum: The Most important invention   Forum   Module de cours consulté   The user with id '115' weeded the post with id '45' in the discussion with id '9' in the forum with course module id '506'. web   105,102,32.22   24 cd. 15, 90.95 Mustaphs Gasmi   Forum: The Most important invention   Forum   Mustaphs Gasmi   Forum: The Most			_	'					
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24 oct. 15, 09:47 Mustapha Gasmi Forum: The Most important invention Forum Module de cours consulté The user with id "118" has posted content in the forum post with id "42" in the discussion "9" located in the forum with course module id "500". web 105.102.3.2.2.2 and control to the course module id "500". web 105.102.3.2.2.2 and control to the course module id "500". web 105.102.3.2.2 and contro				·					
24 act. 15, 09-48 Mustapha Gasmi			=						1
24 oct. 15, 09.48 Mustapha Gasmi   Forum: The Most important invention   Forum   Module de cours consulté   The user with id '118' has created the post with id '31' in the discussion with id '31' in the forum with course module id '506'.   web 105.102.32.22   22   24 oct. 15, 09.64 Mustapha Gasmi   Forum: The Most important invention   Forum   Module de cours consulté   The user with id '118' has prested the post with id '31' in the discussion with id '31' in the forum with course module id '506'.   web 105.102.32.22   24 oct. 15, 09.65 Mustapha Gasmi   Forum: The Most important invention   Forum   Mostule de cours consulté   The user with id '118' has protected content in the Forum post with id '43' in the discussion with id '91' in the forum with course module id '506'.   web 105.102.32.22   24 oct. 15, 09.65 Mustapha Gasmi   Forum: The Most important invention   Forum   Mostule de cours consulté   The user with id '118' has protect content in the Forum post with id '43' in the discussion with id '91' in the forum with course module id '506'.   web 105.102.32.22   24 oct. 15, 09.65 Mustapha Gasmi   Forum: The Most important invention   Forum   Mostule de cours consulté   The user with id '118' has protect content in the Forum post with id '43' in the discussion with id '91' in the forum with course module id '506'.   web 105.102.32.22   24 oct. 15, 09.65 Mustapha Gasmi   Forum: The Most important invention   Forum   Module de cours consulté   The user with id '118' viewed the 'forum' activity with course module id '506'.   web 105.102.32.22   24 oct. 15, 09.65 Mustapha Gasmi   Forum: The Most important invention   Forum   Module de cours consulté   The user with id '118' viewed the 'forum' activity with course module id '506'.   web 105.102.32.22   24 oct. 15, 09.65 Mustapha Gasmi   Forum: The Most important invention   Forum   Module de cours consulté   The user with id '118' viewed the 'forum' activity with course module id '506'.   web 105.102.32.22   24 oct. 15, 09.65 Mustapha Gasmi   Forum: The Most impo			=			,			<b>†</b>
24 oct. 15, 09-48 Mustaphs Gasmi Forum: The Most important invention Forum Message créé The user with id '118' has proteed ontent in the forum with course module id '506'. web 105.102.32.22 dot. 15, 09-50 Mustaphs Gasmi Forum: The Most important invention Forum Module de cours consulté The user with id '118' has posted content in the forum with course module id '506'. web 105.102.32.22 dot. 15, 09-50 Mustaphs Gasmi Forum: The Most important invention Forum Module de cours consulté The user with id '118' has posted content in the forum with course module id '506'. web 105.102.32.22 dot. 15, 09-50 Mustaphs Gasmi Forum: The Most important invention Forum Module de cours consulté The user with id '118' has posted content in the forum with course module id '506'. web 105.102.32.22 dot. 15, 09-52 Mustaphs Gasmi Forum: The Most important invention Forum Module de cours consulté The user with id '118' viewed the 'forum' activity with course module id '506'. web 105.102.32.22 dot. 15, 09-52 Mustaphs Gasmi Forum: The Most important invention Forum Module de cours consulté The user with id '118' viewed the 'forum' activity with course module id '506'. web 105.102.32.22 dot. 15, 09-52 Mustaphs Gasmi Forum: The Most important invention Forum Module de cours consulté The user with id '118' viewed the 'forum' activity with course module id '506'. web 105.102.32.22 dot. 15, 09-52 Mustaphs Gasmi Forum: The Most important invention Forum Module de cours consulté The user with id '118' viewed the 'forum' activity with course module id '506'. web 105.102.32.22 dot. 15, 09-52 Mustaphs Gasmi Forum: The Most important invention Forum Module de cours consulté The user with id '118' viewed the 'forum' activity with course module id '506'. web 105.102.32.22 dot. 15, 09-54 Mustaphs Gasmi Forum: The Most important invention Forum Module de cours consulté The user with id '118' viewed the 'forum' activity with course module id '506'. web 105.102.32.22 dot. 15, 09-54 Mustaphs Gasmi Forum: The Most important invention Forum Module de cours c			=	·	+				
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24 oct. 15, 09-50 Mustapha Gasmi			-	· ·					
24 oct. 15, 09-50 Mustapha Gasmi - Forum: The Most important Invention Forum Message modifié The user with id '118' has updated the post with id '43' in the discussion with id '9' in the forum with course module id '506'. web 105.102.32.22 dot. 15, 09-52 Mustapha Gasmi - Forum: The Most important Invention Forum Module de cours consulté The user with id '118' has posted content in the forum post with id '43' in the discussion '9' located in the forum with course module id '506'. web 105.102.32.22 dot. 15, 09-52 Mustapha Gasmi - Forum: The Most important Invention Forum Module de cours consulté The user with id '118' wisewed the 'forum' activity with course module id '506'. web 105.102.32.22 dot. 15, 09-52 Mustapha Gasmi - Forum: The Most important Invention Forum Module de cours consulté The user with id '118' wisewed the 'forum' activity with course module id '506'. web 105.102.32.22 dot. 15, 09-52 Mustapha Gasmi - Forum: The Most important Invention Forum Module de cours consulté The user with id '118' wisewed the 'forum' activity with course module id '506'. web 105.102.32.22 dot. 15, 09-52 Mustapha Gasmi - Forum: The Most important Invention Forum Module de cours consulté The user with id '118' wisewed the 'forum' activity with course module id '506'. web 105.102.32.22 dot. 15, 09-54 Mustapha Gasmi - Forum: The Most important Invention Forum Module de cours consulté The user with id '118' wisewed the 'forum' activity with course module id '506'. web 105.102.32.22 dot. 15, 09-54 Mustapha Gasmi - Forum: The Most important Invention Forum Module de cours consulté The user with id '118' wisewed the 'forum' activity with course module id '506'. web 105.102.32.22 dot. 15, 09-54 Mustapha Gasmi - Forum: The Most important Invention Forum Module de cours consulté The user with id '118' wisewed the 'forum' activity with course module id '506'. web 105.102.32.22 dot. 15, 09-55 Mustapha Gasmi - Forum: The Most important Invention Forum Module de cours consulté The user with id '118' wisewed the 'forum' activity with co			=	, , , , , , , , , , , , , , , , , , ,		,			
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24 oct. 15, 10:00 Mustapha Gasmi -	Forum: The Most important Invention	Forum	Contenu posté  Module de cours consulté	The user with id '118' has posted content in the forum post with id '47' in the discussion '9' located in the forum with course module id '506'.  The user with id '118' viewed the 'forum' activity with course module id '506'.	web	105.102.32.22
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24 oct. 15, 10:01 Mustapha Gasmi - 24 oct. 15, 10:01 Mustapha Gasmi -	Forum: The Most important Invention  Forum: The Most important Invention	Forum	Module de cours consulté  Module de cours consulté	The user with id '118' viewed the 'forum' activity with course module id '506'.  The user with id '118' viewed the 'forum' activity with course module id '506'.	web	105.102.32.22
24 oct. 15, 10:01 Mustapha Gasmi - 24 oct. 15, 11:08 EFL11 EFL11 -	Forum: The Most important invention	Forum	Module de cours consulté	The user with id '129' viewed the 'forum' activity with course module id '506'.	web	105.102.80.112
24 oct. 15, 11:08   EFEIT EFEIT   -	Forum: The Most important invention	Forum	Module de cours consulté	The user with id '118' viewed the 'forum' activity with course module id '506'.	web	105.102.30.112
<del>-                                    </del>	Forum: The Most important invention	Forum	Module de cours consulté		web	-
		Forum		The user with id '120' viewed the 'forum' activity with course module id '506'.	web	197.115.50.36
24 oct. 15, 12:06	Forum: The Most important Invention	Forum	Module de cours consulté  Module de cours consulté	The user with id '120' viewed the 'forum' activity with course module id '506'.  The user with id '120' viewed the 'forum' activity with course module id '506'.	web	197.115.50.36 197.115.50.36
24 oct. 15, 12:06 EFL02 EFL02 -	Forum: The Most important Invention  Forum: The Most important Invention	Forum	Message créé	The user with id 120' viewed the forum activity with course module id 506.  The user with id '120' has created the post with id '48' in the discussion with id '9' in the forum with course module id '506'.	web	197.115.50.36
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24 oct. 15, 12:08	Forum: The Most important Invention	Forum	Message créé	The user with id '120' has created the post with id '49' in the discussion with id '9' in the forum with course module id '506'.	web	197.115.50.36
24 oct. 15, 12:08	Forum: The Most important Invention	Forum	Contenu posté	The user with id '120' has posted content in the forum post with id '49' in the discussion '9' located in the forum with course module id '506'.	web	197.115.50.36
24 oct. 15, 12:11	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '120' viewed the 'forum' activity with course module id '506'.	web	197.115.50.36
24 oct. 15, 12:11	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '120' viewed the 'forum' activity with course module id '506'.	web	197.115.50.36
24 oct. 15, 12:11	Forum: The Most important Invention	Forum	Message créé	The user with id '120' has created the post with id '50' in the discussion with id '9' in the forum with course module id '506'.	web	197.115.50.36
24 oct. 15, 12:11 EFL02 EFL02 -	Forum: The Most important Invention	Forum	Contenu posté	The user with id '120' has posted content in the forum post with id '50' in the discussion '9' located in the forum with course module id '506'.	web	197.115.50.36
24 oct. 15, 12:13	Forum: The Most important Invention	Forum	Message créé	The user with id '120' has created the post with id '51' in the discussion with id '9' in the forum with course module id '506'.	web	197.115.50.36
24 oct. 15, 12:13 EFL02 EFL02 -	Forum: The Most important Invention	Forum	Contenu posté	The user with id '120' has posted content in the forum post with id '51' in the discussion '9' located in the forum with course module id '506'.	web	197.115.50.36
24 oct. 15, 12:14 EFL02 EFL02 -	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '120' viewed the 'forum' activity with course module id '506'.	web	197.115.50.36
24 oct. 15, 12:14 EFL02 EFL02 -	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '120' viewed the 'forum' activity with course module id '506'.	web	197.115.50.36
24 oct. 15, 12:20 EFL02 EFL02 -	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '120' viewed the 'forum' activity with course module id '506'.	web	197.115.50.36
24 oct. 15, 12:20 EFL02 EFL02 -	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '120' viewed the 'forum' activity with course module id '506'.	web	197.115.50.36
24 oct. 15, 12:20 EFL02 EFL02 -	Forum: The Most important Invention	Forum	Message créé	The user with id '120' has created the post with id '52' in the discussion with id '9' in the forum with course module id '506'.	web	197.115.50.36
24 oct. 15, 12:20 EFL02 EFL02 -	Forum: The Most important Invention	Forum	Contenu posté	The user with id '120' has posted content in the forum post with id '52' in the discussion '9' located in the forum with course module id '506'.	web	197.115.50.36
24 oct. 15, 12:27 EFL02 EFL02 -	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '120' viewed the 'forum' activity with course module id '506'.	web	197.115.50.36
24 oct. 15, 12:27 EFL02 EFL02 -	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '120' viewed the 'forum' activity with course module id '506'.	web	197.115.50.36
24 oct. 15, 12:27 EFL02 EFL02 -	Forum: The Most important Invention	Forum	Message créé	The user with id '120' has created the post with id '53' in the discussion with id '9' in the forum with course module id '506'.	web	197.115.50.36
24 oct. 15, 12:27 EFL02 EFL02 -	Forum: The Most important Invention	Forum	Contenu posté	The user with id '120' has posted content in the forum post with id '53' in the discussion '9' located in the forum with course module id '506'.	web	197.115.50.36
24 oct. 15, 12:28 EFL02 EFL02 -	Forum: The Most important Invention	Forum	Message modifié	The user with id '120' has updated the post with id '53' in the discussion with id '9' in the forum with course module id '506'.	web	197.115.50.36
24 oct. 15, 12:28 EFL02 EFL02 -	Forum: The Most important Invention	Forum	Contenu posté	The user with id '120' has posted content in the forum post with id '53' in the discussion '9' located in the forum with course module id '506'.	web	197.115.50.36
24 oct. 15, 12:28 EFL20 EFL20 -	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '138' viewed the 'forum' activity with course module id '506'.	web	197.202.150.191
24 oct. 15, 12:29 EFL02 EFL02 -	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '120' viewed the 'forum' activity with course module id '506'.	web	197.115.50.36
24 oct. 15, 12:29 EFL02 EFL02 -	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '120' viewed the 'forum' activity with course module id '506'.	web	197.115.50.36
24 oct. 15, 12:32 EFL02 EFL02 -	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '120' viewed the 'forum' activity with course module id '506'.	web	197.115.50.36
24 oct. 15, 12:33 EFL02 EFL02 -	Forum: The Most important Invention	Forum	Discussion consultée	The user with id '120' has viewed the discussion with id '9' in the forum with course module id '506'.	web	197.115.50.36
24 oct. 15, 12:48 Mustapha Gasmi -	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '118' viewed the 'forum' activity with course module id '506'.	web	105.102.32.22
24 oct. 15, 13:17 Mustapha Gasmi -	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '118' viewed the 'forum' activity with course module id '506'.	web	105.102.32.22
24 oct. 15, 13:19 EFL11 EFL11 -	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '129' viewed the 'forum' activity with course module id '506'.	web	105.102.80.112
24 oct. 15, 13:26 EFL11 EFL11 -	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '129' viewed the 'forum' activity with course module id '506'.	web	105.102.80.112
24 oct. 15, 13:55 EFL11 EFL11 -	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '129' viewed the 'forum' activity with course module id '506'.	web	105.102.80.112
24 oct. 15, 13:55 EFL11 EFL11 -	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '129' viewed the 'forum' activity with course module id '506'.	web	105.102.80.112
24 oct. 15, 14:08 EFL11 EFL11 -	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '129' viewed the 'forum' activity with course module id '506'.	web	105.102.80.112
24 oct. 15, 14:11	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '129' viewed the 'forum' activity with course module id '506'.	web	105.102.80.112
24 oct. 15, 15:13 Mustapha Gasmi -	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '118' viewed the 'forum' activity with course module id '506'.	web	197.116.119.109
24 oct. 15, 15:13 Mustapha Gasmi -	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '118' viewed the 'forum' activity with course module id '506'.	web	197.116.119.109
24 oct. 15, 16:55 Mustapha Gasmi -	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '118' viewed the 'forum' activity with course module id '506'.	web	197.116.119.109
24 oct. 15, 17:53 EFL11 EFL11 -	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '129' viewed the 'forum' activity with course module id '506'.	web	105.102.80.112
24 oct. 15, 18:25 Mustapha Gasmi -	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '118' viewed the 'forum' activity with course module id '506'.	web	197.116.119.109
24 oct. 15, 19:43 Mustapha Gasmi -	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '118' viewed the 'forum' activity with course module id '506'.	web	154.121.5.250
24 oct. 15, 19:49 EFL11 EFL11 -	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '129' viewed the 'forum' activity with course module id '506'.	web	105.102.64.234

