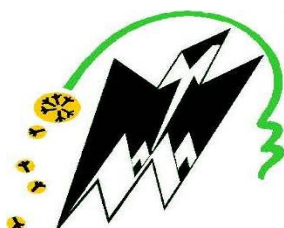


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**Students' Interactivity in Online Discussion Forums:**  
***The Case of Language and Communication Master II students at***  
***MMUTO***

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# *Dedication*

To my beloved family:

My father Houbouonnè (in memory) and mother Oho

My brothers & sisters

Special thanks to my brother Kodjan and his wife Kossia

To my friend Sié

Special thanks to my dear Lucie

Special thanks to Dr Lougué

To all my friends

*Koko DA*

# *Dedication*

*To my sweet family:*

*My father Achour and mother Linda*

*My brother Amine and my sister Imane*

*To my best friend Rima*

*To all my friends*

*Meriem SEDDOUD*

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## **Abstract**

*The study is mainly concerned with Students' Interactivity in Online discussion Forums. It attempted to determine the extent to which the students are interactive in online forums and to seek out the factors influencing students' participation. The experiment was conducted in the MMUTO under Moore's Transactional Distance Theory by also using a mixed method research. Thus, a semi-structured interview was conducted with two instructors of the forum and a questionnaire was distributed to forty five students. SPSS (Statistical Package for Social Sciences) was used for statistical data analysis while Mayring's Qualitative Content Analysis helped to interpret the results of the interview. On the basis of the results of the study, it is concluded that the interaction of the students in the forum is a learner-content interaction and rather passive. The implementation of the socio-constructivist approach to teaching/learning in this forum remains a challenge. Despite their awareness of the importance of interaction, the students fulfil a passive role. The results also reveal that the main demotivating factors to participation are "Difficulty to access", "Time constraint" and the "Lack of interaction" from the other participants. To improve the level of students' interaction and to yield better implementation of the forum, recommendations are provided by the end of the research.*

**Key words:** e-Learning, e-Forum, Interactivity

## **List of Abbreviations**

- ICT: Information and Communication Technology
- ODF: Online Discussion Forum
- VLE: Virtual Learning Environment
- CL: Collaborative Learning
- ZPD: Zone of Proximal Development
- CSCL: Computer Supported Collaborative Learning
- CMC: Computer -Mediated Communication
- TDT: Transactional Distance Theory
- SPSS: Statistical Package for Social Sciences
- QCA: Qualitative Content Analysis

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# *General Introduction*

## **Statement of the Problem**

The area of education, as many others, witnesses important changes due to the technological revolution over the past few years. Indeed, the advent of Information and Communication Technologies (ICTs henceforth) and particularly of the Internet, have favored the development of new means of teaching and learning such as web-based instruction known as e-Learning. One of the e-Learning techniques used is Online Discussion Forums (ODFs hereafter) which makes easier the transmission of knowledge between the participants as they interact with one another.

Indeed, ODFs mainly used in distance learning, are being used in support to the traditional face to face learning as an attempt to achieve better learning environments. They provide new perspectives to learners as the latter are given enough time to think, formulate and respond to the topics, and this results in a higher learning outcome. E-forums are considered as effective in engaging students with the course content and encouraging them in information sharing and meaning negotiation (Wenger, 1999).

Online Discussion Forums or e-Forums are indeed defined as a medium of communication (Santosa et al.; 2005) that permits the individuals to share ideas and information through posting written messages. In other words, e-Forums are learning environments where learners collaborate and learn from one another, and where learners are agents in the process of knowledge construction. They favor so to speak a student-centered approach to learning as they become flexible learning environments where learners are main actors as advocated by constructivist and collaborative views of learning. It is therefore evident that the use of ODFs in education helps instructors raise an effective engagement of students into interaction outside the classroom, breaking the time and space boundaries.

A brief glance at the literature reveals that the issue of engagement and interaction of the learners in the Virtual Learning Environments (hereafter VLEs) such as e-Forum has been

the concern of many studies from different perspectives around the world. In this respect, theories about online learning have been developed by many authors (Holmberg, 1995, 2003; Anderson, 2004, 2008; Lipponen, 2002; Salmon, 2004). They point at interaction as a crucial element of an effective VLE. This means that the effectiveness of a VLE such as e-Forum depends to a great extent on the interaction among the participants.

The review of other studies demonstrates that even though it is acknowledged that interaction is crucial for the effectiveness of e-Forums as learning platforms, maintaining students interactive in ODFs is obviously still a challenge (Baladji and Chakrabarti, 2010) as many factors influence students' motivation toward ODFs. Such a conclusion also incites calls for works on the factors that influence learners' participation in ODFs.

Going through these findings that are of great value in this new field of online learning, emphasizes the need for empirical researches concerning the effectiveness of ODFs. Thus, works were conducted by (R.B. Mason, 2001; S. Mokoena, 2013) reveal that students did not participate because of certain factors like time pressure and lack of motivation. Despite this fact, conducting a similar research in different field (Language and Communication) in a different geographical area (Algeria) is not of less importance and it may either confirm or contradict the results.

This dissertation is therefore a case study that tries to explore the extent to which the implementation of the new ODF at Mouloud Mammeri University of Tizi Ouzou (MMUTO) (Algeria) gets the students interactive, that is, how it brings students into collaboration in their learning process. The research goes further to analyse the factors that either motivate or inhibit learners' participation in this learning environment as it intends to provide suggestions susceptible to increase students' engagement in it.

## **Research Questions and Hypotheses**

Considering students' interactivity as a fundamental aspect for a successful e-Forum, the current study asks the following questions:

- To which extent is the Master Language and Communication e-Forum interactive?
- What are the factors behind students' motivation or non-motivation within the E-forum?
- How could this new practice be enhanced so as to better cope with Students' needs?

In attempt to answer to these questions, the following hypotheses are advanced:

**H1:** The forum is interactive as students frequently access it and interact.

**H2:** The E-forum is not interactive since there is a lack of interaction among participants.

**H3:** There are objective factors that motivate students' participation: a platform of expression for shy students, curiosity, and place for information sharing, the instructor's involvement, and formative assessment.

**H4:** There are objective factors that demotivate students' participation: lack of assessment from the part of the instructor, students' lack of confidence, difficulties to access, dependence on the teachers, inability to use internet, novelty, time constraint and lack of interest.

## **Aim and Significance of the Study**

The overall aim of this study is to determine the students' interactivity in the e-Forum, that is, how the forum gets students into interaction and collaboration, and to advance an understanding of the factors inhibiting or motivating the students' participation. This means that the dissertation strives to determine how frequently the students interact in the e-forum and what motivates or demotivates their interaction in this platform. The motive for focusing on students' interactions in the e-Forum in this research is due to the fact that works in online learning and collaborative learning as well as in social constructivism theory maintain that

interaction and collaboration are critical to any learning environment. It is then worth determining whether this experience at MMUTO yields positive outputs in providing students with an interactive environment outside the classroom.

The research seeks to achieve three main objectives and adopts the *collaborative and social constructivist* views of learning as well as that of *Moore's Transactional Distance Theory*. Indeed, these approaches point at interaction as the defining element of the learning process. The first objective concerns evaluating the students' interactivity within the e-forum through their participation to discussions. As far as the second objective is concerned, it seeks to identify the factors that influence the students' engagement or lack of it in the ODF. The third and last objective is to suggest ideas that may contribute to the enhancement of the learning process through e-Forum.

It is worth conducting such a research at MMUTO for prior works in the field of online learning claim that empirical studies in ODF when used to sustain classroom lessons are still needed. This case study allows assessing the challenge of implementing ODF with traditional campus-based learning environment. In addition, in many developing countries in Africa, the use of ODFs is quite rare and is a new experience for institutions using them (Butcher, 2003). At the national level, though few universities do experience this new practice of e-Learning, such as the University of Mostaganem and MMUTO in Algeria, no available research has been conducted concerning students' interactivity in e-Forums. This research is then original in the fact that it is among the first investigation concerning the new practice, that is, e-Learning, and mainly e-Forums in the Algerian context. Besides, the research aims to be useful not only to teachers, to students, in terms of altering their attitudes towards the use ICTs for teaching and learning, but also to other researchers wishing to undertake similar or further studies.

As a first attempt to account for a new experience in this current field, this research, due to some practical time constraints does not afford to compare both students classroom and VLE interactions, nor is it concerned with comparing the students' results in classroom with their frequency of interaction within the e-Forum. Besides, the research does not intend to provide a model for interactive forums. However, ideas and reflections are provided for improving the learning platforms; that is, a forum with high level of interaction.

### **Research techniques and methodology**

This work adopts the mixed method approach as methodology. This means that the research uses both quantitative and qualitative methods for the collection and analysis of the data, given that it intends to measure students' interaction as well as the influencing factors to participation. This would guide in providing suggestions for the e-Forum improvement.

The research data are collected both from Master II students and from the teacher of *Language and Communication* at the Department of English at MMUTO. This way, the questionnaire on the students' participation and factors affecting their interaction, administered to the students allows gathering numerical data through a statistical method of analysis. The interviews conducted with the two moderators of the e-Forum provide the study with an in-depth and detailed exploration mainly concerning their perception of students' interactivity and their role in this master platform.

### **Structure of the Dissertation**

The dissertation is structured following the traditional simple type that consists of a general introduction, four chapters, and a general conclusion.

The Introduction presents the background of the study, the reasons for choosing this topic, the statement of the problem of the research, the aim and significance, and the organization of the dissertation. The first chapter consists in reviewing the main theoretical framework upon

which this study is based. It explores the constructivist approach to learning focusing on Vygotsky's theory of *socio-constructivism*. It also sheds light on *Moore's Transactional Distance Theory* in relation to interaction in the e-Forum. The second chapter entitled "*Research Design*" introduces the data collection and analysis procedures. It gives a description of the research design, the research instrument, and the data gathered from the respondents. The third chapter labeled "*Presentation of the Findings*" presents the data gathered from the research tools and analyzed statistically. The fourth and last chapter is named "*Discussion of the Findings*" and serves to discuss the outcomes included in the previous chapter, trying to provide answers to the research questions.

The general conclusion provides an overall summary of the different points tackled throughout the research, indicates the limitations and makes suggestions for further research.

# ***Chapter 1: Review of the Literature***

## **Introduction**

The chapter consists in the review of the literature that is designed to account for major works related to the theory and practice of e-Learning by linking it to the wider field of human interaction as an appreciable source for individual learning. It comprises four sections. First of all, it is undertaken to present key terms used in this study “e- Learning”, “e-Forum” as well as “Interaction”. It, then, explores the learning approach; Social constructivism, that favored the implementation of e-Learning through tools such as e-Forums, focusing particularly on the collaborative learning that takes place as learners virtually interact. In addition, an important theory in online learning that tackles the issue of interaction in this new field is exposed in this part of the research: *Moore’s Transactional Distance Theory*. Relying on these theories, the research will attempt to determine the extent to which the e-Forum is interactive in terms of students’ participation; to find out the major factors influencing students’ participation and suggest points for the forum improvement.

### **1.1. E- Learning**

#### **1.1.1. Overview about e-Learning**

A new and significant phenomenon of the 21th century in the field of education is the use of ICTs and internet for the delivery of learning. This new practice which is widely labelled e-Learning since October 1999 (Gogos, 2013), but also termed “Distance education” or “online learning” has been the subject of reflection for many authors. From its inception, many people have expressed their pessimism about it, fearing that the use of ICTs and internet in education would remove the human aspect that some learners need in learning environments (Virtual College, 2015). Nevertheless, as time goes on, and with the sophistication of technologies, ICTs have been accepted and many institutions are offering online programs (Maguire, 2005). This shows that people acknowledge the importance of the use of ICTs in education; what makes authors perceived the “e” of the label as “enhanced” instead of “electronic” as

conceived earlier (Jisc, 2015). E-Learning is from then on perceived as an opportunity to improve ways of learning and therefore to foster the knowledge development process (Lee; 2010). Though used by many authors through different tools and for different purposes, the definition of e-Learning remains challenging.

### **1.1.2 Defining e-Learning**

Jisc (2015) affirms that different definitions of e-Learning exist and this fact tends to confuse people newly interested in the field. Earlier in the nineties, Moore alluded to e-Learning as *“all arrangement for providing instruction through print or electronic communications media to persons engaged in a planned learning in a place or time different from that of the instructor or instructors”*( 1990:14). In other words, it consists in any disposal to provide instruction using technologies. Clarification on the concept of e-Learning evolved as time goes on. Zhong et al. for instance define the term as the use of network technologies which permits to teach and receive instruction, which is greatly required in the educational sphere (2004). This definition as well as the previous one comes to a common point which is that e-Learning or distance education takes place between learners and teachers through the use of ICTs. Jisc provides a less ambiguous definition of e-Learning:

E-Learning can be defined as 'learning facilitated and supported through the use of information and communications technology'. It can cover a spectrum of activities from the use of technology to support learning as part of a 'blended' approach (a combination of traditional and e-learning approaches), to learning that is delivered entirely online. Whatever the technology, however, learning is the vital element (Jisc's e-learning definition from <http://www.jisc.ac.uk/elearning>, accessed on 04 June 2015).