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24 oct. 15, 20:48	EFL11 EFL11	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '129' viewed the 'forum' activity with course module id '506'.	web	105.102.64.234
24 oct. 15, 21:03	EFL11 EFL11	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '129' viewed the 'forum' activity with course module id '506'.	web	105.102.64.234
24 oct. 15, 22:43	EFL35 EFL35	=	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '155' viewed the 'forum' activity with course module id '506'.	web	105.102.61.107
25 nov. 15, 10:19	EFL14 EFL14	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '132' viewed the 'forum' activity with course module id '506'.	web	41.107.49.17
25 nov. 15, 16:22	EFL10 EFL10	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '128' viewed the 'forum' activity with course module id '506'.	web	105.235.130.116
25 nov. 15, 16:57	EFL10 EFL10	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '128' viewed the 'forum' activity with course module id '506'.	web	105.235.133.73
25 nov. 15, 17:24	EFL10 EFL10	=	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '128' viewed the 'forum' activity with course module id '506'.	web	105.235.133.65
25 nov. 15, 19:17	EFL20 EFL20	=	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '138' viewed the 'forum' activity with course module id '506'.	web	41.107.6.160
25 nov. 15, 19:21	EFL20 EFL20	=	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '138' viewed the 'forum' activity with course module id '506'.	web	41.107.16.39
25 nov. 15, 19:21	EFL20 EFL20	=	Forum: The Most important Invention	Forum	Message créé	The user with id '138' has created the post with id '131' in the discussion with id '9' in the forum with course module id '506'.	web	41.107.6.160
25 nov. 15, 19:21	EFL20 EFL20	=	Forum: The Most important Invention	Forum	Contenu posté	The user with id '138' has posted content in the forum post with id '131' in the discussion '9' located in the forum with course module id '506'.	web	41.107.6.160
25 nov. 15, 22:28	EFL10 EFL10	=	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '128' viewed the 'forum' activity with course module id '506'.	web	105.235.130.57
25 nov. 15, 22:28	EFL10 EFL10	=	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '128' viewed the 'forum' activity with course module id '506'.	web	105.235.130.57
25 nov. 15, 22:30	EFL10 EFL10	=	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '128' viewed the 'forum' activity with course module id '506'.	web	105.235.130.57
25 nov. 15, 22:30	EFL10 EFL10	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '128' viewed the 'forum' activity with course module id '506'.	web	105.235.130.57
25 nov. 15, 22:30	EFL10 EFL10	-	Forum: The Most important Invention	Forum	Message créé	The user with id '128' has created the post with id '133' in the discussion with id '9' in the forum with course module id '506'.	web	105.235.130.57
25 nov. 15, 22:30	EFL10 EFL10	-	Forum: The Most important Invention	Forum	Contenu posté	The user with id '128' has posted content in the forum post with id '133' in the discussion '9' located in the forum with course module id '506'.	web	105.235.130.57
25 nov. 15, 22:38	EFL10 EFL10	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '128' viewed the 'forum' activity with course module id '506'.	web	105.235.130.57
25 nov. 15, 22:38	EFL10 EFL10	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '128' viewed the 'forum' activity with course module id '506'.	web	105.235.130.57
25 nov. 15, 22:38	EFL10 EFL10	-	Forum: The Most important Invention	Forum	Message modifié	The user with id '128' has updated the post with id '133' in the discussion with id '9' in the forum with course module id '506'.	web	105.235.130.57
25 nov. 15, 22:38	EFL10 EFL10	-	Forum: The Most important Invention	Forum	Contenu posté	The user with id '128' has posted content in the forum post with id '133' in the discussion '9' located in the forum with course module id '506'.	web	105.235.130.57
25 nov. 15, 22:44	EFL10 EFL10	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '128' viewed the 'forum' activity with course module id '506'.	web	105.235.130.57
25 nov. 15, 22:44	EFL10 EFL10	-	Forum: The Most important Invention	Forum	Message modifié	The user with id '128' has updated the post with id '133' in the discussion with id '9' in the forum with course module id '506'.	web	105.235.130.57
25 nov. 15, 22:44	EFL10 EFL10	-	Forum: The Most important Invention	Forum	Contenu posté	The user with id '128' has posted content in the forum post with id '133' in the discussion '9' located in the forum with course module id '506'.	web	105.235.130.57
25 nov. 15, 22:45	EFL10 EFL10	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with Id '128' viewed the 'forum' activity with course module Id '506'.	web	105.235.130.57
25 oct. 15, 07:00	Mustapha Gasmi	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '118' viewed the 'forum' activity with course module id '506'.	web	154.121.5.250
25 oct. 15, 08:25	EFL11 EFL11	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '129' viewed the 'forum' activity with course module id '506'.	web	105.102.64.234
25 oct. 15, 09:54	Admin Utilisateur	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '2' viewed the 'forum' activity with course module id '506'.	web	172.16.5.6
25 oct. 15, 09:54	Admin Utilisateur	EFL40 EFL40	Forum: The Most important Invention	Forum	Abonnement créé	The user with id '2' subscribed the user with id '162' to the forum with course module id '506'.	web	172.16.5.6
25 oct. 15, 09:54	Admin Utilisateur	EFL39 EFL39	Forum: The Most important Invention	Forum	Abonnement créé	The user with id '2' subscribed the user with id '161' to the forum with course module id '506'.	web	172.16.5.6
25 oct. 15, 09:54	Admin Utilisateur	EFL38 EFL38	Forum: The Most important Invention	Forum	Abonnement créé	The user with id '2' subscribed the user with id '160' to the forum with course module id '506'.	web	172.16.5.6
25 oct. 15, 09:54	Admin Utilisateur	EFL37 EFL37	Forum: The Most important Invention	Forum	Abonnement créé	The user with id '2' subscribed the user with id '159' to the forum with course module id '506'.	web	172.16.5.6
26 nov. 15, 10:55	Mustapha Gasmi	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with Id '118' viewed the 'forum' activity with course module Id '506'.	web	172.16.5.6
26 nov. 15, 11:01	EFL29 EFL29	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '147' viewed the 'forum' activity with course module id '506'.	web	41.107.41.101
26 nov. 15, 11:01	EFL29 EFL29	-	Forum: The Most important Invention	Forum	Message créé	The user with id '147' has created the post with id '134' in the discussion with id '9' in the forum with course module id '506'.	web	41.107.41.101
26 nov. 15, 11:01	EFL29 EFL29	-	Forum: The Most important Invention	Forum	Contenu posté	The user with id '147' has posted content in the forum post with id '134' in the discussion '9' located in the forum with course module id '506'.	web	41.107.41.101
26 nov. 15, 11:01	EFL29 EFL29	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with Id '147' viewed the 'forum' activity with course module Id '506'.	web	41.107.41.101
26 nov. 15, 11:01	EFL29 EFL29	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with Id '147' viewed the 'forum' activity with course module Id '506'.	web	41.107.41.101
26 nov. 15, 15:11	EFL11 EFL11	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with Id '129' viewed the 'forum' activity with course module Id '506'.	web	41.107.64.153
26 nov. 15, 16:09	EFL14 EFL14	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '132' viewed the 'forum' activity with course module id '506'.	web	41.107.4.169
26 nov. 15, 16:33	EFL14 EFL14	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with Id '132' viewed the 'forum' activity with course module Id '506'.	web	41.107.4.169
26 nov. 15, 17:25	EFL16 EFL16	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with Id '134' viewed the 'forum' activity with course module Id '506'.	web	105.109.99.61
26 nov. 15, 17:49	EFL14 EFL14	=	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '132' viewed the 'forum' activity with course module id '506'.	web	41.107.64.153
26 nov. 15, 17:50	EFL14 EFL14	=	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '132' viewed the 'forum' activity with course module id '506'.	web	41.107.64.153
26 nov. 15, 17:50	EFL14 EFL14	=	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '132' viewed the 'forum' activity with course module id '506'.	web	41.107.64.153
26 nov. 15, 17:50	EFL14 EFL14	=	Forum: The Most important Invention	Forum	Message créé	The user with id '132' has created the post with id '135' in the discussion with id '9' in the forum with course module id '506'.	web	41.107.64.153
26 nov. 15, 17:50	EFL14 EFL14	=	Forum: The Most important Invention	Forum	Contenu posté	The user with id '132' has posted content in the forum post with id '135' in the discussion '9' located in the forum with course module id '506'.	web	41.107.64.153
26 nov. 15, 18:13	EFL16 EFL16	=	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '134' viewed the 'forum' activity with course module id '506'.	web	105.109.99.61
26 nov. 15, 18:13	EFL16 EFL16	=	Forum: The Most important Invention	Forum	Message créé	The user with id '134' has created the post with id '136' in the discussion with id '9' in the forum with course module id '506'.	web	105.109.99.61
26 nov. 15, 18:13	EFL16 EFL16	=	Forum: The Most important Invention	Forum	Contenu posté	The user with id '134' has posted content in the forum post with id '136' in the discussion '9' located in the forum with course module id '506'.	web	105.109.99.61
26 oct. 15, 08:37	Mustapha Gasmi	=	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '118' viewed the 'forum' activity with course module id '506'.	web	197.202.130.158
26 oct. 15, 09:29	Admin Utilisateur	5	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '2' viewed the 'forum' activity with course module id '506'.	web	172.16.5.6
26 oct. 15, 11:01	EFL11 EFL11	5	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '129' viewed the 'forum' activity with course module id '506'.	web	41.107.91.191
26 oct. 15, 16:20	EFL32 EFL32	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '158' viewed the 'forum' activity with course module id '506'.	web	41.105.208.191