In short, one speaks about e-Learning whenever there is a mutual transmission and reception of knowledge using technologies. Nevertheless, it is worth noting that this last definition reveals that e-Learning, mainly through the internet can be concomitantly used with traditional learning modes. This other aspect of online learning is known as blended learning, which mainly aims to support the traditional way of learning (Kaye Thorne, 2003: III). Thus,

the exchange between the different elements involved in an e-Learning program may happen synchronously or asynchronously. While the former means that a direct and immediate exchange takes place among learners and the instructor (on time exchange), the latter makes possible communication and knowledge exchange among the learners and the instructor at any time (Stefan Hrastinski, 2008).

However, for these exchanges to take place, institutions and instructors with the help of internet, use interactive tools that bring learners into engagement and value the new means of knowledge delivery. The online learning tool that is the concern of this research is the Online Discussion Forum, also termed e-Forum.

### **1.1.3. e-Forum**

The term *forum* is defined by the Oxford Dictionaries “A meeting or medium where ideas and views on a particular issue can be exchanged”. This definition conceives forums as a tribune for discussion.

As concerns an e-Forum, that is a forum managed by an electronic tool, it is an environment where “members can read, post comments or respond to messages posted by the users on a specific topic” (<http://www.oxforddictionaries.com>). The notion is referred to by many other terms as message board, Online Discussion Forums (ODFs), bulletin board or web board, etc.

Indeed, with the development of Computer-Mediated Communication, Online Discussions Forums are among the first tools used in electronic learning (Harman & Koohang, 2005; Kaur, 2011); the aim being to maintain communication between students themselves and with teachers (Sanchez-Sweatman, 2001).

Online Discussion group was primarily used at the higher education level for the sake of providing major learning environments to distance education or to supplement face-to-face discussion (Jacobsen, 2006 cited in Kaur, 2011). Yet, it has also been used for blended learning, which is, integrating online learning to support the traditional way of learning (Kaye

Thorne, 2003:III) for it helps not only to maintain interaction outside the classroom, but mainly to develop critical thinking, knowledge construction and language learning autonomy (Lim & Chai 2004; Marra et al., 2004). This is why discussion forums are mainly defined as asynchronous tools of communication, meaning that they set dialogue that takes place over a period of time and provide learners with an advantage for the learners with no face-to-face interaction to communicate with one another and thus allow to improve learner knowledge building through peer negotiating meaning (Watson ;2008). That is, online discussion forums permit active learning.

An e-Forum proves its efficiency as it gets the students interactive. The process implies for instance that the Forum appears to students as a friendly environment where fun, authentic activities and topics are discussed namely between learners, the instructor acting as a facilitator (Qing Li, 2004). In other words, e-Forums encourage a learner centered instruction that happens in an environment where students and the instructor, socially present though separate by space and time, interact and collaborate as in face to face learning settings. The notion of interaction is of great importance for the settlement of an effective e-Forum.

## **1.2. Interaction**

Defining the term “interaction” is a difficult task for the term has been used in different situations. Anderson acknowledges that to find a clear and precise definition to this “multifaceted concept” in the education literature is difficult (Anderson, 2008:55). In the same view, Rose says “it is a fragmented, inconsistent, and rather a messy notion” when used in the domain of instructional technologies (Rose, 1999; Su, 2006). Another point to consider when defining “interaction” is that this word is sometimes used interchangeably with the notion of “interactivity”. The latter is most of the time defined in relation to the features of the technologies (Wagner, 1997; Heeter, 1999; Sims, 2000), such as a web page’s ability to

react whenever the cursor of the mouse is moved on its hyperlinks. But, Hillman (1994) and Hirumi (2002) argue that this response of the interface is both interaction and interactivity. Clearly, though literatures have tried to draw borders between the two terms, interaction and interactivity are still used interchangeably as it would be the case in the present work.

Returning to the definition of the concept of interaction, the working one is given by Wagner. Indeed Wagner argues: “interactions are reciprocal events that require at least two objects and two actions. Interactions occur when these objects and events influence one another” (Wagner, 2001, Anderson, 2008:55).

Concerning education, Wagner carries on and notes that “instructional interaction is an event that takes place between a learner and a learner’s environment” (Wagner, 1994:8). This means that interaction in ODF is therefore the ongoing exchange of ideas between the main components of the teaching-learning environment, teacher, students and content. Juwah (2006) provides a clear definition of interaction following the views of Wagner and Anderson (2003). He notes:

...interaction may be defined as a dialogue or discourse or an event between two or more participants and objects that occurs synchronously and/or asynchronously mediated by response or feedback and interfaced by technology, educational interactions can be categorized mainly as learner to learner, learner to tutor and learner to content” (Juwah, 2006).

In other words, as communication, interaction process implies cognitive and conscious, but also reciprocal engagement of both learners and teacher (Robertson, 2002), what allows to achieve the learning process.

### **Importance of Interaction in the e-Forum**

The importance of interaction in a learning environment has been acknowledged by many works, blowing in the same trumpet with theories in education such as Constructivism. For instance, as reported by Esposito (2003), earlier writings by John

Dewey in 1916 already assume that interaction is *“the defining component of the educational process that occurs when students transform the inert information passed to them from another and construct it into knowledge with personal application and value”* ( Anderson, 2008:55).

Like in face to face learning, the importance of interaction in online learning which is characterized by physical separation between learners and teachers is undeniable. Thus, Wagner (in press, Su, 2006: 23-24) notes that “interaction continues to be perceived as the defining attribute for the quality and value in the online learning”. In the same perspective, Su argues that empirical studies conducted by many authors (Manson, 2002; Su et al., 2005) certify that both learners and instructors consider” interaction as a critical factor in online education” (Su, 2006: 25). Such a perception from the two active agents is crucial in building an effective learning environment as it motivates them to spend more time in the VLE. Bullen (1998; Su, 2006) supports this idea when he notes that the interactivity of the course is essential in increasing learners’ motivation, participation and engagement.

Relating interaction to the blended learning environment, Wagner advocates that interaction is “a strategic variable that needs to be fully utilized in technology-mediated learning designs” (Wagner, in press; Su 2006:26). The author goes further to mention that interaction allows participation, communication, meaning negotiation, team-building exploration, discovery, etc. In other words, it is the interactional activities in the VLE that help achieve learning aims.

In the same perspective, Shale and Garrison (1990; Juwah, 2006: 46) state that *“without interaction, instructors may simply become ‘passing on content’ as if it were dogmatic truth and the cycle of knowledge acquisition, critical evaluation and knowledge validation, that is important for the development of higher-order thinking skills is nonexistent”*.

This means that a lack of interaction in an online learning environment such ODF does not lead to an effective learning process as advocated by socio-constructivism. Wolcott (1996), Carnegie (1998) as well as Miltiadow & McIssac (2000; Su, 2006:34) advance the same viewpoint when they assert that lack of interaction in the VLEs results in the students feeling isolated. Their interaction with peers and especially with the teacher makes them feel comfortable as they find their contribution valuable.

To sum up, the value of interaction in online leaning is indisputable. Through it, the participants construct their own meaning from the amount of knowledge provided in the forums. Interaction also reduces if not deletes the effect of distance as it brings the learners closer to peers and to the instructor at anytime from anywhere, forming thus what Wenger (2002) calls the “*community of practice*”, that consists in education of a group of individuals who collaboratively engage in critical thinking that allows achieving a mutual understanding of a given content (Garrison, 2007). Therefore, acquiring a higher-order thinking skills or great amount of positive outcome depends on the interaction between the three main components of a VLE, students, instructor with content. Allowing students to learn through active participation has been the concern of an approach to learning that certainly paved the way to the use of online discussion boards in education.

### **1.3. Theoretical background of Online Learning: socio-constructivism**

This section seeks to point out the theory in education such as socio-constructivism and Collaborative Learning, deemed to have impacted on the field of e-Learning.

#### **1.3.1. The Social-constructivist Theory of Learning**

Social constructivism is an approach in education that stipulates that humans are likely to better understand knowledge they have constructed by themselves (Ozer, 2004). According to this theory, learning happens in society and includes language, real world situations,

interaction and collaboration among learners. Dewey (1916, 1938) and Vygotsky (1978) are two authors who promoted the theory. They claim that knowledge is constructed by learners through social interaction with others.

Vygotsky, in his book *Mind in Society* (1978) argues that the social context in which the learning process takes place is of great importance. For learning to occur, the learner comes into contact with the social environment through interaction and internalizes this experience. Vygotsky explains well the importance of interacting and collaborating with others through his notion of zone of proximal development (ZPD) (Vygotsky, 1978). The author argues that it is through interaction with other people, including learners and teachers that the learner succeeds to go beyond his/her present knowledge. This approach to learning promotes learning environments where learners participate actively and collaboratively. Such environments would be characterized by students interacting with peers, but also with instructors. The latter would guide and monitor the learners in their learning process. As noted by Dewey, the most important thing is the quality of the learning process (Knowles et al., 1998; Laurillard, 1998), or how learners ‘learn to learn’.

In short, Vygotsky and Dewey acknowledge that people learn best when they actively build and internalise their own knowledge from the different opportunities they get in. This theory therefore promotes a learner-centered approach to teaching and learning as Ozer argues “constructivist learning environments promote the learner to gather, filter, analyze, and reflect on the information provided and to comment on this knowledge so that it will result in individualized comprehension and private learning” (2004:1)

### **1.3.2. Collaborative Learning**

A method in teaching/learning that derives from socio-constructivism is labelled Collaborative Learning (CL hereafter). Used interchangeably with “*cooperative learning*” (Dillenbourg, et al, 1996), the method is defined as “a situation in which two or more people

learn or attempt to learn something together” (Dillenbourg, 1999:1). In other words, collaborative learning (CL) implies a situation where a class of learners for instance attends a course or accomplishes given learning activities such as problem solving in “different forms of interaction”, be it face to face or computer-mediated, synchronously or not, frequent in time or not” (Ibid). This means that in collaborative learning situation, learners do not just wait for information to be transmitted from the teacher, but are active agents who participate to the construction of their own knowledge. Johnson & Johnson (1996) speak of mutual exchange of help, information, but also challenging and encouraging one another; and trying to progress in the learning process. Harissim et al. (1995) consider CL as a “step” that allows people to work together for the sake of ameliorating their abilities as they explore the content.

As a summary, the collaborative learning approach promotes an idea that acquiring new knowledge passes through an active process. This process implies interaction with others, and consists in explaining, eliciting knowledge, sharing ideas, receiving feedback. Learners become in CL situation responsible for their own knowledge building and intellectual development.

When the interaction is computer- mediated such as in the case with ODFs, it is labeled computer-supported collaborative learning (CSCL henceforth). Like in face to face classroom, research in the field of CSCL demonstrated that collaboration or interaction in the computer-mediated communication (CMC) learning “can lead to learning outcomes comparable to those achieved in face to face classes” (Hiltz, 2011:23).

Such a theory that puts the learner at the center of the learning process is relevant to consider for a research that intends to determine a learning environment’s efficacy in engaging the participants into interactions. It allows a broader view about the implementation of virtual interactive learning environments such as e-Forums. Indeed, despite the importance of collaboration as advocated by this theory, it is still noticed that students do not always

interact in the discussion forums as expected (Mason, 2011); what pushed researches to seek for major factors that influence students' engagement into interaction in the e-forums. The research therefore finds it necessary following the path of an online learning theory that permit analysing students' interaction in a VLE; Moore's *Transactional Distance Theory*.

#### **1.4. Analytical framework**

The current study aims to depict the extent to which the forum is interactive and the factors influencing students' interaction as well. This leads to adopt Moore's *Transactional Distance Theory* as a theoretical framework for the study. Two main aspects of the theory are considered in this research: the variables influencing the distance learning process as pointed out by the theory and the types of interaction in the online platform. Additionally, Vrasidas' and MacIsaac's views on the theory that contribute to the understanding of the issues affecting learners' engagement are considered in this section. It is under this framework that the work will be analysed.

##### **1.4.1. Transactional Distance Theory**

The idea of Transactional Distance Theory emerged in 1972 and was based on John Dewey's "Transactional" concept of education. The latter is, in fact, referred to as a Distance Education that takes place between teachers and learners (Moore, 1989). Though, Moore started using the expression of Transactional Distance in the 1980's, it is until the 1990's that the theory was completely articulated (Marthaler, 2011). Transactional Distance is defined as a psychological and communicative gap such as miscomprehension that may exist between learners and teachers due to the physical distance (Moore, 1989). For Moore the separation between the learner and the teacher influences both behaviours, teaching and learning environment. It is therefore the aim of the TDT to analyse the main variables that "make up a Transactional Distance" (Moore, 1989:23). These variables that influence distance learning are: the structure (of the programme), the nature of the learner autonomy and

dialogue. These variables will be analysed in this work through some points such as the design of the forum and its content (activities), curiosity, teachers and students' involvement in the forum, etc.

#### **1.4.1.1.Variables**

Structure is defined as the overall design of the course that implies the content that is transmitted via communication media. This content participates to reduce the distance of the geographical separation between teacher and learner (Moore, 1989). The design and the content which are mainly generated by a teacher stress the important role of the instructor in online learning environment. In this sense, factors related to instructors' role such as providing activities, assessing, providing feedback to learners' reactions are tackled in this section.