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26 oct. 15, 16:28	EFL32 EFL32	-	Forum: The Most important Invention	Forum		The user with id '158' viewed the 'forum' activity with course module id '506'.	web	41.105.208.191
26 oct. 15, 16:28	EFL32 EFL32	-	Forum: The Most important Invention	Forum	Message créé	The user with id '158' has created the post with id '54' in the discussion with id '9' in the forum with course module id '506'.	web	41.105.208.191
26 oct. 15, 16:28	EFL32 EFL32	-	Forum: The Most important Invention	Forum	Contenu posté	The user with id '158' has posted content in the forum post with id '54' in the discussion '9' located in the forum with course module id '506'.	web	41.105.208.191
26 oct. 15, 19:12	EFL35 EFL35	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '155' viewed the 'forum' activity with course module id '506'.	web	41.107.52.106
26 oct. 15, 22:42	Mustapha Gasmi	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '118' viewed the 'forum' activity with course module id '506'.	web	41.107.42.200
26 oct. 15, 22:54	Mustapha Gasmi	-	Forum: The Most important Invention	Forum	Message créé	The user with id '118' has created the post with id '55' in the discussion with id '9' in the forum with course module id '506'.	web	41.107.42.200
26 oct. 15, 22:54	Mustapha Gasmi	-	Forum: The Most important Invention	Forum	Contenu posté	The user with id '118' has posted content in the forum post with id '55' in the discussion '9' located in the forum with course module id '506'.	web	41.107.42.200
26 oct. 15, 22:55	Mustapha Gasmi	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '118' viewed the 'forum' activity with course module id '506'.	web	41.107.42.200
26 oct. 15, 22:55	Mustapha Gasmi	=	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '118' viewed the 'forum' activity with course module id '506'.	web	41.107.42.200
26 oct. 15, 22:55	Mustapha Gasmi	=	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '118' viewed the 'forum' activity with course module id '506'.	web	41.107.42.200
26 oct. 15, 23:14	Mustapha Gasmi		Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '118' viewed the 'forum' activity with course module id '506'.	web	41.107.42.200
27 févr. 16, 20:13	Mustapha Gasmi	=	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '118' viewed the 'forum' activity with course module id '506'.	web	41.107.26.36
27 nov. 15, 07:32	EFL11 EFL11	-	Forum: The Most important Invention	Forum	Discussion consultée	The user with id '129' has viewed the discussion with id '9' in the forum with course module id '506'.	web	41.107.77.253
27 oct. 15, 06:31	Mustapha Gasmi	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '118' viewed the 'forum' activity with course module id '506'.	web	41.107.42.200
27 oct. 15, 06:34	Mustapha Gasmi	-	Forum: The Most important Invention	Forum	Message créé	The user with id '118' has created the post with id '56' in the discussion with id '9' in the forum with course module id '506'.	web	41.107.42.200
27 oct. 15, 06:34	Mustapha Gasmi	-	Forum: The Most important Invention	Forum	Contenu posté	The user with id '118' has posted content in the forum post with id '56' in the discussion '9' located in the forum with course module id '506'.	web	41.107.42.200
27 oct. 15, 06:35	Mustapha Gasmi	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '118' viewed the 'forum' activity with course module id '506'.	web	41.107.42.200
27 oct. 15, 06:35	Mustapha Gasmi	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '118' viewed the 'forum' activity with course module id '506'.	web	41.107.42.200
27 oct. 15, 06:35	Mustapha Gasmi	=	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '118' viewed the 'forum' activity with course module id '506'.	web	41.107.42.200
27 oct. 15, 17:07	Mustapha Gasmi		Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '118' viewed the 'forum' activity with course module id '506'.	web	41.107.18.151
27 oct. 15, 18:29	EFL19 EFL19		Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '137' viewed the 'forum' activity with course module id '506'.	web	41.107.9.122
27 oct. 15, 19:26	EFL27 EFL27	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '145' viewed the 'forum' activity with course module id '506'.	web	41.107.36.121
27 oct. 15, 19:49	Mustapha Gasmi	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '118' viewed the 'forum' activity with course module id '506'.	web	41.107.18.151
27 oct. 15, 19:52	EFL27 EFL27	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '145' viewed the 'forum' activity with course module id '506'.	web	41.107.36.121
27 oct. 15, 19:52	EFL27 EFL27	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '145' viewed the 'forum' activity with course module id '506'.	web	41.107.36.121
27 oct. 15, 19:52	EFL27 EFL27	-	Forum: The Most important Invention	Forum	Message créé	The user with id '145' has created the post with id '58' in the discussion with id '9' in the forum with course module id '506'.	web	41.107.36.121
27 oct. 15, 19:52	EFL27 EFL27	-	Forum: The Most important Invention	Forum	Contenu posté	The user with id '145' has posted content in the forum post with id '58' in the discussion '9' located in the forum with course module id '506'.	web	41.107.36.121
27 oct. 15, 20:02	EFL27 EFL27	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '145' viewed the 'forum' activity with course module id '506'.	web	41.107.36.121
27 oct. 15, 20:02	EFL27 EFL27	-	Forum: The Most important Invention	Forum	Message créé	The user with id '145' has created the post with id '59' in the discussion with id '9' in the forum with course module id '506'.	web	41.107.36.121
27 oct. 15, 20:02	EFL27 EFL27	-	Forum: The Most important Invention	Forum	Contenu posté	The user with id '145' has posted content in the forum post with id '59' in the discussion '9' located in the forum with course module id '506'.	web	41.107.36.121
28 nov. 15, 19:05	Mustapha Gasmi	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '118' viewed the 'forum' activity with course module id '506'.	web	154.121.5.232
28 oct. 15, 00:56	Mustapha Gasmi	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '118' viewed the 'forum' activity with course module id '506'.	web	41.107.18.151
28 oct. 15, 07:19	EFL33 EFL33	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '157' viewed the 'forum' activity with course module id '506'.	web	41.107.20.207
28 oct. 15, 07:20	EFL33 EFL33	=	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '157' viewed the 'forum' activity with course module id '506'.	web	41.107.20.207
28 oct. 15, 07:22	EFL33 EFL33	=	Forum: The Most important Invention	Forum	Discussion consultée	The user with id '157' has viewed the discussion with id '9' in the forum with course module id '506'.	web	41.107.20.207
28 oct. 15, 07:23	EFL33 EFL33	=	Forum: The Most important Invention	Forum	Discussion consultée	The user with id '157' has viewed the discussion with id '9' in the forum with course module id '506'.	web	41.107.20.207
28 oct. 15, 07:38	EFL33 EFL33	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '157' viewed the 'forum' activity with course module id '506'.	web	41.107.20.207
28 oct. 15, 07:40	EFL33 EFL33	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '157' viewed the 'forum' activity with course module id '506'.	web	41.107.20.207
28 oct. 15, 07:40	EFL33 EFL33		Forum: The Most important Invention	Forum	Message créé	The user with id '157' has created the post with id '60' in the discussion with id '9' in the forum with course module id '506'.	web	41.107.20.207
28 oct. 15, 07:40	EFL33 EFL33	-	Forum: The Most important Invention	Forum	Contenu posté	The user with id '157' has posted content in the forum post with id '60' in the discussion '9' located in the forum with course module id '506'.	web	41.107.20.207
28 oct. 15, 10:03	EFL11 EFL11	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '129' viewed the 'forum' activity with course module id '506'.	web	41.107.90.160
28 oct. 15, 10:51	EFL29 EFL29	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '147' viewed the 'forum' activity with course module id '506'.	web	41.107.35.67
28 oct. 15, 10:51	EFL29 EFL29	-	Forum: The Most important Invention	Forum	Discussion consultée	The user with id '147' has viewed the discussion with id '9' in the forum with course module id '506'.	web	41.107.35.67
28 oct. 15, 10:54	EFL29 EFL29	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '147' viewed the 'forum' activity with course module id '506'.	web	41.107.35.67
28 oct. 15, 10:58	EFL29 EFL29	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '147' viewed the 'forum' activity with course module id '506'.	web	41.107.35.67
28 oct. 15, 10:58	EFL29 EFL29	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '147' viewed the 'forum' activity with course module id '506'.	web	41.107.35.67
28 oct. 15, 12:44	EFL02 EFL02	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '120' viewed the 'forum' activity with course module id '506'.	web	197.119.39.223
28 oct. 15, 15:31	Mustapha Gasmi	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '118' viewed the 'forum' activity with course module id '506'.	web	41.107.28.108
28 oct. 15, 17:51	EFL18 EFL18	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '136' viewed the 'forum' activity with course module id '506'.	web	41.107.39.142
28 oct. 15, 18:00	EFL18 EFL18	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '136' viewed the 'forum' activity with course module id '506'.	web	41.107.39.142
28 oct. 15, 18:02	EFL18 EFL18	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '136' viewed the 'forum' activity with course module id '506'.	web	41.107.39.142
28 oct. 15, 18:04	EFL18 EFL18	-	Forum: The Most important Invention	Forum	Discussion consultée	The user with id '136' has viewed the discussion with id '9' in the forum with course module id '506'.	web	41.107.39.142
28 oct. 15, 18:05	EFL18 EFL18	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '136' viewed the 'forum' activity with course module id '506'.	web	41.107.39.142
28 oct. 15, 19:13	Mustapha Gasmi	=	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '118' viewed the 'forum' activity with course module id '506'.	web	41.107.28.108
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28 oct. 15, 20:04	EFL18 EFL18	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with Id '136' viewed the 'forum' activity with course module Id '506'.	web	41.107.39.142
28 oct. 15, 20:19	EFL30 EFL30	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with Id '149' viewed the 'forum' activity with course module Id '506'.	web	41.107.111.54
28 oct. 15, 20:34	EFL18 EFL18	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '136' viewed the 'forum' activity with course module id '506'.	web	41.107.39.142
28 oct. 15, 20:53	EFL18 EFL18	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '136' viewed the 'forum' activity with course module id '506'.	web	41.107.39.142
28 oct. 15, 21:09	EFL30 EFL30	-	Forum: The Most important Invention	Forum	Discussion consultée	The user with id '149' has viewed the discussion with id '9' in the forum with course module id '506'.	web	41.107.111.54
28 oct. 15, 21:45	EFL18 EFL18	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '136' viewed the 'forum' activity with course module id '506'.	web	41.107.39.142
29 oct. 15, 08:03	EFL11 EFL11	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '129' viewed the 'forum' activity with course module id '506'.	web	41.107.65.45
29 oct. 15, 08:43	EFL34 EFL34	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '156' viewed the 'forum' activity with course module id '506'.	web	41.107.103.148
29 oct. 15, 08:48	EFL34 EFL34	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '156' viewed the 'forum' activity with course module id '506'.	web	41.107.103.148
29 oct. 15, 09:26	Admin Utilisateur	EFL45 EFL45	Forum: The Most important Invention	Forum	Abonnement créé	The user with id '2' subscribed the user with id '167' to the forum with course module id '506'.	web	172.16.5.6
29 oct. 15, 09:26	Admin Utilisateur	EFL44 EFL44	Forum: The Most important Invention	Forum	Abonnement créé	The user with id '2' subscribed the user with id '166' to the forum with course module id '506'.	web	172.16.5.6
29 oct. 15, 09:26	Admin Utilisateur	EFL43 EFL43	Forum: The Most important Invention	Forum	Abonnement créé	The user with id '2' subscribed the user with id '165' to the forum with course module id '506'.	web	172.16.5.6
29 oct. 15, 09:26	Admin Utilisateur	EFL42 EFL42	Forum: The Most important Invention	Forum	Abonnement créé	The user with id '2' subscribed the user with id '164' to the forum with course module id '506'.	web	172.16.5.6
29 oct. 15, 09:26	Admin Utilisateur	EFL41 EFL41	Forum: The Most important Invention	Forum	Abonnement créé	The user with id '2' subscribed the user with id '163' to the forum with course module id '506'.	web	172.16.5.6
29 oct. 15, 09:35	EFL18 EFL18	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '136' viewed the 'forum' activity with course module id '506'.	web	41.107.39.142
29 oct. 15, 09:35	EFL18 EFL18	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '136' viewed the 'forum' activity with course module id '506'.	web	41.107.39.142
29 oct. 15, 10:12	Mustapha Gasmi	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '118' viewed the 'forum' activity with course module id '506'.	web	41.107.47.232
29 oct. 15, 11:01	EFL36 EFL36	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '154' viewed the 'forum' activity with course module id '506'.	web	41.107.112.62
29 oct. 15, 11:01	EFL36 EFL36	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '154' viewed the 'forum' activity with course module id '506'.	web	41.107.112.62
29 oct. 15, 11:03	EFL36 EFL36	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '154' viewed the 'forum' activity with course module id '506'.	web	41.107.112.62
29 oct. 15, 11:03	EFL36 EFL36	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '154' viewed the 'forum' activity with course module id '506'.	web	41.107.112.62
29 oct. 15, 11:05	EFL36 EFL36	_	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '154' viewed the 'forum' activity with course module id '506'.	web	41.107.112.62
29 oct. 15, 11:05	EFL36 EFL36	_	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '154' viewed the 'forum' activity with course module id '506'.	web	41.107.112.62
29 oct. 15, 11:29	EFL29 EFL29		Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '147' viewed the 'forum' activity with course module id '506'.	web	41.107.46.94
29 oct. 15, 11:29	EFL29 EFL29		Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '147' viewed the 'forum' activity with course module id '506'.	web	41.107.46.94
	EFL29 EFL29	-	Forum: The Most important Invention	Forum	Discussion consultée	The user with id 147' Newed the Toroni activity with coarse module id 506'.  The user with id '147' has viewed the discussion with id '9' in the forum with coarse module id '506'.	web	41.107.46.94
29 oct. 15, 11:30		=					web	
29 oct. 15, 11:30	EFL29 EFL29	-	Forum: The Most important Invention  Forum: The Most important Invention	Forum	Discussion consultée	The user with id '147' has viewed the discussion with id '9' in the forum with course module id '506'.  The user with id '147' viewed the 'forum' activity with course module id '506'.	web	41.107.46.94 41.107.46.94
29 oct. 15, 11:31	EFL29 EFL29	-		Forum	Module de cours consulté			
29 oct. 15, 11:31	EFL29 EFL29	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '147' viewed the 'forum' activity with course module id '506'.	web	41.107.46.94
29 oct. 15, 11:37	EFL29 EFL29	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '147' viewed the 'forum' activity with course module id '506'.	web	41.107.46.94
29 oct. 15, 11:37	EFL29 EFL29	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '147' viewed the 'forum' activity with course module id '506'.	web	41.107.46.94
29 oct. 15, 11:39	EFL29 EFL29	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '147' viewed the 'forum' activity with course module id '506'.	web	41.107.46.94
29 oct. 15, 11:39	EFL29 EFL29	-	Forum: The Most important Invention	Forum	Message créé	The user with id '147' has created the post with id '62' in the discussion with id '9' in the forum with course module id '506'.	web	41.107.46.94
29 oct. 15, 11:39	EFL29 EFL29	-	Forum: The Most important Invention	Forum	Contenu posté	The user with id '147' has posted content in the forum post with id '62' in the discussion '9' located in the forum with course module id '506'.	web	41.107.46.94
29 oct. 15, 11:39	EFL29 EFL29	-	Forum: The Most important Invention	Forum	Message créé	The user with id '147' has created the post with id '61' in the discussion with id '9' in the forum with course module id '506'.	web	41.107.46.94
29 oct. 15, 11:39	EFL29 EFL29	-	Forum: The Most important Invention	Forum	Contenu posté	The user with id '147' has posted content in the forum post with id '61' in the discussion '9' located in the forum with course module id '506'.	web	41.107.46.94
29 oct. 15, 11:47	EFL36 EFL36	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '154' viewed the 'forum' activity with course module id '506'.	web	41.107.112.62
29 oct. 15, 11:47	EFL36 EFL36	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '154' viewed the 'forum' activity with course module id '506'.	web	41.107.112.62
29 oct. 15, 11:48	EFL36 EFL36	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '154' viewed the 'forum' activity with course module id '506'.	web	41.107.112.62
29 oct. 15, 11:48	EFL36 EFL36	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '154' viewed the 'forum' activity with course module id '506'.	web	41.107.112.62
29 oct. 15, 11:50	EFL36 EFL36	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '154' viewed the 'forum' activity with course module id '506'.	web	41.107.112.62
29 oct. 15, 11:50	EFL36 EFL36	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '154' viewed the 'forum' activity with course module id '506'.	web	41.107.112.62
29 oct. 15, 11:51	EFL36 EFL36	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '154' viewed the 'forum' activity with course module id '506'.	web	41.107.112.62
29 oct. 15, 12:13	EFL36 EFL36	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '154' viewed the 'forum' activity with course module id '506'.	web	41.107.86.37
29 oct. 15, 12:13	EFL36 EFL36	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '154' viewed the 'forum' activity with course module id '506'.	web	41.107.86.37
29 oct. 15, 12:46	EFL36 EFL36	-	Forum: The Most important Invention	Forum	Discussion consultée	The user with id '154' has viewed the discussion with id '9' in the forum with course module id '506'.	web	41.107.127.187
29 oct. 15, 12:47	EFL36 EFL36	=	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '154' viewed the 'forum' activity with course module id '506'.	web	41.107.127.187
29 oct. 15, 12:47	EFL36 EFL36	=	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '154' viewed the 'forum' activity with course module id '506'.	web	41.107.127.187
29 oct. 15, 13:59	EFL26 EFL26	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '144' viewed the 'forum' activity with course module id '506'.	web	41.107.47.232
29 oct. 15, 14:02	EFL26 EFL26	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '144' viewed the 'forum' activity with course module id '506'.	web	41.107.47.232
29 oct. 15, 14:02	EFL26 EFL26	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '144' viewed the 'forum' activity with course module id '506'.	web	41.107.47.232
29 oct. 15, 14:02	EFL26 EFL26	-	Forum: The Most important Invention	Forum	Message créé	The user with id '144' has created the post with id '63' in the discussion with id '9' in the forum with course module id '506'.	web	41.107.47.232
29 oct. 15, 14:02	EFL26 EFL26	-	Forum: The Most important Invention	Forum	Contenu posté	The user with id '144' has posted content in the forum post with id '63' in the discussion '9' located in the forum with course module id '506'.	web	41.107.47.232
29 oct. 15, 14:07	EFL36 EFL36	_	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id 154' viewed the 'forum' activity with course module id '506'.	web	41.107.102.32
25 000. 15, 14.07	LI LOU EFLOU		r or arm. The iviost important invention	i oi uiii	iviouule de cours consulte	The user within 134 viewed the forum activity with course module to 300.	wen	71.107.102.32