In fact, authors explain that activities and tasks designed by the moderator, mainly those of students' interest could support interaction through inciting the students to take an active part in the forum. Guzdial and Turns (2000); Dennen, (2005) support the idea that activities supplied by a teacher increase students' awareness in interacting and value the discussion and the forum. Another factor related to the instructor that influences students' interactivity is assessment. Researches claim that assessment contributes to the fulfillment of a high level of interaction. Gerbic for instance mentions that, in fact , students make sense of what is assessed and marked by the instructor (2006; in Watson, 2008).

The Autonomy of the Learner refers to learner independence, power and support, that is, the learner's ability to make choices, their capability of engagement in a learning experience as well as being provided with resources that favor a successful participation to online learning (Moore, 1989). In other words, learner's interactivity in an online forum may be influenced by either internal or external factors as noted by Vrasidas and McIsaac (1999). In this research, this point is tackled through the analysis of learner's shyness, lack of

confidence, curiosity, etc. For instance, an internal factor that influences students' engagement into interaction in the forum is that the later serves as solution to their timidity. Thus, in the Online Discussion Forum, they overcome the fear of the presence of the others in face to face environment and can communicate freely. Watson (2008) contends that a classroom context may be a barrier to shy students who do not want to be there and show their presence through interaction.

However, in the other side, the lack of confidence as internal factor is spotted by authors as a handicap to students' participation to the interactions in the forum. Weaver (2005) and Dooly (2008) comfort this view, stating that students fear to look silly because of producing meaningless messages and therefore are reluctant to actively participate in the forum. Charles Juwah says "some members of the group have expressed lack of confidence in posting to a discussion group" (2006:164). In other terms, lack of confidence explains the low level of interaction in an online learning. The external factors that may influence learners' participation in the discussion are, in this work, analyzed in relation to the next points, feedback and social presence in online environment.

Dialogue is the communication between the learner and a teacher that consists in the teacher giving "instruction and the others respond" (Moore, 1989: 24). Holmberg (2003) refers to this dialogue as "*didactic conversation*". However, Vrasidas and McIsaac (1999) went further in defining the concept of dialogue by adding feedback which denotes teachers' reaction to students' performance. This factor compensates to a certain extent the absence of non-verbal feedback that is present in face to face communication (Ibid). Timely providing feedback to learners affects their satisfaction (Stevenson et al., 1996 cited in Vrasidas and McIsaac, 1999). Here, the instructor is expected to build an active community with learners through providing feedback to learners' reactions. Anderson and Kanuka (1997) as well as Salmon (2004) allude to a supportive online learning environment. It consists in the instructor

commenting either to confirm or refute what is expressed by the learners or to summarize and guide the participants on the suitable path. This point goes hand in hand with the social presence that implies both learners and instructors' presence.

The social presence allows to form community of practice (Wenger, 2002) which entails the learners interacting with peers and the teacher feeding the social presence through their involvement. Indeed, when the instructors do not post often, learners perceived them as not being enthusiastic, not being interested, and not having expertise in their fields (Mazzolini and Maddison 2003; Wills, 2002). More than just supplying participants with collaborative learning platforms serving simply as a channel for communication, the e-teacher assumes different roles in an online environment; she/he might need to be a participant, an observer, a facilitator, a mediator, a co-learner, a community organizer, a tutor, a chair and a lecturer at the same time (Salmon, 2000).

As a whole, the course design (structure), the autonomy of the learner and dialogue are the variables which affect students' interaction in the educational environment. In 1989, focusing on the dialogue that is synonym to interaction, Moore detailed the different types of interaction that take place between the three main components of the online environment: teacher, learner and content. The current study considers these three types of interaction in the prospect that it contributes to analyse the types of interaction in the forum.

#### **1.4.1.2. Moore's Types of Interactions**

According to Moore (1989), different types of interactions take place between the three components of an online learning platform (students, teachers and content). This section is devoted to the characteristics of such interactions.

Indeed, Michael Moore (1989) was the first to discuss the three most common forms of interaction in the field of distance learning that are: student-student (learner-learner), student-teacher and student-content interactions (Christenson & Menzel, 1998, Anderson, 2008:56).

### *Student-student interaction or learner-learner interaction*

This model of interaction happens between the students themselves. As Moore argues, it takes place “between one learner and other learners, alone or in group setting, with or without the real-time presence of an instructor” (Moore, 1989:2). This type is an inter-learner interaction. In collaborating in such a way, learners develop critical thinking skills. Another benefit from this interaction type is that it helps build a “community of practice”. Considered as “sometimes an extremely valuable resource for learning, and (...) sometimes even essential” (Moore, 1989:2), this interaction interests students to a great extent (Grooms, 2000).

### *Student- content interaction*

Moore argues that without this type, there would not be education because it consists in “a process of intellectually interacting with content that results in changes in the learner’s understanding, the learner’s perspective, or cognitive structures of the learner’s mind” (1989:1). That is, it is when a learner reflects upon a given content. Though also present in the traditional teaching and learning in terms of books or library, this type of interaction is enriched by the web that provides guidance for the learner in the information gathering process through different web pages and materials (Anderson, 2008).

### *Student-instructor interaction*

It is this type of interaction that takes place when the instructor exchanges with the learners. This type as defined by Moore is centered on the instructor’s role. The instructor provides needed and important information to learners, gives feedback to their reactions, and acts as tutor, guide and facilitator. This type of interaction is perceived as “essential by many educators and highly desired by many learners” (Moore, 1989:1). For Moore, this should be what Holmberg (1986) first called “guided didactic conversation” that is a mutual exchange between learners and instructors. Viewed as the “most critical” type of interaction by learners

(Thompson, 1990; Manson, 2002 cited by Su, 2006: 36), this interaction supports students' greater engagement and participation (Anderson, 2008:58). This implies that this form of interaction plays a crucial role in maintaining learners interactive in the learning environment.

However, other different types of interactions have been developed by many authors like Hillman et al (1994), Soo & Bonk, (1998) Sutton (1999), Su (2006), etc. Indeed, Hillman et al. mentioned the *learner-interface interaction* considering that online learning takes place thanks to an interface. It happens between the learner and the communication media used in the learning process (Hillman, 1994). This means how the learner is for instance able to log in the electronic system, travel through the different parameters of the interface.

Soo & Bonk spotted light on *the learner-self interaction* which is "the learner's self-reflection on the content, learning process, and his new understanding" (Soo and Bonk, 1998:3). This means, the internal reflection over the content.

Sutton (2001) rather spoke about what she named vicarious interaction that refers to a learner processing to understand something that has been posted by a peer and the instructor, without reacting (Sutton, 2001:227; Su, 2006). In this mode of interaction, the learner avoids a direct interaction with other participants in the e-Forum.

Discussing these different forms of interactions provides a larger picture of the literature concerning interaction in online learning. However, considering interaction as a "conscious cognitive activity" from the part of the participants, Su argues that 'technically', the learner-content, learner-interface and vicarious interactions are not interactions in themselves. For the author, content and computer cannot interact with humans for they are 'inanimate' Sutton (2001:7; Su, 2006), and observing the others' interaction (vicarious) does not influence the interaction (Su, 2006:40). These forms of interactions could therefore be incorporated in the learner-self interaction.

For a research that intends to focus on students' interactivity in the virtual platform (e-forum), such remarks are of great value. However, the study claims that for a 'cognitive activity' to happen, one needs a content to reflect on. Content is therefore important when dealing with the interaction. Students' engagement and active participation in an online discussion forum depends to a great extent on both the content and the active participants; students and instructor. Without a total rejection of Su's comment as aforementioned, the research supports that the learner-self interaction could rather be incorporated in the learner-content interaction as defined by Moore. Therefore, this study focuses on the interactions viewed as implying 'cognitive activity', that is, learner-learner, learner-instructor and learner-content interactions considered all as the most important in the learning environment (Juwah, 2006). In the communication tools that are the Online Discussion Forums, different levels of interactions can take place as clarified in the following section.

#### **1.4.2. Levels of interaction**

According to Paul Grice (1975), conversation is based on the "cooperative principle", that is, that one should contribute to the exchange as it is required, at the suitable place for the benefit of the conversation one is engaged in. However, students who participate in the online learning environment do not do it in the same way. According to the role they play when they log in, they are classified at different levels of interaction. Thus, the first level of interaction is composed of "*lurkers*" (Salmon, 2003). They are the kind of learners who just read the messages and do not participate. They can gain some outcomes from these reading (Guzdial and Carroll, 2002). The second level consists in participants who see the forum as a posting board where they post their own views which are not necessarily in relation to the content or the other participants. The third level is the most desired in any learning environment. There is a high level of interaction among all participants, and the contents are built through discussion while knowledge is construed via consensual dialogue

(Ho, 2002). The collaboration between the participants facilitates achieving learning outcomes. An intensive collaboration passes through some efforts to be made as proposed by authors.

### **1.5. Authors' Suggestions for the Improvement of the e-Forum**

Aware of the importance of interaction in online learning, scholars have provided ideas to supply a higher level of interaction in e-forums. For instance, Bonk et al.( 2002) and Eisley (1995) note that questions should be asked so as to urge the students to discover more in their learning. This incites learners to make more efforts and inquiry. Others state that communication in ODFs should be informal and friendly in order to promote the interaction between learners and the instructor. This means a using a language that makes learners feel more at ease to participate. Through such communication, the instructors would require the learners to prepare and elaborate questions related to the lesson (Bonk and Reynolds, 1997). Like in any learning environment, learners should be encouraged to summarize the essential topics or discussions (Bonk, and Cumming, 1998; Peters, 2000; Swan, 2003). It is a way to promote critical thinking skills.

Besides, learners should be evaluated during their learning process (Swan; 2003). This consists in the instructors providing mainly feedbacks to students' comments or questions (formative assessment). Likewise, the instructor should check the general advance of the learners through time to notice whether they have achieved a specific goal concerning their learning (Stewart et al; 2004). This allows teachers to decide on the most relevant topics to be tackled in the activities.

## Conclusion

The review of the literature in this chapter allowed to define e- Learning, e-Forums and interaction. Thus, while e-Learning consists in the transmission of instruction through electronic tool and internet, e-Forum which is a means to practice e-Learning, is defined as a virtual learning environment that permits to maintain learners interactive in their learning process from everywhere at any time. Interaction that happens in different types and levels is the dynamic exchange of ideas between learners. The review also clarified the theoretical background of e-Learning as well as examples of online theories developed to guide a better online learning process. The Social constructivism that indicates that learning is a social activity that occurs through interaction, and that successful learning occurs when students take an active role through doing collaborative activities and tasks, are perceived as foundations to e-Learning. For *Moore's Transactional Distance Theory*, the structure of the programme, the autonomy of the learner and dialogue are the main variables affecting online learning process. The theory also states that there are three major types of interaction in online learning (learner-learner, learner-content and learner- instructor) that take place at different levels. The review of literature also revealed that the importance of interaction in online learning has been mentioned in different works where suggestions for an effective learning platform have been provided. Despite these finding, empirical studies are still needed for a better understanding of this new field of research that is e-Learning.

## ***Chapter 2: Research Design***

## **Introduction**

This chapter is concerned with the research design of the study that will serve to answer the research questions asked in the general introduction. First, it describes the context of investigation. It, then, presents the subjects of the study. Furthermore, it explains the procedures of data collection which consist of a questionnaire administered to master II students in the English department at Mouloud Mammeri University of Tizi Ouzou, and of an interview conducted with two moderators of the master forum. Finally, it explains the data analysis methods; the closed ended questions being analyzed using a statistical method labelled Social Package for Social Sciences (SPSS). As for the analysis of the open ended questions of the questionnaire as well as for the interview, Qualitative Content Analysis (QCA henceforth) is used that also help to interpret the data.

### **2.1. Context of the study**

The study is carried out in a real setting, that is, in the English department at (UMMTO). However, it is worth noting that the research finds its background in a virtual setting context, that is, the master e-Forum designed for Master II Language and Communication specialty at MMUTO which can be accessed following the link (<http://teleensm.ummt0.dz/course/category.php?id=216>).

The latter is indeed a web-based system for academic collaboration and study-related interactions. The forum has been implemented using the Moodle system to support a face to face course; namely the semiotics courses for 2014-2015 academic year. It aims to engage students into interaction and communication with peers but also with the teachers in charge of the module (lecture and workshop).

Since 2013-2014, all the students concerned with this study were registered in the forum and have a minimum knowledge about it (how to log in, how to upload or download books, post

messages, etc.). This platform uses a threaded discussion, that is, it allows the site participants to reply both to the topic and to other participants' postings. The aim of this new experience at MMUTO is to allow for a constructivist and collaborative approach to learning. That is, making the students active in their learning process. In the forum, they can talk to one another but also with the instructors about the concern which is in this case, the subject of semiotics lessons. Such interaction permits learners to expose their understanding of the classroom lessons and discuss it with peers and still be monitored by the teacher. Though the virtual context which is the e-Forum has inspired the study, the data are rather extracted from the real setting.

## **2.2. The subjects**

The total number of the participants involved in the research is made up of forty five (45) students and two teachers. The students are randomly chosen to answer to answer to the questionnaire. As well, two (2) moderators of the forum were interviewed. The results of the study therefore represent the sixty (60) master II Language and Communication students, as a whole. Given these concerns, it is important to mention that because of lack of availability of data, we as researchers are involved both as observers and as participants; that is to say, we are making use of the participant observation technique which, from our standpoint is well adapted to this type of research. The forty five subjects under investigation are required to complete the written questionnaire related not only to their level of participation in the master forum but to the role they perform as well. Face to face semi-structured interview has been conducted with the main moderator of the forum who happen to be also in charge of the lectures in the real life setting, and with the teacher in charge of the workshops of the same module. All of these participants take part in the master forum of the university.