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29 oct. 15, 14:07	EFL36 EFL36	-	Forum: The Most important Invention	Forum	Message créé	The user with id '154' has created the post with id '64' in the discussion with id '9' in the forum with course module id '506'.	web	41.107.102.32
29 oct. 15, 14:07	EFL36 EFL36	-	Forum: The Most important Invention	Forum	Contenu posté	The user with id '154' has posted content in the forum post with id '64' in the discussion '9' located in the forum with course module id '506'.	web	41.107.102.32
29 oct. 15, 17:05	EFL40 EFL40	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '162' viewed the 'forum' activity with course module id '506'.	web	41.107.53.45
29 oct. 15, 17:08	EFL40 EFL40	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '162' viewed the 'forum' activity with course module id '506'.	web	41.107.53.45
29 oct. 15, 17:08	EFL12 EFL12	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '130' viewed the 'forum' activity with course module id '506'.	web	41.107.53.45
29 oct. 15, 17:09	EFL12 EFL12	=	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '130' viewed the 'forum' activity with course module id '506'.	web	41.107.53.45
29 oct. 15, 17:11	EFL12 EFL12	-	Forum: The Most important Invention	Forum	Message créé	The user with id '130' has created the post with id '65' in the discussion with id '9' in the forum with course module id '506'.	web	41.107.53.45
29 oct. 15, 17:11	EFL12 EFL12	-	Forum: The Most important Invention	Forum	Contenu posté	The user with id '130' has posted content in the forum post with id '65' in the discussion '9' located in the forum with course module id '506'.	web	41.107.53.45
29 oct. 15, 17:18	EFL40 EFL40	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '162' viewed the 'forum' activity with course module id '506'.	web	41.107.53.45
29 oct. 15, 17:18	EFL40 EFL40	-	Forum: The Most important Invention	Forum	Message créé	The user with id '162' has created the post with id '66' in the discussion with id '9' in the forum with course module id '506'.	web	41.107.53.45
29 oct. 15, 17:18	EFL40 EFL40	-	Forum: The Most important Invention	Forum	Contenu posté	The user with id '162' has posted content in the forum post with id '66' in the discussion '9' located in the forum with course module id '506'.	web	41.107.53.45
29 oct. 15, 17:19	EFL12 EFL12	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '130' viewed the 'forum' activity with course module id '506'.	web	41.107.53.45
29 oct. 15, 17:19	EFL12 EFL12	=	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '130' viewed the 'forum' activity with course module id '506'.	web	41.107.53.45
29 oct. 15, 17:19	EFL12 EFL12	-	Forum: The Most important Invention	Forum	Message créé	The user with id '130' has created the post with id '67' in the discussion with id '9' in the forum with course module id '506'.	web	41.107.53.45
29 oct. 15, 17:19	EFL12 EFL12	-	Forum: The Most important Invention	Forum	Contenu posté	The user with id '130' has posted content in the forum post with id '67' in the discussion '9' located in the forum with course module id '506'.	web	41.107.53.45
29 oct. 15, 17:24	EFL40 EFL40	-	Forum: The Most important Invention	Forum	Discussion consultée	The user with id '162' has viewed the discussion with id '9' in the forum with course module id '506'.	web	41.107.53.45
29 oct. 15, 17:35	EFL32 EFL32	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '158' viewed the 'forum' activity with course module id '506'.	web	154.121.5.234
29 oct. 15, 17:38	EFL19 EFL19	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '137' viewed the 'forum' activity with course module id '506'.	web	41.107.29.205
29 oct. 15, 17:41	EFL32 EFL32	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '158' viewed the 'forum' activity with course module id '506'.	web	154.121.5.234
29 oct. 15, 17:41	EFL32 EFL32	-	Forum: The Most important Invention	Forum	Message créé	The user with id '158' has created the post with id '68' in the discussion with id '9' in the forum with course module id '506'.	web	154.121.5.234
29 oct. 15, 17:41	EFL32 EFL32	-	Forum: The Most important Invention	Forum	Contenu posté	The user with id '158' has posted content in the forum post with id '68' in the discussion '9' located in the forum with course module id '506'.	web	154.121.5.234
29 oct. 15, 21:22	EFL16 EFL16	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '134' viewed the 'forum' activity with course module id '506'.	web	41.107.3.72
29 oct. 15, 21:24	EFL16 EFL16	_	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '134' viewed the 'forum' activity with course module id '506'.	web	41.107.3.72
29 oct. 15, 21:27	EFL16 EFL16	_	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '134' viewed the 'forum' activity with course module id '506'.	web	41.107.3.72
3 nov. 15, 19:35	EFL25 EFL25	_	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '143' viewed the 'forum' activity with course module id '506'.	web	41.107.33.126
3 nov. 16, 08:59	Mustapha Gasmi		Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '118' viewed the 'forum' activity with course module id '506'.	web	172.16.5.6
30 oct. 15, 09:53	EFL02 EFL02		Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '120' viewed the 'forum' activity with course module id '506'.	web	197.119.122.135
30 oct. 15, 10:28	EFL26 EFL26		Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '144' viewed the 'forum' activity with course module id '506'.	web	41.107.53.95
30 oct. 15, 10:28	EFL26 EFL26	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id 144' viewed the Yorum' activity with course module id '506'.	web	41.107.53.95
30 oct. 15, 10:31	EFL26 EFL26	-	Forum: The Most important Invention	Forum	Message créé	The user with id '144' has created the post with id '69' in the discussion with id '9' in the forum with course module id '506'.	web	41.107.53.95
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30 oct. 15, 10:31	EFL26 EFL26	-	Forum: The Most important Invention	Forum	Contenu posté	The user with id '144' has posted content in the forum post with id '69' in the discussion '9' located in the forum with course module id '506'.	web	41.107.53.95
30 oct. 15, 10:34	EFL26 EFL26	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '144' viewed the 'forum' activity with course module id '506'.	web	41.107.53.95
30 oct. 15, 10:34	EFL26 EFL26	-	Forum: The Most important Invention	Forum	Message créé	The user with id '144' has created the post with id '70' in the discussion with id '9' in the forum with course module id '506'.	web	41.107.53.95
30 oct. 15, 10:34	EFL26 EFL26	-	Forum: The Most important Invention	Forum	Contenu posté	The user with id '144' has posted content in the forum post with id '70' in the discussion '9' located in the forum with course module id '506'.	web	41.107.53.95
30 oct. 15, 10:37	EFL26 EFL26	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '144' viewed the 'forum' activity with course module id '506'.	web	41.107.53.95
30 oct. 15, 10:37	EFL26 EFL26	-	Forum: The Most important Invention	Forum	Message créé	The user with id '144' has created the post with id '71' in the discussion with id '9' in the forum with course module id '506'.	web	41.107.53.95
30 oct. 15, 10:37	EFL26 EFL26	-	Forum: The Most important Invention	Forum	Contenu posté	The user with id '144' has posted content in the forum post with id '71' in the discussion '9' located in the forum with course module id '506'.	web	41.107.53.95
30 oct. 15, 10:39	EFL26 EFL26	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '144' viewed the 'forum' activity with course module id '506'.	web	41.107.53.95
30 oct. 15, 10:39	EFL26 EFL26	-	Forum: The Most important Invention	Forum	Message créé	The user with id '144' has created the post with id '72' in the discussion with id '9' in the forum with course module id '506'.	web	41.107.53.95
30 oct. 15, 10:39	EFL26 EFL26	-	Forum: The Most important Invention	Forum	Contenu posté	The user with id '144' has posted content in the forum post with id '72' in the discussion '9' located in the forum with course module id '506'.	web	41.107.53.95
30 oct. 15, 10:42	EFL26 EFL26	-	Forum: The Most important Invention	Forum	Message créé	The user with id '144' has created the post with id '73' in the discussion with id '9' in the forum with course module id '506'.	web	41.107.53.95
30 oct. 15, 10:42	EFL26 EFL26	-	Forum: The Most important Invention	Forum	Contenu posté	The user with id '144' has posted content in the forum post with id '73' in the discussion '9' located in the forum with course module id '506'.	web	41.107.53.95
30 oct. 15, 10:43	EFL26 EFL26	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '144' viewed the 'forum' activity with course module id '506'.	web	41.107.53.95
30 oct. 15, 10:43	EFL26 EFL26	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '144' viewed the 'forum' activity with course module id '506'.	web	41.107.53.95
30 oct. 15, 10:47	EFL11 EFL11	=	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '129' viewed the 'forum' activity with course module id '506'.	web	41.107.105.72
30 oct. 15, 10:57	EFL26 EFL26	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '144' viewed the 'forum' activity with course module id '506'.	web	41.107.53.95
30 oct. 15, 10:57	EFL26 EFL26	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '144' viewed the 'forum' activity with course module id '506'.	web	41.107.53.95
30 oct. 15, 10:57	EFL26 EFL26	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '144' viewed the 'forum' activity with course module id '506'.	web	41.107.53.95
30 oct. 15, 10:57	EFL26 EFL26	-	Forum: The Most important Invention	Forum	Message créé	The user with id '144' has created the post with id '74' in the discussion with id '9' in the forum with course module id '506'.	web	41.107.53.95
30 oct. 15, 10:57	EFL26 EFL26	-	Forum: The Most important Invention	Forum	Contenu posté	The user with id '144' has posted content in the forum post with id '74' in the discussion '9' located in the forum with course module id '506'.	web	41.107.53.95
30 oct. 15, 11:01	EFL26 EFL26	=	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '144' viewed the 'forum' activity with course module id '506'.	web	41.107.53.95
30 oct. 15, 11:01	EFL26 EFL26	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '144' viewed the 'forum' activity with course module id '506'.	web	41.107.53.95
30 oct. 15, 11:01	EFL26 EFL26	-	Forum: The Most important Invention	Forum	Message créé	The user with id '144' has created the post with id '75' in the discussion with id '9' in the forum with course module id '506'.	web	41.107.53.95
30 oct. 15, 11:01	EFL26 EFL26	-	Forum: The Most important Invention	Forum	Contenu posté	The user with id '144' has posted content in the forum post with id '75' in the discussion '9' located in the forum with course module id '506'.	web	41.107.53.95
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30 oct. 15, 11:02	EFL26 EFL26	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '144' viewed the 'forum' activity with course module id '506'.	web	41.107.53.95
30 oct. 15, 11:02	EFL26 EFL26	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '144' viewed the 'forum' activity with course module id '506'.	web	41.107.53.95
30 oct. 15, 11:02	EFL26 EFL26	-	Forum: The Most important Invention	Forum	Message créé	The user with id '144' has created the post with id '76' in the discussion with id '9' in the forum with course module id '506'.	web	41.107.53.95
30 oct. 15, 11:02	EFL26 EFL26	-	Forum: The Most important Invention	Forum	Contenu posté	The user with id '144' has posted content in the forum post with id '76' in the discussion '9' located in the forum with course module id '506'.	web	41.107.53.95
30 oct. 15, 11:08	EFL19 EFL19	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '137' viewed the 'forum' activity with course module id '506'.	web	41.107.7.225
30 oct. 15, 11:23	EFL16 EFL16	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with Id '134' viewed the 'forum' activity with course module Id '506'.	web	41.107.58.248
30 oct. 15, 11:56	EFL36 EFL36	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with Id '154' viewed the 'forum' activity with course module Id '506'.	web	41.107.105.100
30 oct. 15, 11:56	EFL36 EFL36	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with Id '154' viewed the 'forum' activity with course module Id '506'.	web	41.107.105.100
30 oct. 15, 13:22	EFL16 EFL16	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with Id '134' viewed the 'forum' activity with course module Id '506'.	web	41.107.58.248
30 oct. 15, 13:25	EFL16 EFL16	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with Id '134' viewed the 'forum' activity with course module Id '506'.	web	41.107.58.248
30 oct. 15, 13:25	EFL16 EFL16	-	Forum: The Most important Invention	Forum	Message créé	The user with id '134' has created the post with id '77' in the discussion with id '9' in the forum with course module id '506'.	web	41.107.58.248
30 oct. 15, 13:25	EFL16 EFL16	-	Forum: The Most important Invention	Forum	Contenu posté	The user with id '134' has posted content in the forum post with id '77' in the discussion '9' located in the forum with course module id '506'.	web	41.107.58.248
30 oct. 15, 13:26	EFL16 EFL16	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '134' viewed the 'forum' activity with course module id '506'.	web	41.107.58.248
30 oct. 15, 13:26	EFL16 EFL16	-	Forum: The Most important Invention	Forum	Message supprimé	The user with id '134' has deleted the post with id '77' in the discussion with id '9' in the forum with course module id '506'.	web	41.107.58.248
30 oct. 15, 13:50	EFL16 EFL16	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '134' viewed the 'forum' activity with course module id '506'.	web	41.107.58.248
30 oct. 15, 13:50	EFL16 EFL16	-	Forum: The Most important Invention	Forum	Message créé	The user with id '134' has created the post with id '78' in the discussion with id '9' in the forum with course module id '506'.	web	41.107.58.248
30 oct. 15, 13:50	EFL16 EFL16	-	Forum: The Most important Invention	Forum	Contenu posté	The user with id '134' has posted content in the forum post with id '78' in the discussion '9' located in the forum with course module id '506'.	web	41.107.58.248
30 oct. 15, 13:51	EFL16 EFL16	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '134' viewed the 'forum' activity with course module id '506'.	web	41.107.58.248
30 oct. 15, 13:51	EFL16 EFL16	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '134' viewed the 'forum' activity with course module id '506'.	web	41.107.58.248
30 oct. 15, 13:51	EFL16 EFL16	-	Forum: The Most important Invention	Forum	Message modifié	The user with id '134' has updated the post with id '78' in the discussion with id '9' in the forum with course module id '506'.	web	41.107.58.248
30 oct. 15, 13:51	EFL16 EFL16	-	Forum: The Most important Invention	Forum	Contenu posté	The user with id '134' has posted content in the forum post with id '78' in the discussion '9' located in the forum with course module id '506'.	web	41.107.58.248
30 oct. 15, 14:26	EFL10 EFL10	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '128' viewed the 'forum' activity with course module id '506'.	web	105.109.92.27
30 oct. 15, 14:26	EFL10 EFL10	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '128' viewed the 'forum' activity with course module id '506'.	web	105.109.92.27
30 oct. 15, 14:37	EFL10 EFL10	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '128' viewed the 'forum' activity with course module id '506'.	web	105.109.92.27
30 oct. 15, 14:44	EFL10 EFL10	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '128' viewed the 'forum' activity with course module id '506'.	web	105.109.92.27
30 oct. 15, 14:47	EFL11 EFL11	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '129' viewed the 'forum' activity with course module id '506'.	web	41.107.105.72
30 oct. 15, 15:25	Mustapha Gasmi	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '118' viewed the 'forum' activity with course module id '506'.	web	213.140.59.150
30 oct. 15, 15:32	Mustapha Gasmi	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '118' viewed the 'forum' activity with course module id '506'.	web	213.140.59.150
30 oct. 15, 15:32	Mustapha Gasmi	-	Forum: The Most important Invention	Forum	Message créé	The user with id '118' has created the post with id '79' in the discussion with id '9' in the forum with course module id '506'.	web	213.140.59.150
30 oct. 15, 15:32	Mustapha Gasmi	-	Forum: The Most important Invention	Forum	Contenu posté	The user with id '118' has posted content in the forum post with id '79' in the discussion '9' located in the forum with course module id '506'.	web	213.140.59.150
30 oct. 15, 15:33	Mustapha Gasmi	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '118' viewed the 'forum' activity with course module id '506'.	web	213.140.59.150
30 oct. 15, 15:33	Mustapha Gasmi	-	Forum: The Most important Invention	Forum	Message créé	The user with id '118' has created the post with id '80' in the discussion with id '9' in the forum with course module id '506'.	web	213.140.59.150
30 oct. 15, 15:33	Mustapha Gasmi	-	Forum: The Most important Invention	Forum	Contenu posté	The user with id '118' has posted content in the forum post with id '80' in the discussion '9' located in the forum with course module id '506'.	web	213.140.59.150
30 oct. 15, 15:34	Mustapha Gasmi	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '118' viewed the 'forum' activity with course module id '506'.	web	213.140.59.150
30 oct. 15, 15:34	Mustapha Gasmi	-	Forum: The Most important Invention	Forum	Message modifié	The user with id '118' has updated the post with id '80' in the discussion with id '9' in the forum with course module id '506'.	web	213.140.59.150
30 oct. 15, 15:34	Mustapha Gasmi	-	Forum: The Most important Invention	Forum	Contenu posté	The user with id '118' has posted content in the forum post with id '80' in the discussion '9' located in the forum with course module id '506'.	web	213.140.59.150
30 oct. 15, 15:37	Mustapha Gasmi	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '118' viewed the 'forum' activity with course module id '506'.	web	213.140.59.150
30 oct. 15, 16:12	EFL11 EFL11	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '129' viewed the 'forum' activity with course module id '506'.	web	41.107.71.24
30 oct. 15, 16:54	EFL18 EFL18	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '136' viewed the 'forum' activity with course module id '506'.	web	41.107.50.245
30 oct. 15, 16:57	EFL18 EFL18	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '136' viewed the 'forum' activity with course module id '506'.	web	41.107.50.245
30 oct. 15, 17:03	EFL18 EFL18	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '136' viewed the 'forum' activity with course module id '506'.	web	41.107.50.245
30 oct. 15, 17:03	EFL18 EFL18	-	Forum: The Most important Invention	Forum	Message créé	The user with id '136' has created the post with id '81' in the discussion with id '9' in the forum with course module id '506'.	web	41.107.50.245
30 oct. 15, 17:03	EFL18 EFL18	-	Forum: The Most important Invention	Forum	Contenu posté	The user with id '136' has posted content in the forum post with id '81' in the discussion '9' located in the forum with course module id '506'.	web	41.107.50.245
30 oct. 15, 17:19	EFL18 EFL18	-	Forum: The Most important Invention	Forum	Discussion consultée	The user with id '136' has viewed the discussion with id '9' in the forum with course module id '506'.	web	41.107.50.245
30 oct. 15, 18:17	EFL14 EFL14	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '132' viewed the 'forum' activity with course module id '506'.	web	41.107.71.24
30 oct. 15, 18:20	EFL14 EFL14	-	Forum: The Most important Invention	Forum	Message créé	The user with id '132' has created the post with id '82' in the discussion with id '9' in the forum with course module id '506'.	web	41.107.71.24
30 oct. 15, 18:20	EFL14 EFL14	-	Forum: The Most important Invention	Forum	Contenu posté	The user with id '132' has posted content in the forum post with id '82' in the discussion '9' located in the forum with course module id '506'.	web	41.107.71.24
30 oct. 15, 18:21	EFL14 EFL14	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '132' viewed the 'forum' activity with course module id '506'.	web	41.107.71.24
30 oct. 15, 19:21	EFI 20 FFI 20	İ-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '138' viewed the 'forum' activity with course module id '506'.	web	105.109.67.100
30 oct. 15, 20:12	EFL25 EFL25	İ-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '143' viewed the 'forum' activity with course module id '506'.	web	41.107.55.152
30 oct. 15, 20:29	EFL10 EFL10	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '128' viewed the 'forum' activity with course module id '506'.	web	41.107.71.24
30 oct. 15, 20:30	EFL10 EFL10	_	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '128' viewed the 'forum' activity with course module id '506'.	web	41.107.71.24
30 oct. 15, 20:30	EFL10 EFL10		Forum: The Most important invention	Forum	Message créé	The user with id '128' has created the post with id '83' in the discussion with id '9' in the forum with course module id '506'.	web	41.107.71.24
30 oct. 15, 20:30	EFL10 EFL10		Forum: The Most important Invention	Forum	Contenu posté	The user with id '128' has posted content in the forum post with id '83' in the discussion '9' located in the forum with course module id '506'.	web	41.107.71.24
30 UCL. 13, 20:30	FLETO ELETO	I <sup>r</sup>	rorum. The iviost important invention	FOLUIII	contenu poste	The user within 120 has posted content in the forum post within 65 in the discussion 9 located in the forum with course module id 506.	wen	41.10/./1.24

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30 oct. 15, 23:09	EFL20 EFL20	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '138' viewed the 'forum' activity with course module id '506'.	web	105.109.78.12
30 oct. 15, 23:51	EFL20 EFL20	=	Forum: The Most important Invention	Forum	Message créé	The user with id '138' has created the post with id '84' in the discussion with id '9' in the forum with course module id '506'.	web	105.109.78.12
30 oct. 15, 23:51	EFL20 EFL20	-	Forum: The Most important Invention	Forum	Contenu posté	The user with id '138' has posted content in the forum post with id '84' in the discussion '9' located in the forum with course module id '506'.	web	105.109.78.12
30 oct. 15, 23:52	EFL20 EFL20	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with Id '138' viewed the 'forum' activity with course module Id '506'.	web	105.109.78.12
30 oct. 15, 23:56	EFL10 EFL10	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '128' viewed the 'forum' activity with course module id '506'.	web	105.109.92.27
31 oct. 15, 08:03	Mustapha Gasmi	=	Forum: The Most important Invention	Forum	Module de cours consulté	The user with Id '118' viewed the 'forum' activity with course module Id '506'.	web	41.107.49.80
31 oct. 15, 08:06	Mustapha Gasmi	=	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '118' viewed the 'forum' activity with course module id '506'.	web	41.107.49.80
31 oct. 15, 08:06	Mustapha Gasmi	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '118' viewed the 'forum' activity with course module id '506'.	web	41.107.49.80
31 oct. 15, 08:06	Mustapha Gasmi	-	Forum: The Most important Invention	Forum	Message modifié	The user with id '118' has updated the post with id '79' in the discussion with id '9' in the forum with course module id '506'.	web	41.107.49.80
31 oct. 15, 08:06	Mustapha Gasmi	-	Forum: The Most important Invention	Forum	Contenu posté	The user with id '118' has posted content in the forum post with id '79' in the discussion '9' located in the forum with course module id '506'.	web	41.107.49.80
31 oct. 15, 08:17	EFL11 EFL11	=	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '129' viewed the 'forum' activity with course module id '506'.	web	41.107.71.24
31 oct. 15, 11:55	EFL16 EFL16	=	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '134' viewed the 'forum' activity with course module id '506'.	web	41.107.62.150
31 oct. 15, 12:29	EFL34 EFL34	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '156' viewed the 'forum' activity with course module id '506'.	web	41.107.86.225
31 oct. 15, 12:35	EFL11 EFL11	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '129' viewed the 'forum' activity with course module id '506'.	web	41.107.71.24
31 oct. 15, 12:38	EFL11 EFL11	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '129' viewed the 'forum' activity with course module id '506'.	web	41.107.71.24
31 oct. 15, 12:38	EFL11 EFL11	=	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '129' viewed the 'forum' activity with course module id '506'.	web	41.107.71.24
31 oct. 15, 12:38	EFL11 EFL11		Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '129' viewed the 'forum' activity with course module id '506'.	web	41.107.71.24
31 oct. 15, 12:38	EFL11 EFL11		Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '129' viewed the 'forum' activity with course module id '506'.	web	41.107.71.24
31 oct. 15, 12:38	EFL11 EFL11	-	Forum: The Most important Invention	Forum	Message créé	The user with id '129' has created the post with id '85' in the discussion with id '9' in the forum with course module id '506'.	web	41.107.71.24
31 oct. 15, 12:38	EFL11 EFL11	-	Forum: The Most important Invention	Forum	Contenu posté	The user with id '129' has posted content in the forum post with id '85' in the discussion '9' located in the forum with course module id '506'.	web	41.107.71.24
31 oct. 15, 12:51	EFL34 EFL34	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '156' viewed the 'forum' activity with course module id '506'.	web	41.107.86.225
31 oct. 15, 12:52	EFL34 EFL34	_	Forum: The Most important Invention	Forum	Discussion consultée	The user with id '156' has viewed the discussion with id '9' in the forum with course module id '506'.	web	41.107.86.225
31 oct. 15, 12:52	EFL34 EFL34	_	Forum: The Most important Invention	Forum	Discussion consultée	The user with id 156' has viewed the discussion with id '9' in the forum with course module id '506'.	web	41.107.86.225
31 oct. 15, 12:54	EFL34 EFL34		Forum: The Most important Invention	Forum	Discussion consultée	The user with id '156' has viewed the discussion with id '9' in the forum with course module id '506'.	web	41.107.86.225
31 oct. 15, 13:03	EFL11 EFL11		Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '129' viewed the 'forum' activity with course module id '506'.	web	41.107.80.223
31 oct. 15, 13:07	EFL11 EFL11		Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '129' viewed the 'forum' activity with course module id '506'.	web	41.107.71.24
31 oct. 15, 13:07	EFL11 EFL11	=	Forum: The Most important Invention	Forum	Message créé	The user with id '129' has created the post with id '86' in the discussion with id '9' in the forum with course module id '506'.	web	41.107.71.24
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31 oct. 15, 13:07	EFL11 EFL11	=	Forum: The Most important Invention	Forum	Contenu posté	The user with id '129' has posted content in the forum post with id '86' in the discussion '9' located in the forum with course module id '506'.	web	41.107.71.24
31 oct. 15, 16:20	EFL19 EFL19	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '137' viewed the 'forum' activity with course module id '506'.	web	41.107.27.62
31 oct. 15, 16:33	EFL19 EFL19	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '137' viewed the 'forum' activity with course module id '506'.	web	41.107.27.62
31 oct. 15, 16:34	EFL19 EFL19	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '137' viewed the 'forum' activity with course module id '506'.	web	41.107.27.62
31 oct. 15, 17:22	EFL11 EFL11	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '129' viewed the 'forum' activity with course module id '506'.	web	41.107.116.78
31 oct. 15, 18:34	EFL26 EFL26	=	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '144' viewed the 'forum' activity with course module id '506'.	web	41.107.49.80
31 oct. 15, 20:10	EFL11 EFL11	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '129' viewed the 'forum' activity with course module id '506'.	web	41.107.116.78
31 oct. 15, 23:02	EFL26 EFL26	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '144' viewed the 'forum' activity with course module id '506'.	web	41.107.4.172
31 oct. 15, 23:11	EFL20 EFL20	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '138' viewed the 'forum' activity with course module id '506'.	web	105.109.33.128
31 oct. 15, 23:19	EFL26 EFL26	2	Forum: The Most important Invention	Forum	Message créé	The user with id '144' has created the post with id '87' in the discussion with id '9' in the forum with course module id '506'.	web	41.107.4.172
31 oct. 15, 23:19	EFL26 EFL26	=	Forum: The Most important Invention	Forum	Contenu posté	The user with id '144' has posted content in the forum post with id '87' in the discussion '9' located in the forum with course module id '506'.	web	41.107.4.172
31 oct. 15, 23:20	EFL26 EFL26	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '144' viewed the 'forum' activity with course module id '506'.	web	41.107.4.172
4 déc. 15, 09:04	EFL11 EFL11	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '129' viewed the 'forum' activity with course module id '506'.	web	41.107.114.24
4 nov. 15, 09:32	Admin Utilisateur	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '2' viewed the 'forum' activity with course module id '506'.	web	172.16.5.6
4 nov. 15, 09:42	Mustapha Gasmi	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '118' viewed the 'forum' activity with course module id '506'.	web	213.140.59.152
5 nov. 15, 15:57	EFL11 EFL11	=	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '129' viewed the 'forum' activity with course module id '506'.	web	41.107.84.171
5 nov. 16, 17:46	Mustapha Gasmi		Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '118' viewed the 'forum' activity with course module id '506'.	web	41.111.8.244
5 nov. 16, 17:51	Mustapha Gasmi		Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '118' viewed the 'forum' activity with course module id '506'.	web	41.111.8.244
6 nov. 15, 10:55	EFL11 EFL11	=	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '129' viewed the 'forum' activity with course module id '506'.	web	41.107.116.100
6 nov. 15, 14:11	EFL17 EFL17	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '135' viewed the 'forum' activity with course module id '506'.	web	41.107.69.105
6 nov. 15, 14:19	EFL17 EFL17	Ē	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '135' viewed the 'forum' activity with course module id '506'.	web	41.107.69.105
6 nov. 15, 14:19	EFL17 EFL17	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '135' viewed the 'forum' activity with course module id '506'.	web	41.107.69.105
6 nov. 15, 14:19	EFL17 EFL17	-	Forum: The Most important Invention	Forum	Message créé	The user with id '135' has created the post with id '93' in the discussion with id '9' in the forum with course module id '506'.	web	41.107.69.105
6 nov. 15, 14:19	EFL17 EFL17	-	Forum: The Most important Invention	Forum	Contenu posté	The user with id '135' has posted content in the forum post with id '93' in the discussion '9' located in the forum with course module id '506'.	web	41.107.69.105
6 nov. 15, 14:24	EFL17 EFL17	-	Forum: The Most important Invention	Forum	Message modifié	The user with id '135' has updated the post with id '93' in the discussion with id '9' in the forum with course module id '506'.	web	41.107.69.105
6 nov. 15, 14:24	EFL17 EFL17	=	Forum: The Most important Invention	Forum	Contenu posté	The user with id '135' has posted content in the forum post with id '93' in the discussion '91 located in the forum with course module id '506'.	web	41.107.69.105
6 nov. 15, 14:25	EFL17 EFL17	_	Forum: The Most important Invention	Forum		The user with id '135' viewed the 'forum' activity with course module id '506'.	web	41.107.69.105
U 11UV. 13, 14.23	CI CI/ LTLI/		r oram. The wost important invention	i oi uiii	wiodule de cours consulte	The user within 155 viewed the forum activity with course module in 500.	wen	71.107.05.105