## **2.3. Procedures of data collection**

To reach the objectives of this research, a questionnaire and an interview are carried as two types of procedures to collect information since a mixed approach is adopted as a methodology for the research for both collecting and analyzing the two forms of information.

The choice of a mixed method approach is not random, but rather based on that it allows exploring the attitudes of the participants towards the forum, in particular, students' frequency of access, interest in interacting, and fulfilment in this platform website. Moreover, it leads to an in-depth understanding of the issues motivating or demotivating students' participation, based on students' responses presented in questionnaires and moderators' answers presented in the interviews. Thus, the mixed method approach would be suitable for this empirical study as supported by Mayring (2014) who mentions that the appropriate methodology is the one that leads to the solution of the research question.

### **2.3.1. The questionnaire**

Generally speaking, a questionnaire is a research tool which presents respondents with a list of questions. It allows gathering statistical data, that is, quantitative data with a non-restricted number of participants. It is, therefore, an easier, faster and less time consuming instrument used to gather information. Zoltán Dörnyei (2003) argues that this tool is the suitable for second language research because of time constraints, the researcher's efforts as well as the financial resources.

For the sake of gathering enough data to this research issue, a questionnaire survey is handed to the subjects on the 18<sup>th</sup> and 19<sup>th</sup> of March, 2015. Indeed, to guarantee more reliable data, participants are insured that their answers are highly anonymous.

The questionnaire is made of 23 questions which are divided into two types: closed-ended questions which contain predetermined answers from which participants can choose; and open-ended questions where students are required to give their own answers. It is, then, composed of five major parts. The first part includes demographic questions about the students' degree and specialty. The second part is concerned with students' attitudes towards the master forum; about how often they use it. The third section deals with factors influencing students' participation either motivating or as demotivating. The fourth section is devoted to the instructor's role in the forum; and about the students' opinions on the instructor's involvement. As for the fifth and last section, it is related to students' suggestions for the improvement of the forum.

### **2.3.2 The interview**

In addition to the questionnaire, an interview is used as an extensive survey which helps to complete the results gathered through the questionnaire. It is a research tool which aims at gathering in depth answers, that is, qualitative data. Indeed, interviews are particularly useful for getting the story behind a participant's experiences. With it, the interviewer can pursue in-depth information around the topic (Mc Namara; 1999). Hence, the interview is undertaken to complete the understanding of the data gathered by the survey administered to students' master forum.

The interviews last from 12 to 30 minutes for each person conducted with the two moderators of the master forum and include open ended questions. Clearly, it is separated into three parts. The first part, thus, is devoted to the demographic information about the moderator. The second part deals with teachers perceptions of the students' performance in the e-Forum; particularly, their frequency of access as well as their satisfaction about students' participation. The last part aims to explore the

role that the moderators perform in the forum and how they incite and motivate more the students to take part.

## **2.4. Procedures of data analysis**

### **2.4.1. Descriptive Statistical method**

As mentioned above both quantitative and qualitative methods are used in order to analyze the data. Closed-ended questions which will generate numerical data explore the frequency of interaction as well as the factors encouraging or discouraging participation. These data are calculated with the help of a computer program named the Statistical Package for Social Sciences (SPSS). This computer program is mainly used in social sciences helping in the description of statistical analysis.

### **2.4.2. Qualitative Content Analysis**

Qualitative Content Analysis (QCA) is a method that is adopted to describe and interpret the open ended questions and the interview of this study. Among the different authors who are concerned with QCA, Philip Mayring (2014:10)'s work is one of the most prominent and is adopted in this study. Indeed, Philip Mayring defines clearly QCA as “a mixed method approach: assignment of categories to text as qualitative step, working through many text passages and analysis of frequencies of categories as a quantitative step” It is, in fact, “a research method for subjective interpretation of the content of the text data through systematic classification process of coding and identifying themes or patterns” (Hsieh & Shannon, 2005: 2). Developed first in some sciences, the use of Qualitative Content Analysis in sciences such as Psychology, Sociology, educational sciences and so forth, received more impetus during the fifties (Mayring, 2014).

The analysis of the interview of this study is based on the conventional type of content analysis. More generally, Conventional content analysis is to convert the text gathered

into coding categories in order to understand a particular phenomenon (Mayring, 2014). The main advantageous feature of the conventional approach is “gaining direct information from study participants without imposing preconceived categories or theoretical perspectives” (Hsieh & Shannon, 2005:3). This method, therefore, enables to describe, interpret and explain the findings obtained through open ended questions.

## **Conclusion**

The chapter has laid out the research design used in the study. First of all, it has presented the data collection procedures which consist of a questionnaire and an interview. Then, it outlined the methods used for the analysis of the gathered data. Indeed, SPSS is used as a statistical technique to provide a percentage of the data obtained through a questionnaire while the Qualitative Content Analysis is used to interpret both the open ended questions of the questionnaire and of the interview. These analyses will enable to evaluate the interaction attitudes of the learners in the forum as well as the factors affecting their participation.

## ***Chapter 3: Presentation of the Findings***

## **Introduction**

This chapter is empirical. It presents the results reached through the questionnaires administered to forty five (45) Master II students of Language and communication (Department of English) and through the interviews conducted with two teachers (the lecturer and instructor of the forum and the workshop teacher) at Mouloud Mammeri University of Tizi Ouzou (MMUTO). The students were registered in the forum since 2013-2014 academic year as mentioned earlier. The section aims to determine the students and teachers' interactivity in the forum in terms of frequency of access to the forum as well as the major factors that may encourage or discourage students' participation in discussion in the forum. The results, for the sake of readability and visibility, are presented in percentages and displayed using bar charts and sectors. This would also facilitate the discussion of the results later on. This chapter is organized into two main parts. The first part presents the results obtained from the analysis of the questionnaire that mainly concerns students' behaviors in the forum, and the second reports the results from the interview that deals with the instructors' own participation as well as their views on the learners' interactions in the forum.

### **3.1. Presentation of the Results of the Questionnaire**

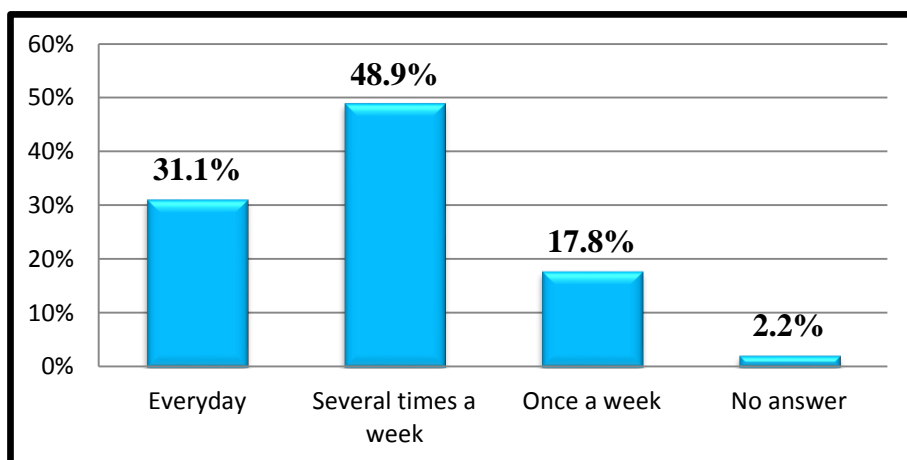
#### **3.1.1. Results of the section one**

##### **3.1.1.1. Demographic information on the respondents**

The results concerning this question show that all of students (100%) are all registered as Master II students in Language and Communication at MMUTO for 2014-2015 academic year.

### 3.1.2 The results of section two: Students' Interactivity in the e-Forum.

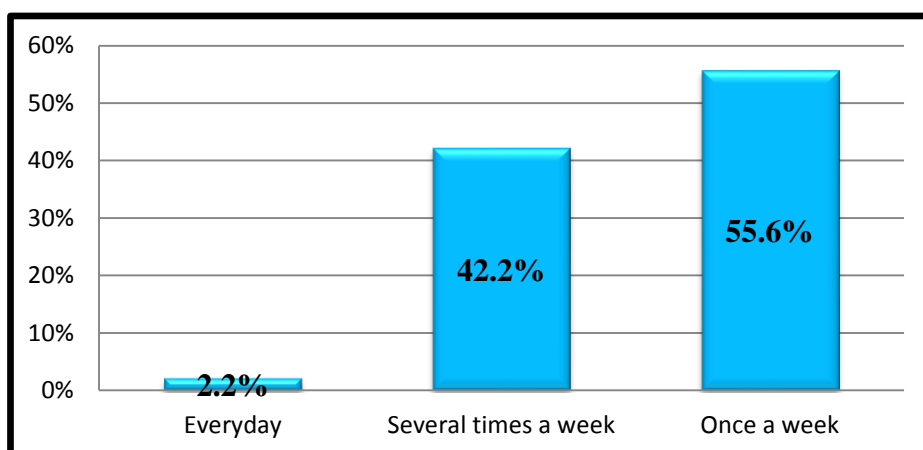
#### 3.1.2.1 Q3: "How often do you access to the social networks per week?"



**Diagram1: Frequency of Students 'access to social networks.**

As underscored in the bar chart, the majority of the participants access to social networks several times a week; that is, 48.9% that stand for 22 participants access to social networks several times a week while 31.1% access every day. However, few students (17.8%) say they connect only once a week.

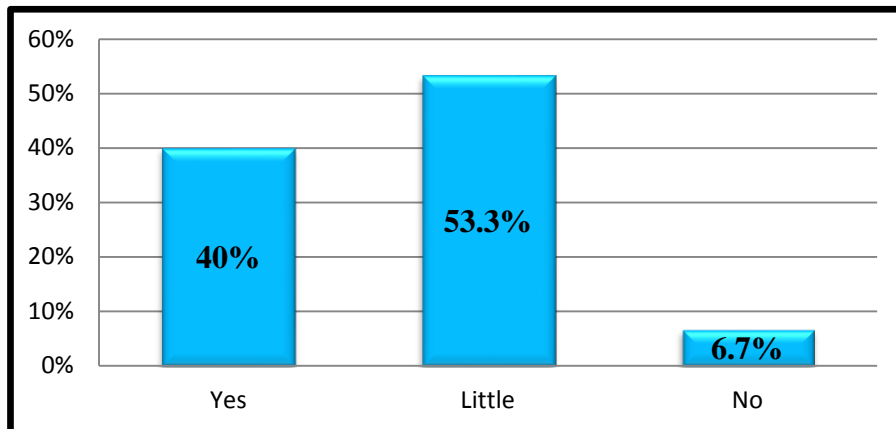
#### 3.1.2.2. Q4: "How often do you access to the forum per week?"



**Diagram 2: Frequency of students' access to the forum**

As indicated in the diagram 2, the majority of the participants log in in the forum only once a week. Namely, 55.6% who represent 25 participants are engaged in the forum only once a week, 19% log in several times a week. In contrast, only 2.2% of the participants access to the forum every day.

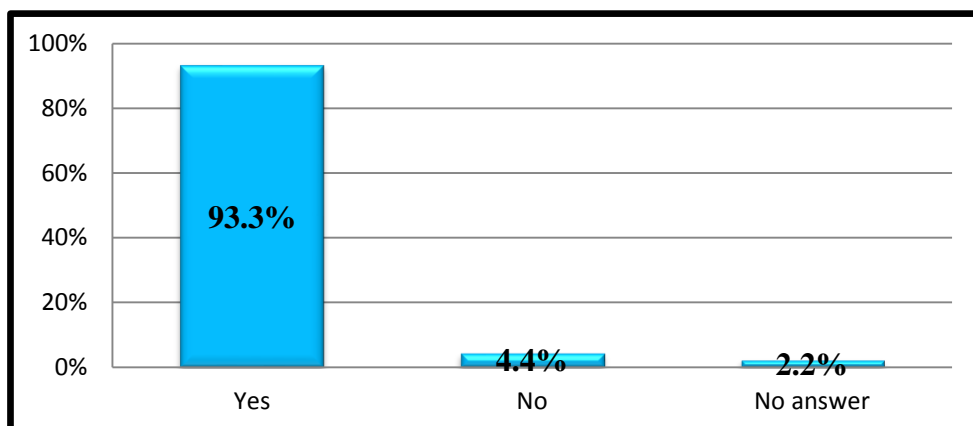
### 3.1.2.3. Q5: “Are you interested in the university master forum?”



**Diagram 3: Students’ interest in interacting in the university master forum**

As for students’ interest in interacting in the master forum, the results in diagram 3 show that 53.3% of them affirm to show little interest whereas 48.9% of the participants answered with “yes”. Insignificant number of students (6.7%) shows no interest in interacting in the forum. Therefore, the outcomes state clearly that the majority of the participants are to some extent interested in interacting in the forum.