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6 nov. 15, 14:25	EFL17 EFL17	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '135' viewed the 'forum' activity with course module id '506'.	web	41.107.69.105
6 nov. 15, 14:51	EFL17 EFL17	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '135' viewed the 'forum' activity with course module id '506'.	web	41.107.69.105
6 nov. 15, 14:51	EFL17 EFL17	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '135' viewed the 'forum' activity with course module id '506'.	web	41.107.69.105
6 nov. 15, 14:51	EFL17 EFL17	-	Forum: The Most important Invention	Forum	Message créé	The user with id '135' has created the post with id '94' in the discussion with id '9' in the forum with course module id '506'.	web	41.107.69.105
6 nov. 15, 14:51	EFL17 EFL17	-	Forum: The Most important Invention	Forum	Contenu posté	The user with id '135' has posted content in the forum post with id '94' in the discussion '9' located in the forum with course module id '506'.	web	41.107.69.105
6 nov. 15, 15:15	EFL17 EFL17	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '135' viewed the 'forum' activity with course module id '506'.	web	41.107.69.105
6 nov. 15, 15:16	EFL17 EFL17	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '135' viewed the 'forum' activity with course module id '506'.	web	41.107.69.105
6 nov. 15, 15:22	EFL17 EFL17	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '135' viewed the 'forum' activity with course module id '506'.	web	41.107.69.105
6 nov. 15, 15:22	EFL17 EFL17	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '135' viewed the 'forum' activity with course module id '506'.	web	41.107.69.105
6 nov. 15, 15:22	EFL17 EFL17	-	Forum: The Most important Invention	Forum	Message créé	The user with id '135' has created the post with id '95' in the discussion with id '9' in the forum with course module id '506'.	web	41.107.69.105
6 nov. 15, 15:22	EFL17 EFL17	-	Forum: The Most important Invention	Forum	Contenu posté	The user with id '135' has posted content in the forum post with id '95' in the discussion '9' located in the forum with course module id '506'.	web	41.107.69.105
6 nov. 15, 15:35	EFL17 EFL17	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '135' viewed the 'forum' activity with course module id '506'.	web	41.107.69.105
6 nov. 15, 15:35	EFL17 EFL17	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '135' viewed the 'forum' activity with course module id '506'.	web	41.107.69.105
6 nov. 15, 15:35	EFL17 EFL17	-	Forum: The Most important Invention	Forum	Message créé	The user with id '135' has created the post with id '96' in the discussion with id '9' in the forum with course module id '506'.	web	41.107.69.105
6 nov. 15, 15:35	EFL17 EFL17	-	Forum: The Most important Invention	Forum	Contenu posté	The user with id '135' has posted content in the forum post with id '96' in the discussion '9' located in the forum with course module id '506'.	web	41.107.69.105
6 nov. 15, 15:37	EFL17 EFL17	-	Forum: The Most important Invention	Forum	Message modifié	The user with id '135' has updated the post with id '95' in the discussion with id '9' in the forum with course module id '506'.	web	41.107.69.105
6 nov. 15, 15:37	EFL17 EFL17	=	Forum: The Most important Invention	Forum	Contenu posté	The user with id '135' has posted content in the forum post with id '95' in the discussion '9' located in the forum with course module id '506'.	web	41.107.69.105
6 nov. 15, 15:38	EFL17 EFL17	=	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '135' viewed the 'forum' activity with course module id '506'.	web	41.107.69.105
6 nov. 15, 15:38	EFL17 EFL17	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '135' viewed the 'forum' activity with course module id '506'.	web	41.107.69.105
6 nov. 15, 15:45	EFL17 EFL17	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '135' viewed the 'forum' activity with course module id '506'.	web	41.107.69.105
6 nov. 15, 15:45	EFL17 EFL17	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '135' viewed the 'forum' activity with course module id '506'.	web	41.107.69.105
6 nov. 15, 15:45	EFL17 EFL17	-	Forum: The Most important Invention	Forum	Message créé	The user with id '135' has created the post with id '97' in the discussion with id '9' in the forum with course module id '506'.	web	41.107.69.105
6 nov. 15, 15:45	EFL17 EFL17	-	Forum: The Most important Invention	Forum	Contenu posté	The user with id '135' has posted content in the forum post with id '97' in the discussion '9' located in the forum with course module id '506'.	web	41.107.69.105
6 nov. 15, 15:50	EFL17 EFL17	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '135' viewed the 'forum' activity with course module id '506'.	web	41.107.69.105
6 nov. 15, 15:50	EFL17 EFL17	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '135' viewed the 'forum' activity with course module id '506'.	web	41.107.69.105
6 nov. 15, 15:50	EFL17 EFL17	-	Forum: The Most important Invention	Forum	Message créé	The user with id '135' has created the post with id '98' in the discussion with id '9' in the forum with course module id '506'.	web	41.107.69.105
6 nov. 15, 15:50	EFL17 EFL17	-	Forum: The Most important Invention	Forum	Contenu posté	The user with id '135' has posted content in the forum post with id '98' in the discussion '9' located in the forum with course module id '506'.	web	41.107.69.105
6 nov. 15, 16:45	EFL26 EFL26	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '144' viewed the 'forum' activity with course module id '506'.	web	41.107.21.192
6 nov. 15, 18:24	EFL16 EFL16	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '134' viewed the 'forum' activity with course module id '506'.	web	105.109.53.20
6 nov. 16, 06:26	Mustapha Gasmi	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '118' viewed the 'forum' activity with course module id '506'.	web	41.111.8.244
6 nov. 16, 06:32	Mustapha Gasmi	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '118' viewed the 'forum' activity with course module id '506'.	web	41.111.8.244
7 nov. 15, 09:57	EFL32 EFL32	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '158' viewed the 'forum' activity with course module id '506'.	web	41.107.56.204
7 nov. 15, 17:27	EFL25 EFL25	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '143' viewed the 'forum' activity with course module id '506'.	web	41.107.33.168
8 mars 16, 19:58	Mustapha Gasmi	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '118' viewed the 'forum' activity with course module id '506'.	web	41.107.48.174
8 nov. 15, 09:32	Mustapha Gasmi	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '118' viewed the 'forum' activity with course module id '506'.	web	41.107.22.130
8 nov. 15, 09:33	Mustapha Gasmi	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '118' viewed the 'forum' activity with course module id '506'.	web	41.107.22.130
8 nov. 15, 09:36	Mustapha Gasmi	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '118' viewed the 'forum' activity with course module id '506'.	web	41.107.22.130
8 nov. 15, 09:38	Mustapha Gasmi	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '118' viewed the 'forum' activity with course module id '506'.	web	41.107.22.130
8 nov. 15, 09:42	Mustapha Gasmi	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '118' viewed the 'forum' activity with course module id '506'.	web	41.107.22.130
8 nov. 15, 09:48	Mustapha Gasmi	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '118' viewed the 'forum' activity with course module id '506'.	web	41.107.22.130
8 nov. 15, 09:48	Mustapha Gasmi	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '118' viewed the 'forum' activity with course module id '506'.	web	41.107.22.130
8 nov. 15, 09:48	Mustapha Gasmi	-	Forum: The Most important Invention	Forum	Message créé	The user with id '118' has created the post with id '99' in the discussion with id '9' in the forum with course module id '506'.	web	41.107.22.130
8 nov. 15, 09:48	Mustapha Gasmi	-	Forum: The Most important Invention	Forum	Contenu posté	The user with id '118' has posted content in the forum post with id '99' in the discussion '9' located in the forum with course module id '506'.	web	41.107.22.130
8 nov. 15, 09:53	Mustapha Gasmi	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '118' viewed the 'forum' activity with course module id '506'.	web	41.107.22.130
8 nov. 15, 09:53	Mustapha Gasmi	-	Forum: The Most important Invention	Forum	Message créé	The user with id '118' has created the post with id '100' in the discussion with id '9' in the forum with course module id '506'.	web	41.107.22.130
8 nov. 15, 09:53	Mustapha Gasmi	-	Forum: The Most important Invention	Forum	Contenu posté	The user with id '118' has posted content in the forum post with id '100' in the discussion '9' located in the forum with course module id '506'.	web	41.107.22.130
8 nov. 15, 21:15	EFL03 EFL03	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '121' viewed the 'forum' activity with course module id '506'.	web	41.107.57.21
8 nov. 15, 21:18	EFL03 EFL03	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '121' viewed the 'forum' activity with course module id '506'.	web	41.107.57.21
8 nov. 15, 21:18	FFL03 FFL03	_	Forum: The Most important Invention	Forum	Message créé	The user with id '121' has created the post with id '101' in the discussion with id '9' in the forum with course module id '506'.	web	41.107.57.21
8 nov. 15, 21:18	EFL03 EFL03	_	Forum: The Most important Invention	Forum	Contenu posté	The user with id '121' has posted content in the forum post with id '101' in the discussion '9' located in the forum with course module id '506'.	web	41.107.57.21
8 nov. 15, 21:18	EFL03 EFL03	_	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '121' viewed the 'forum' activity with course module id '506'.	web	41.107.57.21
8 nov. 15, 21:21	EFLO3 EFLO3	_	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '121' viewed the 'forum' activity with course module id '506'.	web	41.107.57.21
8 nov. 15, 21:21	EFLO3 EFLO3	_	Forum: The Most important Invention	Forum	Message créé	The user with id '121' has created the post with id '102' in the discussion with id '9' in the forum with course module id '506'.	web	41.107.57.21
8 nov. 15, 21:21	EFLO3 EFLO3	_	Forum: The Most important Invention	Forum	Contenu posté	The user with id '121' has posted content in the forum post with id '102' in the discussion '9' located in the forum with course module id '506'.	web	41.107.57.21
O 110V. 13, 21.21	LITUS EFLUS		rorum. The Wost Important invention	FOLUIII	contenu poste	The user within 121 has posted content in the forum post within 102 in the discussion 9 located in the forum with course module id 506.	wen	41.107.37.21

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8 nov. 15, 21:22	EFL16 EFL16	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '134' viewed the 'forum' activity with course module id '506'.	web	41.107.57.21
8 nov. 15, 21:24	EFL16 EFL16	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '134' viewed the 'forum' activity with course module id '506'.	web	41.107.57.21
8 nov. 15, 21:24	EFL16 EFL16	-	Forum: The Most important Invention	Forum	Message créé	The user with id '134' has created the post with id '103' in the discussion with id '9' in the forum with course module id '506'.	web	41.107.57.21
8 nov. 15, 21:24	EFL16 EFL16	-	Forum: The Most important Invention	Forum	Contenu posté	The user with id '134' has posted content in the forum post with id '103' in the discussion '9' located in the forum with course module id '506'.	web	41.107.57.21
8 nov. 15, 21:27	EFL16 EFL16	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '134' viewed the 'forum' activity with course module id '506'.	web	41.107.57.21
8 nov. 15, 21:27	EFL16 EFL16	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '134' viewed the 'forum' activity with course module id '506'.	web	41.107.57.21
8 nov. 15, 21:27	EFL16 EFL16	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '134' viewed the 'forum' activity with course module id '506'.	web	41.107.57.21
8 nov. 15, 21:27	EFL16 EFL16	-	Forum: The Most important Invention	Forum	Message créé	The user with id '134' has created the post with id '104' in the discussion with id '9' in the forum with course module id '506'.	web	41.107.57.21
8 nov. 15, 21:27	EFL16 EFL16	-	Forum: The Most important Invention	Forum	Contenu posté	The user with id '134' has posted content in the forum post with id '104' in the discussion '9' located in the forum with course module id '506'.	web	41.107.57.21
8 nov. 15, 21:28	EFL05 EFL05	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '123' viewed the 'forum' activity with course module id '506'.	web	41.107.57.21
8 nov. 15, 21:33	EFL05 EFL05	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '123' viewed the 'forum' activity with course module id '506'.	web	41.107.57.21
8 nov. 15, 21:33	EFL05 EFL05	-	Forum: The Most important Invention	Forum	Message créé	The user with id '123' has created the post with id '105' in the discussion with id '9' in the forum with course module id '506'.	web	41.107.57.21
8 nov. 15, 21:33	EFL05 EFL05	-	Forum: The Most important Invention	Forum	Contenu posté	The user with id '123' has posted content in the forum post with id '105' in the discussion '9' located in the forum with course module id '506'.	web	41.107.57.21
8 nov. 15, 21:35	EFL14 EFL14	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '132' viewed the 'forum' activity with course module id '506'.	web	41.107.57.21
8 nov. 15, 21:38	EFL14 EFL14	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '132' viewed the 'forum' activity with course module id '506'.	web	41.107.57.21
8 nov. 15, 21:38	EFL14 EFL14	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '132' viewed the 'forum' activity with course module id '506'.	web	41.107.57.21
8 nov. 15, 21:38	EFL14 EFL14	-	Forum: The Most important Invention	Forum	Message créé	The user with id '132' has created the post with id '106' in the discussion with id '9' in the forum with course module id '506'.	web	41.107.57.21
8 nov. 15, 21:38	EFL14 EFL14	-	Forum: The Most important Invention	Forum	Contenu posté	The user with id '132' has posted content in the forum post with id '106' in the discussion '9' located in the forum with course module id '506'.	web	41.107.57.21
8 nov. 15, 21:40	EFL14 EFL14	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '132' viewed the 'forum' activity with course module id '506'.	web	41.107.57.21
8 nov. 15, 21:40	EFL14 EFL14	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '132' viewed the 'forum' activity with course module id '506'.	web	41.107.57.21
8 nov. 15, 21:40	EFL14 EFL14	_	Forum: The Most important Invention	Forum	Message créé	The user with id '132' has created the post with id '107' in the discussion with id '9' in the forum with course module id '506'.	web	41.107.57.21
8 nov. 15, 21:40	EFL14 EFL14	_	Forum: The Most important Invention	Forum	Contenu posté	The user with id '132' has posted content in the forum post with id '107' in the discussion '9' located in the forum with course module id '506'.	web	41.107.57.21
8 nov. 15, 21:41	EFL01 EFL01		Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '119' viewed the 'forum' activity with course module id '506'.	web	41.107.57.21
8 nov. 15, 21:44	EFL01 EFL01		Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '119' viewed the 'forum' activity with course module id '506'.	web	41.107.57.21
8 nov. 15, 21:44	EFL01 EFL01		Forum: The Most important Invention	Forum	Message créé	The user with id '119' has created the post with id '108' in the discussion with id '9' in the forum with course module id '506'.	web	41.107.57.21
8 nov. 15, 21:44	EFL01 EFL01	[-	Forum: The Most important Invention	Forum	Contenu posté	The user with id '119' has posted content in the forum post with id '108' in the discussion '9' located in the forum with course module id '506'.	web	41.107.57.21
		[-					web	
8 nov. 15, 21:45	EFLO1 EFLO1	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '119' viewed the 'forum' activity with course module id '506'.	web	41.107.57.21
8 nov. 15, 21:45	EFL01 EFL01	-	Forum: The Most important Invention	Forum	Message créé	The user with id '119' has created the post with id '109' in the discussion with id '9' in the forum with course module id '506'.		41.107.57.21
8 nov. 15, 21:45	EFL01 EFL01	-	Forum: The Most important Invention	Forum	Contenu posté	The user with id '119' has posted content in the forum post with id '109' in the discussion '9' located in the forum with course module id '506'.	web	41.107.57.21
8 nov. 15, 22:38	EFL13 EFL13	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '131' viewed the 'forum' activity with course module id '506'.	web	41.107.57.21
8 nov. 15, 22:41	EFL13 EFL13	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '131' viewed the 'forum' activity with course module id '506'.	web	41.107.57.21
8 nov. 15, 22:41	EFL13 EFL13	-	Forum: The Most important Invention	Forum	Message créé	The user with id '131' has created the post with id '110' in the discussion with id '9' in the forum with course module id '506'.	web	41.107.57.21
8 nov. 15, 22:41	EFL13 EFL13	-	Forum: The Most important Invention	Forum	Contenu posté	The user with id '131' has posted content in the forum post with id '110' in the discussion '9' located in the forum with course module id '506'.	web	41.107.57.21
8 nov. 15, 22:45	EFL13 EFL13	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '131' viewed the 'forum' activity with course module id '506'.	web	41.107.57.21
8 nov. 15, 22:45	EFL13 EFL13	-	Forum: The Most important Invention	Forum	Message créé	The user with id '131' has created the post with id '111' in the discussion with id '9' in the forum with course module id '506'.	web	41.107.57.21
8 nov. 15, 22:45	EFL13 EFL13	-	Forum: The Most important Invention	Forum	Contenu posté	The user with id '131' has posted content in the forum post with id '111' in the discussion '9' located in the forum with course module id '506'.	web	41.107.57.21
8 nov. 15, 22:47	EFL15 EFL15	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '133' viewed the 'forum' activity with course module id '506'.	web	41.107.57.21
8 nov. 15, 22:50	EFL15 EFL15	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '133' viewed the 'forum' activity with course module id '506'.	web	41.107.57.21
8 nov. 15, 22:50	EFL15 EFL15	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '133' viewed the 'forum' activity with course module id '506'.	web	41.107.57.21
8 nov. 15, 22:50	EFL15 EFL15	-	Forum: The Most important Invention	Forum	Message créé	The user with id '133' has created the post with id '112' in the discussion with id '9' in the forum with course module id '506'.	web	41.107.57.21
8 nov. 15, 22:50	EFL15 EFL15	-	Forum: The Most important Invention	Forum	Contenu posté	The user with id '133' has posted content in the forum post with id '112' in the discussion '9' located in the forum with course module id '506'.	web	41.107.57.21
8 nov. 15, 22:52	EFL15 EFL15	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '133' viewed the 'forum' activity with course module id '506'.	web	41.107.57.21
8 nov. 15, 22:52	EFL15 EFL15	-	Forum: The Most important Invention	Forum	Message créé	The user with id '133' has created the post with id '113' in the discussion with id '9' in the forum with course module id '506'.	web	41.107.57.21
8 nov. 15, 22:52	EFL15 EFL15	-	Forum: The Most important Invention	Forum	Contenu posté	The user with id '133' has posted content in the forum post with id '113' in the discussion '9' located in the forum with course module id '506'.	web	41.107.57.21
8 nov. 15, 22:54	EFL15 EFL15	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '133' viewed the 'forum' activity with course module id '506'.	web	41.107.57.21
8 nov. 15, 22:54	EFL15 EFL15	-	Forum: The Most important Invention	Forum	Message créé	The user with id '133' has created the post with id '114' in the discussion with id '9' in the forum with course module id '506'.	web	41.107.57.21
8 nov. 15, 22:54	EFL15 EFL15	-	Forum: The Most important Invention	Forum	Contenu posté	The user with id '133' has posted content in the forum post with id '114' in the discussion '9' located in the forum with course module id '506'.	web	41.107.57.21
9 mars 16, 09:00	Admin Utilisateur	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '2' viewed the 'forum' activity with course module id '506'.	web	172.16.5.6
9 mars 16, 09:01	Admin Utilisateur	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '2' viewed the 'forum' activity with course module id '506'.	web	172.16.5.6
9 nov. 15, 08:07	EFL11 EFL11	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '129' viewed the 'forum' activity with course module id '506'.	web	41.107.57.21
9 nov. 15, 08:10	EFL11 EFL11	-	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '129' viewed the 'forum' activity with course module id '506'.	web	41.107.57.21
9 nov. 15, 08:10	EFL11 EFL11	-	Forum: The Most important Invention	Forum	Message créé	The user with id '129' has created the post with id '115' in the discussion with id '9' in the forum with course module id '506'.	web	41.107.57.21
9 nov. 15, 08:10	EFL11 EFL11	_	Forum: The Most important Invention	Forum	Contenu posté	The user with id '129' has posted content in the forum post with id '115' in the discussion '9' located in the forum with course module id '506'.	web	41.107.57.21
9 nov. 15, 08:13	EFL11 EFL11	_	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '129' viewed the 'forum' activity with course module id '506'.	web	41.107.57.21
J 110V. 13, UO.13	CI CAL LITELL	l	r or am. The iviost important invention	Orum	iviousie de cours consulte	The data within 125 viewed the forthin activity with course module id 500.	WCD	71.107.37.21