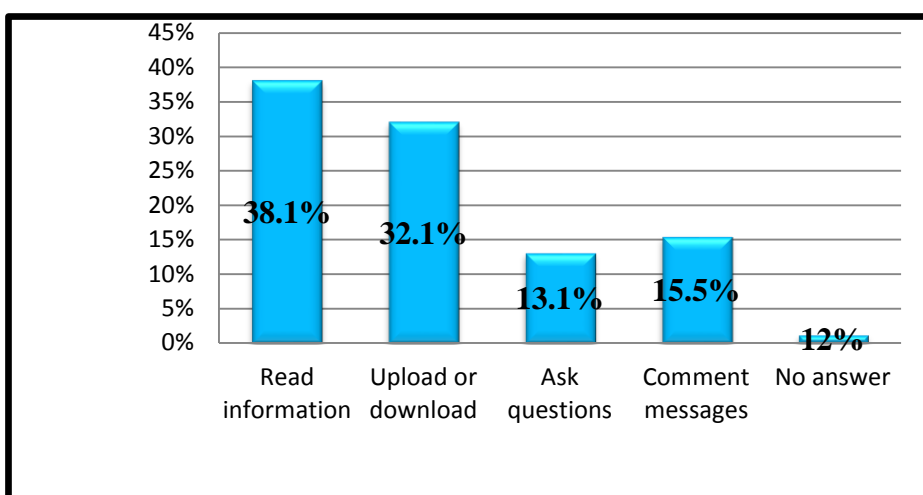
### 3.1.2.4. Q6: “Do you perceive interaction as a significant element of online learning?”



**Diagram 4: Students' opinion about interaction in online learning**

The results gathered in question 6 show that 93.3% of the participants perceive interaction as a significant element of online learning and defend their views by the fact that interaction in this online learning environment *“helps keep contact with peers”*, *“allows better understanding of ambiguous notions”* and *“favor personal assessment”*. Only 4.4% say the opposite arguing that several means exist to learn.

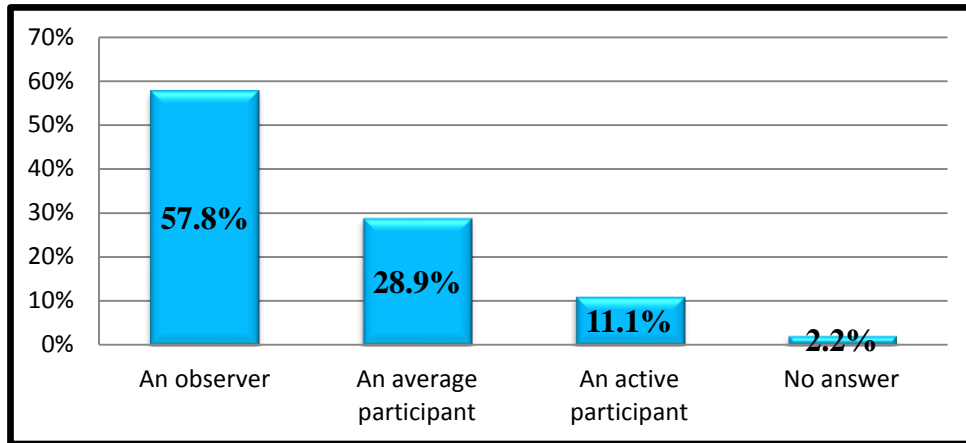
**3.1.2.5. Q7: “What do you do when you access the forum?”**



**Diagram 5: Students' Tendencies of actions in the forum**

As the participants are asked about what they do when they access the forum, the diagram indicates that a significant part of the respondents that corresponds to 70.2% tend to *“read information”* or *“upload/download documents”* when they access the forum. Nevertheless, a number of them that stands for 28.6% *“comment messages”* or *“ask questions”*.

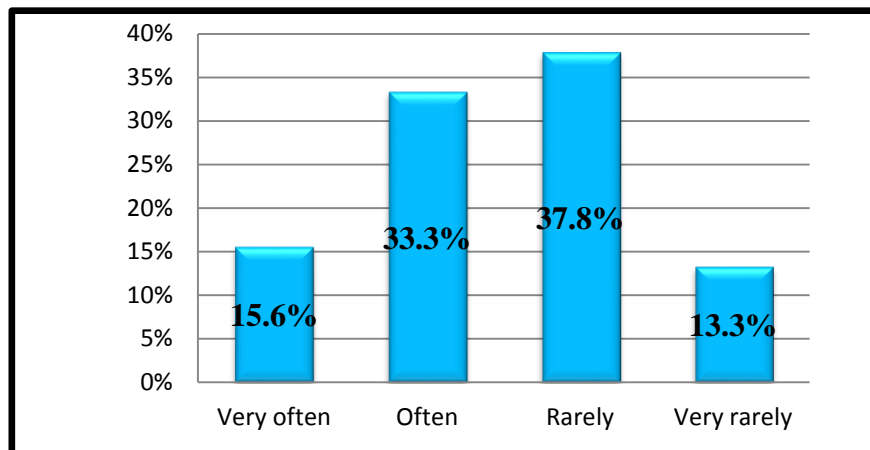
### 3.1.2.6. Q8: “What is the role you perform in the forum?”



**Diagram 6: The students’ role in the forum**

As presented in the above diagram, the majority of the participants (57.8%) act as observers in the forum. Contrary to the 28.9% who act as average participants, only 11.1% of them affirm to perform an active role.

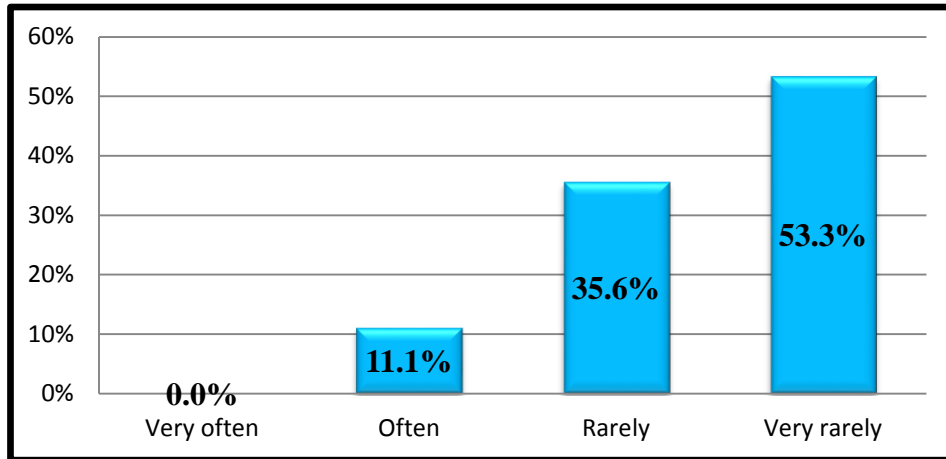
### 3.1.3. Q9: “How often do you read the posting?”



**Diagram 7: The students’ frequency of reading the posting**

The above diagram represents how frequently the students read messages in the forum. Thus, 37.8% read the posting “rarely”, 33.3% “often” while 15.6% do it “Very often”. And only 13.3% read the posting “very rarely”.

#### 3.1.4. Q10: “How often do you post messages?”

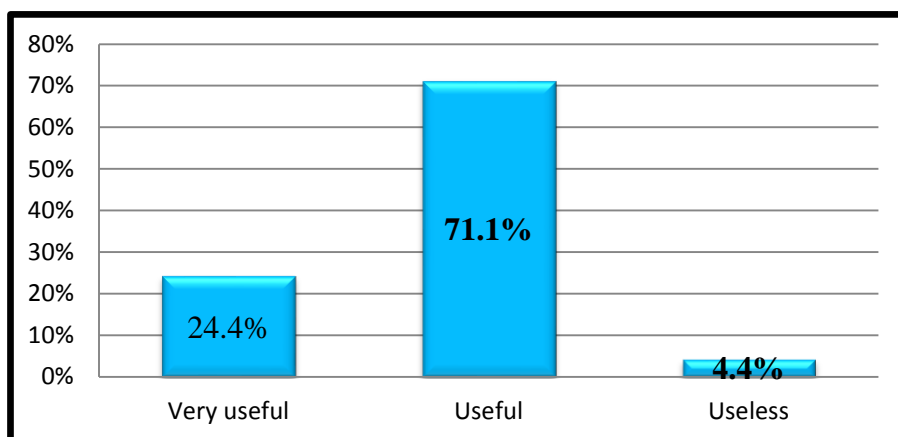


**Diagram 8: The students’ tendency of messages posting**

In the diagram 8 above, the proportion of students’ posting messages “*very rarely*” is shown to be higher than the other choices. That is to say, 24 participants who stand for 53.3% claim that they post messages “*very rarely*”, 35.6% of them post “*rarely*”, whereas 11.1% post “*often*”.

#### 3.1.3. Section three: Students’ perception of the forum

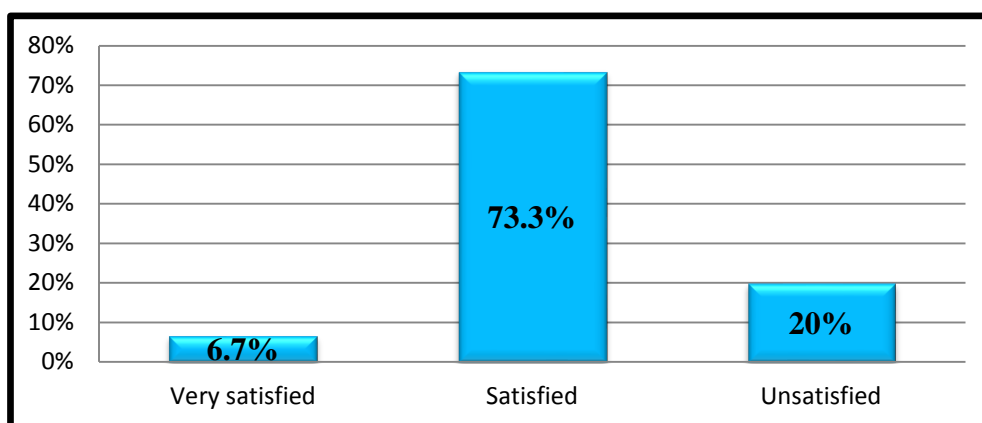
##### 3.1.3.1. Q11: “How do you find the master forum?”



### Diagram 9: Students' opinion towards the master forum

The diagram 9 above indicates that 71.1% which represent 32 participants qualify the forum as being useful, 24.4% describe it as being “*very useful*”. Explicitly, almost all the respondents (71.1% + 24.4%) find the master forum “*useful*”. Only 4.4% consider it as “*useless*”.

#### 3.1.3.2. Q12: “How satisfied are you with master forum?”



### Diagram 10: Students' satisfaction with the e-Forum

The diagram 10 denotes that the majority of the participants that stands for 73.3% are satisfied with the e-Forum platform while 6.7% are “*very satisfied*”. However, 20% affirm to be “*unsatisfied*”.

#### 3.1.3.3. Q13: “How does the master forum help you in your learning?”

categories	Number of answers	Percentage
Knowledge development	23	33.8%
Interaction and knowledge sharing	33	48.5%
It does not help	4	5.9%
Other	8	11.8%
Total	68	100%

**Table 1: How the forum helps students in their learning process**

Based on the results, the majority of the respondents argue that the forum does help them in their learning process. Most of them (48.5%) indicate that it is a platform which enhances their learning process as it provides them with an opportunity to interact and share knowledge with the other students. Others (33.8%) argue that the forum assists them in their knowledge construction and development. However, a minority (5.9%) of the respondents affirms that the forum does not help them at all.

#### 3.1.3.4. Q14: “What are the positive aspects of the forum?”

Categories	Answers	Percentage
Discussion, knowledge sharing and knowledge development	31	40.8%
Community of practice building	14	18.4%
Simple and free expression platform	30	39.5%
Other	1	1.3
Total	76	100%

**Table 2: Positive aspects of the forum according to the respondents**

From the results, participants show that there are various positive aspects of the forum. Most of them acknowledge that it is an area which allows “*discussion*”, “*knowledge sharing*” as well as “*knowledge development*” as it helps them better understand different notions they have not grasped in classroom. Likewise others argue that the forum is beneficial as it allows “*free expression*” to take place. For some other participants, the online platform allows *build* a “*community of practice*”, which is maintaining contact with peers at anytime from anywhere.

#### 3.1.3.5. Q15: “According to you, what are its limitations?”

categories	Answers	Percentage
Poor design	2	3.4%

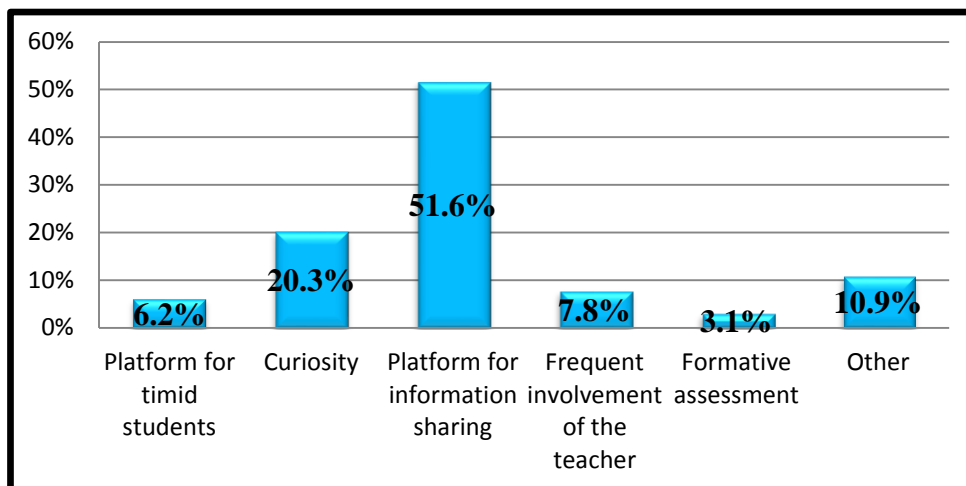
Monotony in the forum	13	22%
Lack of other students' interaction	12	20.3%
Difficulty to access	11	18.6%
Insufficient role of the moderator	5	8.5%
Other	16	27.1%
Total	59	100%

**Table3: Students' opinions about the forum's limitation**

The respondents assert that the forum shows some weaknesses. According to their responses, many of them find the forum “*monotonous*” in terms of activities, arising from the fact that nothing new occurs. Others state that the forum “*lacks interaction*” from the part of students, that is, their participation is insufficient. Nevertheless, other respondents argue that the “*non-attractiveness*” of the forum’s design and the difficulty to access are also limitations of the forum.

### 3.1.4. Section three: Factors influencing students' participation

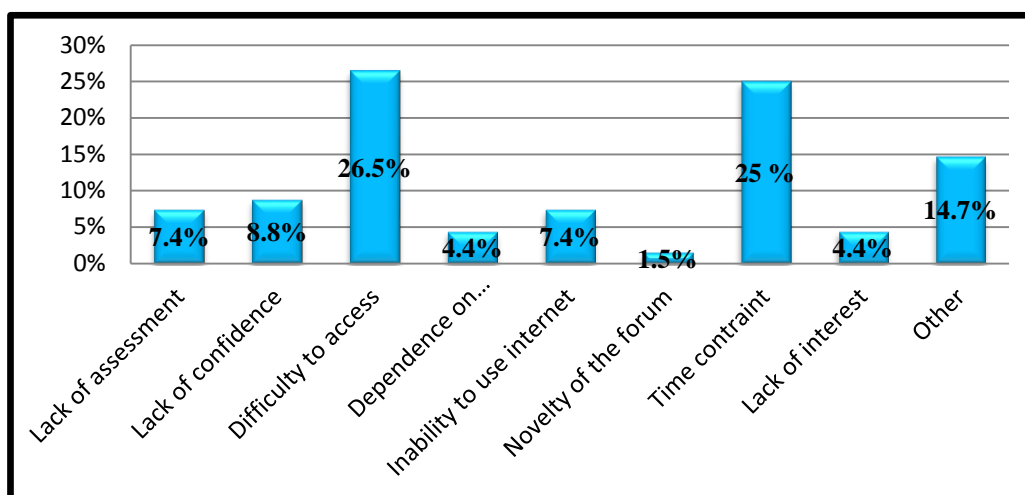
#### 3.1.4.1. Q16: “What are the factors which motivate you to participate?”



**Diagram 11: Factors encouraging students' participation in the forum.**

As seen in the diagram 11, the findings related to the factors that motivate students to participate indicate that 51.6% are centered on “*a platform for information sharing*”. While 20.3% point out that “*curiosity*” is a contributing factor to their participation. Few participants name “other” factors that motivate them to log in the forum.

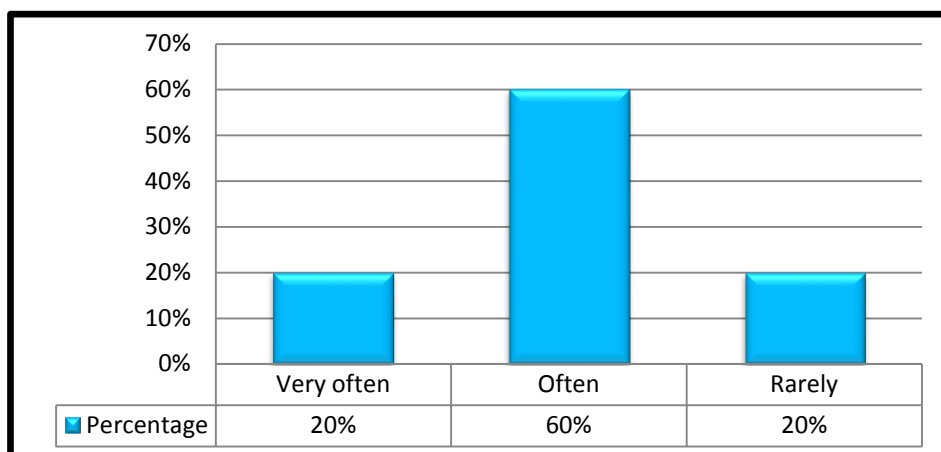
#### 3.1.4.2. Q17: “What are the factors that prevent you from interacting?”



**Diagram12: Factors inhibiting students to participate**

As indicated above, from the answers gathered from 45 participants, 26.5% of the answers point out *difficulty to access* as a barrier that prevents the students to take part. 25% indicate *time constraint*, 14.7% indicate that there are *other* reasons that demotivate the students to get engaged while 8.8% say to be in “*lack of confidence*” as clearly displayed in the diagram above.

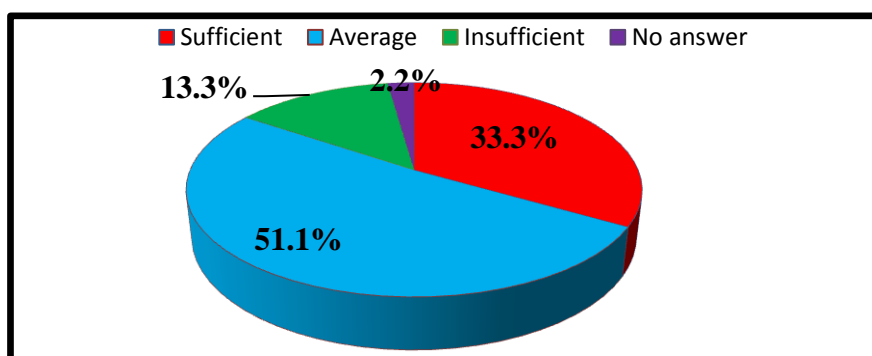
#### 3.1.4.3. Q18: “To what extent does the instructor of the forum participate?”



**Diagram 13: The extent to which the instructors participate**

The statistics of the diagram 13 indicates that most responders (60%) find the instructors contribute “*often*” in the forum. In contrast, the rest of the answers are equally divided. 20% think that the instructors contribute “*very often*” while 20% argue that instructors’ contribution is “*rare*”.

#### 3.1.4.4. Q19: “How do you find the intervention of the instructor in the forum?”

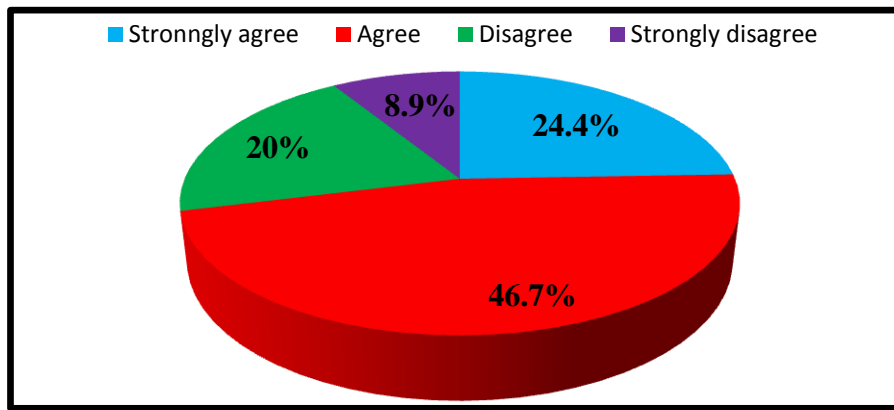


**Diagram 14: The level of the instructors’ intervention in the forum**

As demonstrated in the above diagram, the level of the instructors’ intervention is valued by the majority of the participants (51.1%) as average. 33.3% characterize it as *sufficient*, while only 13.3% qualify it as *insufficient*.

#### 3.1.4.5. Q20: “How much do you agree with each of the following statements?”

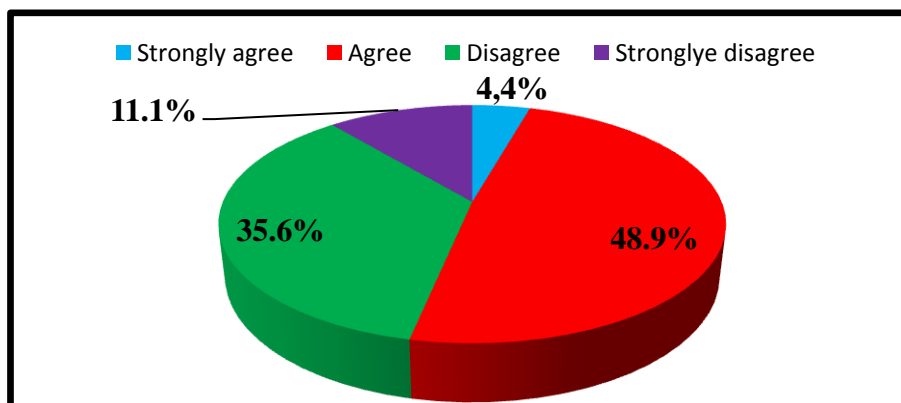
**A: Your instructors provide you with attractive activities**



**Diagram 15: The instructors providing attractive activities**

Relying on the results, 46.7% of the participants agree that the instructors provide them with attractive activities. 24.4% “*strongly disagree*”. Nevertheless, 20% rejected the idea, stating that the instructors do not provide them with attractive activities in the online learning platform.

**B: Your instructor provides you with feedback to each comment and activity**

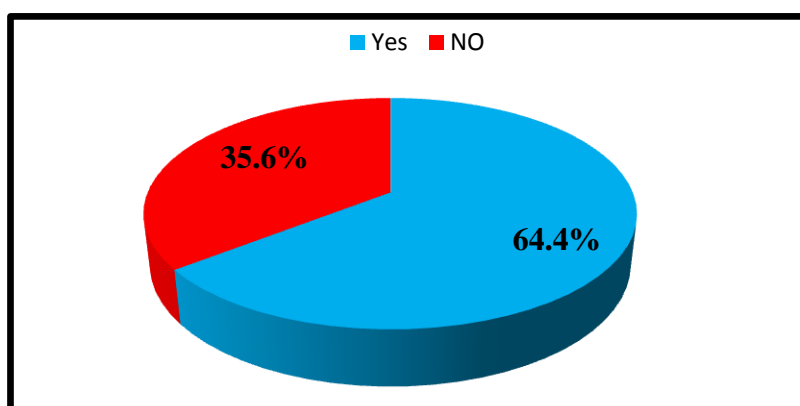


**Diagram 16: The instructors providing feedback to students’ action in the forum**

The outcomes clearly show that 48.9% of the students agree on the fact that the instructors provide the students with feedback to each of their comment and activity. Yet, for 35.6%, the instructors do not provide their comments and activities with feedback. The different viewpoints are clearly displayed in the pie-chart above (diagram 16).

**3.1.5. Section four: Students’ suggestions for the improvement of the forum**

**3.1.5.1. Q21: “Do you think that relating frequency of interaction to marks could motivate you to interact in the forum?”**



**Diagram 17: The role of interaction assessment in motivating students**

The results show that while the majority (64.4%) of the students affirms that relating their performance with marks would encourage learners' participation in the forum. However, a considerable percentage, 35.6%, rejects this view.

**3.1.5.2. Q22: “According to you, how could the forum be improved?”**

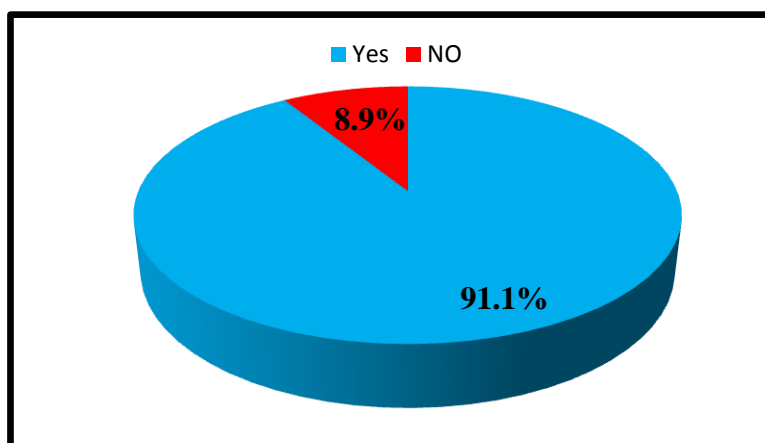
Categories	Answers	Percentage
There is a need to more varied activities	17	26.6%
The instructor should be more involved	8	15.5%
Other	20	31.3%
Total	64	100%

**Table 4: Suggestions on the forum improvement**

The respondents give various suggestions which they consider could improve the forum platform. They suggested that more *varied activities* should be established. Moreover, others propose that the *instructors need to be more involved*, so that they could be oriented and motivated. Yet, others say that the forum could be improved if all the *students are more*

*involved*, that is performing an active role. Improving the design of the forum is also another suggestion from the respondents.