9 nov. 15, 08:13	EFL11 EFL11 -	Forum: The Most important Invention	Forum	Message créé	The user with id '129' has created the post with id '116' in the discussion with id '9' in the forum with course module id '506'.	web	41.107.57.21
9 nov. 15, 08:13	EFL11 EFL11 -	Forum: The Most important Invention	Forum	Contenu posté	The user with id '129' has posted content in the forum post with id '116' in the discussion '9' located in the forum with course module id '506'.	web	41.107.57.21
9 nov. 15, 08:14	EFL10 EFL10 -	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '128' viewed the 'forum' activity with course module id '506'.	web	41.107.57.21
9 nov. 15, 08:17	EFL10 EFL10 -	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '128' viewed the 'forum' activity with course module id '506'.	web	41.107.57.21
9 nov. 15, 08:17	EFL10 EFL10 -	Forum: The Most important Invention	Forum	Message créé	The user with id '128' has created the post with id '117' in the discussion with id '9' in the forum with course module id '506'.	web	41.107.57.21
9 nov. 15, 08:17	EFL10 EFL10 -	Forum: The Most important Invention	Forum	Contenu posté	The user with id '128' has posted content in the forum post with id '117' in the discussion '9' located in the forum with course module id '506'.	web	41.107.57.21
9 nov. 15, 15:21	Mustapha Gasmi -	Forum: The Most important Invention	Forum	Module de cours consulté	The user with id '118' viewed the 'forum' activity with course module id '506'.	web	154.121.5.234
9 nov. 15, 15:22	Mustapha Gasmi -	Forum: The Most important Invention	Forum	Discussion consultée	The user with id '118' has viewed the discussion with id '9' in the forum with course module id '506'.	web	154.121.5.234

#### (Glossary of Key Terms)

## GLOSSARY OF KEY TERMS

**Moodle:** an acronym for Modular Object Oriented Developmental Learning Environment and is a course management system (Course Management System - CMS) through the Internet, also known as a Learning Management System (LMS) or a Virtual Learning Environment (VLE). It is a free web application that educators can use to create effective online learning sites.

*Peer review:* a process by which something proposed (as for research or publication) is evaluated by a group.

Writing competence: it includes a set of different abilities which are necessary for composing good texts. On the one hand writing can be seen as a process for which suitable work techniques must be available (for instance writing strategies, revision strategies, time and project planning for writing). On the other hand there are requirements the writing product has to meet and which the writers must adhere to (such as characteristics of certain and particularly academic texts, knowledge about language).

**Blended learning:** a term generally applied to the practice of using both online and in-person learning experiences when teaching students. In a blended-learning course, for example, students might attend a class taught by a teacher in a traditional classroom setting, while also independently completing online components of the course outside of the classroom.

Online peer feedback: a practice in language education where feedback is given by one student to another in online writing classes to provide students more opportunities to learn from each other. After students finish a writing assignment, the instructor has two or more than two students work together to check each other's work and give comments to the peer partner. Comments from peers are called as peer feedback. Peer feedback can be in the form of corrections, opinions, suggestions, ideas to each other.

*E-learning environment:* a technology-supported environment. For example a classroom in which a technological tool is used as a learning device.

E-learning: electronically mediated asynchronous and synchronous communication for the purposes of constructing and confirming knowledge. While "electronically" could easily be replaced with "online".

### Résumé

L'objectif de cette étude est de démontrer l'efficacité de la co-évaluation entre les étudiants en utilisant la plateforme électronique « Moodle » et cela pour conforter et améliorer les compétences à l'écrit pour les utilisateurs de l'anglais en tant que langue étrangère. Le but est de prouver que ces étudiants qui ont été entrainé à ce type d'activités avec l'aide de la technologie seront capables de rédiger des textes de qualités notamment en ce qui concerne la structure, la progression, l'enchainement des idées, l'utilisation du vocabulaire approprié et le mécanisme de rédaction. Tout cela par rapport à des apprenants qui rédigent de manière traditionnelle.

De plus nous voulons prouver que la co-évaluation entre les étudiants de manière anonyme et en utilisant cette plateforme a un impact positif sur eux en ce qui concerne leur motivation et leur conception des choses.

Notre échantillon se compose de 69 étudiants universitaires divisés en deux groupes de manière aléatoire. 36, ont été entrainés à la co-évaluation, sujet de notre étude, et on leur a demandé de rédiger des articles en utilisant des pseudonymes dans la plateforme « Moodle ». Tandis que les 33 autres ont été désignés comme modérateur sous la tutelle d'un enseignant qui exprime leurs réactions. Nous avons demandé aux deux groupes de rédiger un article qui représente un examen d'admission et un autre à la fin de l'expérimentation. On a aussi distribué des questionnaires aux étudiants pour connaître leurs compétences à l'écrit. 7 étudiants du groupe expérimental ont été choisis au hasard pour passer l'entretien à la fin de notre pratique. L'expérimentation a duré huit semaines. Tous les résultats des examens et des questionnaires ont été effectués en prenant en compte les résultats des entretiens et de l'expérimentation.

Les résultats ont démontré que l'application de la co-évaluation avec l'aide de la plateforme électronique « Moodle » a de nombreux bénéfices pour les étudiants car cela les motive considérablement à améliorer leur production écrite. Cette expérience a permis de diminuer le stress et la timidité entre les apprenants et à dépasser les barrières psychologiques telles que la timidité, le stress et la peur de commettre des erreurs.

**Mots clés** : co-évaluation – Moodle - Compétences à l'écrit – Motivation

#### ملسخسص

الغريض من هذه الدراسة هو التحقق من فعالية قراءة الأقران باستعمال الأرضية الالكترونية موودل في تعزيز وتحسين مهارات الكتابة لدى المتعلمين للغة الإنجليزية كلغة أجنبية. كان الهدف هو تحديد ما إذًا كان الطلاب الذين تم تدريبهم على تحرير و تقييم كتابة الأقران ضمن بيئة مدعومة بالتكنولوجيا أصبحوا واعين بالخطوات العملية للكتابة وانتجوا النصوص المكتوبة أفضل من حيث التخطيط والتنمية والتلاحم والتماسك، والهيكل، والمفردات، والميكانيك من الطلاب الذين خضعوا لجلسات الكتابة التي يقودها المعلم في إطار تقليدي، وعما إذا كان الانخراط في جلسات استعراض الأقران باستعمال الأرضية الالكترونية موودل ، دون الكشف عن الهوية، كان له أثر إيجابي على الطلاب من حيث المواقف والتصورات والدوافع عينة الدراسة شملت 69 طالبا جامعيا موزعة بشكل عشوائي في مجموعتين: 36 تم تدريتهم على قراءة الأقران محل التجربة وطلب منهم كتابة المقالات مستخدمين اسماء مستعارة باستخدام منصة موودل، في حين 33 الآخرين تم تعيينهم كمجموعة ضابطة يقودها المعلم أين تأتى ردود الفعل فقط من المعلم كلا المجموعتين من الطلاب، طلب منهم كتابة مقال بمثابة اختبار الدخول، و آخر في نهاية التجربة، كما وزع على المجموعتين استبيان في بداية الدراسة خاص بمهارة الكتابة. سبعة طلاب من المجموعة التجريبية اختيروا عشوائيا لإجراء المقابلة في نهاية الدراسة. التجربة دامت ثمانية أسابيع. نتائج كل الاختبارات والردود على الاستبيان تمت ، مع الأخذ بعين الاعتبار ردود المقابلة وكذا التجربة. و كشفت النتائج أن تطبيق قراءة الأقران باستعمال موودل عن العديد من الفوائد التي تعود على الطلاب ليس فقط من حيث مواقفهم بل خلق الدافعية لتحسين كتاباتهم. ساعدت التجربة في الحد من القلق والخجل بين الطلاب كما ساعدت في التغلب على الحواجز النفسية، منها القلق والخجل والخوف من ارتكاب

الكلمات المفاتيح: موودل - مهارة الكتابة - قراءة الأقران - التحصيل - الدافعية