### 3.1.5.3. Q23: “Do you think that more varied activities in the forum will stimulate your participation?”



**Diagram 18: The influence of varied activities on students’ interaction**

As for diagram 22, results show that the majority of the respondents answered “yes” when asked if more varied activities will stimulate their participation in the forum. Indeed, 41 participants (91.1%) argue that more varied activities in the forum would stimulate their interaction. In contrast, 4 respondents’ state that establishing more varied activities will not impact participation.

## 3.2. Results of the interview

The analysis of this section is based on data gathered through interviews conducted with two moderators of the university master forum. The interviews, in fact, are audiotapes which were converted, more exactly, transcribed by hand into texts (verbatim). Based on these transcripts, the analysis is made using *Qualitative Content Analysis* and aims to find out the instructors’ perception of students interactions in the forum. It also intends to identify their roles performed in the forum as their involvement is crucial to the interactivity of the students in the forum. The results shown below come from the transcripts of the interviews. Data,

therefore, were analyzed following QCA steps: it consists first in coding the text units into categories, then make correlations between them and finally assign meaning to the content (Mayring, 2014).

### **3.2.2. Participants**

The two participants selected for the interview are both teachers in the Department of English at MMUTO. Both of them teach the semiotics module, and use the forum to upload or download documents and discuss topics in relation to the module. Even if the two participants share some criteria, the distinction between them is outlined in their experience. The main moderator has, in fact, been teaching for 36 years and has launched using the forum since 2013. As for the other interviewee, also a moderator of the forum, this year is her first year of experience in teaching. More precisely, she has been previously taking part in the forum as a master student. The two teachers, in fact, are selected purposely, as they are the only teachers who use the online interface as a support to face to face classes in the English department of UMMTO.

### **3.2.3. When have you started using the master two e-Forums?**

#### **Participant 1:**

To answer this question, the main moderator of the forum says to have started using the e-forum in December 2013.

#### **Participant 2:**

The second respondent affirms that her first experience with the e-Forum goes back to 2012-2013 academic year when she was a student. But as a workshop teacher, she started co-monitoring the forum this year (2014-2015).

### **3.2.4. How often per week do you access to the forum?**

As for the frequency of access, both of the interviewees affirm to access the forum several times a week (two or three times a week).

### **3.2.5. How does the forum help you in your teaching?**

When the interviewees are asked about how the forum helps them in the teaching process, different points rise in the answers.

#### **Participant 1:**

The interviewee expresses his view, stating that the forum is a “*supplementary help for the students*”. To his view, students are provided with chance to interact with other students outside the classroom through the forum.

#### **Participant 2:**

The second participant says the forum serves as “*platform for further explanation*” of classroom lessons for students feel free to express themselves within the platform. Indeed, according to the interviewee, the forum enables to know about what students “*have not understood in classroom*” as they can freely ask questions. More particularly, the respondent argues that the forum offers opportunity to make the students feel more comfortable as they go beyond the complex of “*not knowing*”, or “*fear of mistakes*”. It allows the teacher bring the students to make more “*efforts*” through some tasks.

### **3.2.6. How satisfied are you with your learners’ interaction in the forum?**

#### **Participant1:**

Concerning teachers' appreciation of the learners’ interactions, the first participant argues that if the question is restricted to the students who frequently interact, the level of interaction may be considered as *high*. According to the respondent, there is a feeling of satisfaction towards students who participate most of the time.

#### **Participant2:**

The second interviewee says to be “*very satisfied*” with the learners’ interactions in the platform. The latter argues that the use of e-platform is at its beginning in this university and students’ are doing their best to participate by asking questions and commenting and that

makes the intervener *"proud of it"*. For instance, the interviewee affirms: *"three years ago, there was no interaction at all, teachers were not using it, so, looking at this, I am very satisfied and it is not exaggerating"*.

### **3.2.7. How do you classify the level of students' participation in the forum?**

When it comes to the level of the learners' participation in the forum, the interviewees agree upon one point: only a few numbers of students are highly accessing frequently the forum through asking and answering to questions, uploading and downloading documents. The respondents argue that it is *"mostly the same students, roughly perhaps one third or half of the students who participate"*.

### **3.2.8. According to you, what inhibits your students' from taking part in the forum?**

Questioned about what may inhibit students' participation in the forum, both respondents defended that on the basis of self-experience, the inhibiting factors may be the *"fear of spelling mistakes"*, *"shyness for timid students"*, *"ignorance about the forum's benefit"*, *"the lack of the culture of sharing"* or *"lack of interest"*.

### **3.2.9. What role do you perform in the forum?**

On the role performed in the forum, the respondents say to act as participants, observers, a facilitators or mediators and helpers or guides to students by *"orienting the learners towards others' comments"* for instance. In relation to this, one of the respondents stresses that ones' role is to facilitate interaction between the students. In this regard, the latter also maintains that students need to feel freer in this space where they have to ensure interactivity between them.

### **3.2.10. Do you provide your learners with activities and tasks to stimulate their interaction?**

**Participant1:**

When it comes to the point of providing learners with stimulating activities and tasks, the first respondent points out that he *"sometimes"* provide students with activities that lead them to be critical. He also recognizes its value by affirming that his aim by doing this is to incite students *"to comment"* as well as *"to reflect actively on their learning"*.

#### **Participant2:**

On the other hand, the other participant says, *"not really"*, questions are asked and exercises to be corrected by students themselves are provided. S/he says *"yes"* concerning providing feedback to learners' reactions to activities.

#### **3.2.11. Do you assess students' participation in the forum?**

On the point of assessing students' participation in the forum, the interviewees argue not to allocate marks at the moment. However, the respondents say it would be motivating to assess the participation and therefore intend to do it. Though some aspects should first be analyzed and that *"students' should be provided with parameters to show the way they will be assessed"*.

#### **Conclusion**

The chapter provides results both of a questionnaire and the interview indicating students' interactivity in the forum as well as the factors either encouraging or inhibiting their engagement. The results obtained from the participants indicate that the students' level of interaction is far from being high. In this regard, the majority of the students perform more the role of observers instead of active participants. As far as the motivating factors are concerned, the students' responses reveal that issues motivating them tend to be *"platform for information sharing"* and *"curiosity"* and means of *keeping contact* with peers. In contrast, the results reported that *"difficulty to access"* and *"time constraint"* and other elements confirmed to be the major reasons that demotivate students' interaction. In light of presenting details and

clarifications, the following chapter is devoted to the interpretation and discussion of the results described in this section.

## ***Chapter 4 : Discussion of the Findings***

## **Introduction**

The chapter discusses the results of the study in relation to the research questions. The findings deriving from the students' questionnaire and the instructors' interviews are analyzed and interpreted together, and this because of the correlation that exists between the outcomes collected from these two research tools. The results are then discussed and interpreted in relation to the literature presented in chapter one. The chapter comprises three major sections; each part aims to provide an answer to the research questions asked in the introduction. It first discusses the results obtained concerning students' interactivity in the forum. It, then, discusses the outcomes relating to the major factors influencing students' interactivity. Finally, the third part outlines students' suggestions for the forum's improvement.

### **4.1. Students' Interactivity in the Forum**

#### **4.1.1. Comparing Students' Frequency of Accesses to Social Networks and to the Forum**

From the results as displayed in the previous chapter, it appears that master two students in Language and Communication at MMUTO are more engaged in social networks than in the forum. Indeed, the research revealed that the majority of the students access social networks very frequently during the week. Thus, 48.9% affirm to connect in social networks several times a week and a significant part of the participants; 31.1% say to access to social networks every day. This means that most of the learners (80% as a whole) access internet many times a week.

However, when it comes to the issue of students' frequency of access to the master II forum, the findings indicate a contrast comparing with the frequency of access to the social networks. This way, few participants access the forum every day, while most of them (diagram 2) access it once a week. Thus, these results allow to confirm that students participate in online discussion sporadically. It is clear that students' interactivity in terms of frequency of access to the forum is lesser when compared to that of social networks' access. At the same time, this

comparison allows to find out that the majority of the learners have access to internet every week. Their weaker engagement into interaction in the forum is not related to the availability of the internet for these learners and can be reported to the learner control element, that is, learner's own decision to access the forum or not.

#### **4.1.2. Students' Perception and Interest in Interaction in the Forum**

The research reveals mixed results concerning students' perception of interaction in online learning and their interest in interacting in the forum. Thus the majority of the participants confess that interaction is important in online learning. One participant says for instance that interaction in e-Learning is significant *"because when we interact, we exchange ideas, we correct the false ones and we acquire knowledge"*. Another respondent argues: *"interaction will help learners progress and enrich their knowledge as they collectively and collaboratively exchange with other peers and teachers"*. This result goes hand in hand with what has been reported by Su (2006), that interaction is a fundamental component in online learning. Therefore it can be asserted that master two students in Language and Communication at MMUTO admit that interaction as greatly relevant in online learning such as the case of e-forum. They imply that collaboration in the learning process is relevant.

Though students perceive interaction as important, the data about the students' interest in interacting in the forum indicate contradiction. Thus, the majority of the students (diagram 3) show little interest in interacting in the forum. This fact shows a big gap between students' perception of interaction in online learning and their actual commitment into the interaction. Then it also clarifies the extent to which learners perceive interaction as important. Su (2006) argues that people tend to spend more time in something they find important. Nevertheless, this little interest in interaction in the forum corroborates the fact that students' interaction in the platform is less frequent than their frequency of access to social networks.

#### 4.1.3. Students' Participation in the Forum

The results of the survey demonstrate that though the majority of the participants consider interaction as crucial in the e-Learning process, their attitudes and behaviours when they access the forum present differences. Thus, while some of the learners prove this interest as they participate by asking questions or by commenting messages (See diagram 5), most of them are less active when they access the forum. 38.1% affirm that they just “*read information*” while 32.1% are concerned in “*downloading documents*” in their access time (diagram 5). This proves that the majority ( $38.1\%+32.1\%=70.2\%$ ) are less actively engaged in the forum in terms of interaction. Likewise, the results about the role the students perform when they access the forum confirm this type of engagement. Most of the students affirm to be “*observers*” when they access the forum, while only few students affirm to be active participants (see diagram 6). In the same perspective, the students mostly confess to “*post messages*” very rarely, while 35.6% do it rarely. Besides, when interviewed, the instructors of the forum confirmed the findings of the questionnaire. The instructors affirm that the majority of the students are not active in the forum. The interviewees argue that only a few numbers of students access the forum through asking and answering questions, uploading and downloading documents; it is “*mostly the same students, roughly perhaps one third or half of them who participate*”. These findings allow to qualify the type of interactions in the master forum.

Indeed, because they mainly observe, read or download documents without reaction to others' postings, the participants in this research may be said to belong to the group of interactors that Salmon (2004) called “lurkers”. This kind of participants does not really participate to the interaction, but just observes what is being discussed by the other participants. This behaviour is nevertheless considered as a type of interaction, the learner-content interaction (see chapter one) and it helps learners in the learning process, as Moore

(1989) suggests, within this type of interaction learning is self-directed. The learners reflect upon the content but do not show their collaboration with others as they do not react in the discussion taking place in the platform.

In short, it can be noted that the majority of the participants are concerned with learner-content interaction, which though important, is not interactive in terms of mutual exchange. It certainly allows self-learning but does not fit for collaborative learning (see chapter one).

#### **4.1.4. Participants' Opinion on the Forum**

The findings of this work demonstrate that the students in their majority find the forum useful (see diagram 9) and more than 73.3% of the participants affirm to be satisfied with the forum platform. They base their satisfaction on different reasons. Thus, according to the results, 33.8% argue that the forum is important for their learning process as it helps improve their knowledge development, that is, it incites them to learn, receive new documents for instance from others, and reflect upon these things and so to say build knowledge. 48.5% affirm that through the forum, they interact as they ask and answer to questions, and receive others' feedback. For some other participants, the interaction in the forum helps to orient them in their learning process, and makes them feel comfortable. These arguments confirm previous authors' findings as defended by the socio-constructivist theory (Vygotsky, 1978) and the collaborative approach to learning. Many authors such as Watson (2008) and Holmberg (2003) share the same view concerning the interactive process in e-Learning. Holmberg argues that interaction allows learners and instructors to take part in the discussions at time that fit them (Holmberg, 2003:42).

The results also reveal that learners find in the forum an opportunity to keep contact with friends, but also with instructors. This way, they can ask as well as answer to questions from classmates or instructors. This is why other learners say that the forum provides them with an environment where they can meet and collaborate with one another and with teachers.

This alludes Wenger's idea of "community of practice". Indeed, Wenger (2002) notes the learners in a virtual environment such as e-Forum feel some pleasure of belonging to a community where they can exchange at any time. They build relationship among the members and go beyond the barriers related to time and space and form this community. This also explains why a significant number of participants (39.5%) see in the forum an environment where one can freely express oneself. In short, interactions with other students through the forum participate is positively appreciated by the Language and Communication Master II students. It can then be affirmed that this collaboration process in online environment reinforces the learners' learning outcome as it allows mutual exchange among members who form together a community. That is, the socialization in the online learning that fosters more acquaintance not only with the content but also with the other members of that virtual platform is positive to most of the participants.

As a whole, it can be noted that the interactivity in the students' forum is rather passive. Indeed, though most of the students affirm to perceive interaction as an important element in online learning, their discourse does not corroborate their behaviours in the forum. Thus, they show little interest in interacting in the forum. Most of them post or comment messages very rarely while they affirm to often read information or download documents. Though this attitude is benefic for students (Guzdial and Carroll, 2002), it does not allow a reciprocal learning process, the collaborative approach to learning. In such a practice, the learning outcome is unidirectional for lurker learners. The interaction process as defined in the literature review (see chapter one) is not achieved between the majority of the learners. However, it is worth noting that few numbers of students are active as they post, ask and comment on what happens in the forum. The results also denote that students are aware of the potential of the use of e-Forum in this period of constructivist approach to learning. The challenge that still remains is how to get the majority of the students engaged into interaction

within the forum. Taking up this challenge goes through first understanding the factors impacting learners' engagement into interaction in the forum.

## **4.2. Major Factors Influencing Students' Interactivity in the Forum**

### **4.2.1. Motivating Factors**

As already mentioned in this work, students' opinion on the forum is positive. They agree at their majority on the fact that the forum plays an important role, helping them in their learning process. Thus, when they are clearly questioned about the factors which motivate them to access the forum, students' responses are multiple. Most of the students who connect in the forum say they do it because they see this VLE as *"a platform of information sharing"*. For 51.6% of the learners, the forum serves as *"a place to receive information"*. This fact testifies students' passive fulfilment in the forum. This means that most of the participants are not active in the forum. They do not actively participate when they access the forum. This denotes the fact that it is earlier in this research demonstrated that the majority of the participants in this platform are lurkers.

In addition, others point to *"curiosity"* as an incentive to their participation in the forum, the aim being to notice what is new as information from teachers or from other learners. Therefore, one can argue that the majority of the students log in the forum because they are eager to know what happens in the forum, that is, what are the new interactions from the other participants. This way of trying to remain in contact with teachers or peers corroborates once more Wenger's idea of community of practice. So the feeling of belonging to this community; students of the same domain of study, contributes to stimulate learners to access the forum. Salmon (2004) has stated the socialization process, arguing that becoming well acquainted with both the content and the other participants, participates to intensify the students' interactivity in the forum.

But a point that deserves attention from what precedes is that the students' perception of the forum as a platform of information may be related to the forum's use in education being a new practice in this university. Indeed, the implementation of the forum is recent and this may bring the students to be more interested in observing what is being done by others rather than doing it themselves. In other words, the use of the Online Discussion Forum is new and students may still doubt about how to use the forum. This may also reveal the necessity of getting the students well skilled about how to behave in the forum.

Besides, it is worth noting that only few students affirm that the forum serves as an environment for free expression for timid students. Instructors do confirm this perception of the forum as they note that an aim of the forum is "*to let students feel much freer, to ask one another questions than they do not ask in the classroom*". Tim S. Robert notes that online learning is virtual rather than physical, as it provides a support to unfriendly and shy students by offering them a possibility to feel at ease as well as to express themselves freely (2003). In other words, it is through e-Forums that some learners overcome the fear of the presence of the others in face to face environment. Concerning the present research, the students' answers scarcely correspond with Tim S. Robert's (2003) claim. Students do not clearly affirm shyness as an incentive element to participation into interaction; however they recognize to feel *freer* and *comfortable*. This fact can be explained by the fact that the participants in this forum already know one another and have been studying together for years and therefore form both a real and virtual community. Learners' interactivity in the forum is rather related to their curiosity, which can get right with what Vrasidas and McIsaac (1999) named as learner control.

In the same perspective, it is relevant to mention that students' interactivity in the forum is hardly related to the teacher's role. Indeed, the results of the research present 7.8% of participants who claim that their participation is motivated by the teacher's frequent

involvement in the forum; while 3.1% admit to be encouraged to participate by teacher's formative assessment, that is, the teacher's comments and feedbacks about students' reaction.

Though the results seem insignificant, they should be analysed with caution. Relating these data to other points of the research such as students' satisfaction about the instructors' participation in the forum, it comes out that notable part of learners find that the instructors participate very often while other agree that they do it often. Thus, 33.3% of the participants say the teachers' participation is sufficient (see diagram 14). In the same order, the results show that the majority of the learners (diagram 15) agree that the instructors provide them with activities that stimulate their participation in the forum. More than half of the students admit that the instructors provide them with feedback, that is, they react and comment the learners' deeds in the forum. In other words, the results demonstrate that the role of the instructor is crucial in encouraging students to interact in the forum. These findings corroborate what has previously been affirmed. Juwah (2006) states that the instructor's role affects the involvement of the learners. Ramsdon argues that, it is the only and the most useful way which incites students to take part by giving marks to their activities (2003; Watson, 2008). Therefore, comments or feedback from the instructor is important in motivating students' participation in the forum. Moreover, supplying varied activities to learners in virtual learning environment is stimulating for their real engagement in it. That is why the students at 91.1% (see diagram 18) claim that more varied activities in the forum will surely improve their interactivity in the forum. David Jacques and Gilly Salmon state that few activities need to be undertaken in order to ameliorate participation as well as establishing interesting activities foster dialogue, encourage knowledge construction (2007). In this respect, results reveal that the instructors participate *several times per week* to the forum interactions as well as to provide learners with activities that intend to develop their critical thinking process. An instructor says: "*yes, sometimes; for example, once for master II*

*students, we had a lecture about Peirce, and while navigating on the internet I found a lesson about him and it was full of errors. And I found it interesting to ask the students to go to read it ...and then make comments to see whether they could actively reflect upon their learning”.*

The findings of this research demonstrate that the role of the instructor in an online platform is relevant. Both students and teachers involved in the study testify these results. Indeed, the instructors in this work say to act as participants, observers, a facilitators or mediators and helpers or guides to students by *“orienting the learners towards others’ comments”* for instance. One instructor shares their belief: *this is part of my belief that what I have to do is simply to help, orient, guide, perhaps facilitate”*. This type of behaviour, from the part of the instructor certainly participates to stimulate learners’ interest in interacting in the forum. As well scholars claim that the instructor in an e-Forum plays multiple roles that participate to a great extent in motivating students’ engagement. The findings are consistent with Watson (2008) and Salmon’s (2006) claim that the instructor needs to assume more than one role in the forum.

In sum, the forum serving as a platform to receive information, the curiosity, the socialization with others as well as the instructor, are the major stimulating factors to students’ interactivity in the forum. Therefore, interacting in the Master II forum is affected by what Moore (1993) called the autonomy of learner (the learner’s own decision to participate), that is in the current study mainly related to curiosity, the social presence (the presence of other participants allowed through interactions) with other participants, but also to feedback, as students agree that the instructor participate enough in the forum. However, for the transactional distance (reducing as much as possible the distance between the learners and the instructor), the influence on students interactivity is less significant. This can find its explanations in the fact that students regularly meet the instructors in face to face interaction twice a week.

#### 4.2.2. Inhibiting Factors

As mentioned in the literature review, different factors can prevent the students from interacting with others in the forum (see chapter one). The results of this research show that the main factors that negatively influence students' interactivity in the forum are "difficulty to access" "time constraints" "monotony in the forum" and "other factors" The difficulty of access can be due either to the fact that the e-Learning platform of the university is sometimes inaccessible, mainly during holidays or to the fact that internet is not available for some students, especially during weekends knowing that some students live in remote areas.

The results concerning time constraints go hand in hand with other previous research (Croxton, 2014). In contrast with these findings where learners are attending full online programmes while dealing with other activities (Croxton, 2014), the present sample consists in full time students who get access to the net several times a week as demonstrated by the results earlier in the research. The results can therefore be in relation with students' self determination to learn through this new means. Time constraints can be explained by the fact that the learning are also taking face to face classes during which different activities to complete are required. Nevertheless, the results confirm the suggested hypothesis concerning time constraints (see general introduction).

The other factors preventing students from interacting in the forum may be related to the forum itself. Indeed, the results attest that students emphasize "*the monotony in the forum*" as the influencing factor that prevents students from participating. What is expressed is that the forum deals most of the time with the same subject or topic and lacks variety in activities. For these students, the fact of being all the time discussing about semiotics, dealing only with "*written form*" of exercises does not encourage to access the forum every time. A learner says: "*the drawback of the forum is that it is bound up to the field of linguistics. In this*

*respect, it is not extended to other fields such as civilization, translation studies*". The instructors seem to sustain this point. One instructor affirms: *"I have suppositions, sometimes I say well the students are not well motivated because the themes are not very interesting"*.

Some students also express their lack of interactivity by the fact that the other students do not interact. Indeed, as demonstrated by the results, only few students are active participants in the forum. Therefore, the fact of being always the ones who access and participate in the forum discourages them from staying active in the forum. A participant says for instance that *"...the problem is in the students as most of them are not interested in making comments or sharing information"*. This point highlights the idea of social presence in online learning that can influence learners' interactivity. Conformingly, Vrasidas and McIsaac (1999) state the importance of mutual interaction among the participants for more engagement in online platforms. This means that when students feel left alone, they cannot persist in interaction in these environments. What is claimed here by students bring out that the learner-content interaction which is the one present in the findings, is not fully satisfying. There is the need to encourage the learner-learner and learner-instructor interactions for a more effective collaborative learning process.

Other students state that the inhibiting factors are related to the design of the forum which they evaluate as *"not attractive"*, and the lack of privacy. For this last point some students argue that the lack of privacy, that is, students are clearly displayed by their names, does not allow a free discussion.

However, it is worth noting that these results do not confirm the ideas defended by previous researchers and as suggested in the general introduction concerning learners' lack of confidence. For instance, Juwah (2006) states that learners need to be confident before they can post messages in the forum. Indeed, they for example fear making mistakes or not answering correctly to a question. In the same vein, when questioned about what may inhibit

students' participation in the forum, the instructors of the forum tend to defend what has been found in literature. They affirm that the probable obstacles to the students' interaction may be *"the fear of spelling mistakes"*, *"shyness for timid students"*, *"ignorance about the forum's benefit"*, *"lack of the culture of sharing"*. However, only minorities affirm to be influenced by *"lack of confidence"*, *"lack of assessment"* or *"dependence on teacher"* (see diagram 12). It can be claimed that the participants do not mention the lack of confidence as a demotivating factor to their participation into interaction in the online forum. The hypothesis issued in the introduction on this issue is therefore not confirmed.

Likewise, the results show that learners are not to a great extent inhibited by the absence of the instructors in the Forum. Only 7.4% say that there is lack of assessment while only 8.5% say the instructor is insufficient. This confirms the point concerning the instructors' participation that learners judge as sufficient (see diagram 14). The findings therefore do not confirm Mazzolini and Maddison (2003) assertion that alludes the instructor's performance in the forum hinders students' participation.

#### **4.3. Students' Suggestions for the forum's improvement**

The learners participating to the research have suggested different points that may help in improving students' interactivity in the forum. Though less proposed here by students (12.5%), the role of the instructor (including their participation with comments, feedback, assessment, etc.) is spotted by learners as one factor that could improve the forum. A participant affirms: *"maybe if the instructor can participate more by asking questions and launching debates, students could be stimulated to respond"*. Another says that the instructor should provide learners with *"motivational speeches and rewarding"*. As already mentioned in the literature review, scholars also recommend more involvement from the part of the instructor through encouraging the learners, asking them questions (Stewart et al; 2004; Bonk, and Cumming, 1998; Peters, 2000; Swan, 2003; Bonk and Reynolds, 1997). Salmon defends

the same idea of the instructor's involvement when she argues that *"for online learning to be successful and happy, participants need to be supported through a structured development process"* (2004:10).

On the same point, learners declare that providing them with more varied activities may improve students' engagement in the forum. 26.6% of them argue that different activities will increase the desire of the learners of logging in the forum for the sake of discovering new things. Many students maintain that *"the variety of activities encourage to be more in touch each time to look for something new"*. Another learner claims that the improvement of the forum goes through providing *"some funny activities to attract students' interest"*. This point noted by the learners corroborates what has been discussed by authors (Guzdial and Turns, 2000) concerning activities in the electronic forums. For learners, providing varied activities implies exercises written form, video, games, riddles, etc. that would later be discussed in the classroom. In the same perspective, learners suggest that inciting other teachers to be engaged in the forums or create other forums may increase students' engagement as curiosity will bring them to participate in these different forums, and learn different points about different modules or domains of study. A student notes: *"the forum can be improved through the participation of other teachers..."* For them, different teachers using different forums would increase their curiosity in trying to know what happens in each forum.

Moreover, participants claim at 64.4% that assessing learners' interactivity will get the learners more active in the forum. This point confirms what has been mentioned earlier in the research. Swan (2003) insists that learners be evaluated so that they become more aware of the forum's purpose which is to reinforce classroom learning process. Learners name "other" points that could play a role in improving the forum.

Among these points, learners mention the improvement of the forum's design. Indeed, students have already cited the design of the forum that is "not attractive" as a demotivating

factor; and therefore suggest that it is improved. It is here the structure of the forum itself that if ameliorated can increase learners' engagement into interactions in the platform (Moore, 1993). It comes out that though the results show the instructors' involvement scarcely inhibiting learners' interactivity in the forum, the role of the teachers is still required by learners.

Students argue that more responsibility that may consist in giving them the possibility that allows learners to launch a new discussion would be motivating. For instance, a respondent writes that the fact that *"we can as students write a message only if the teacher has already written one before..."* is a limitation of the forum.

Another point which is suggested by learners is that the forum could be more interactive if all the students are engaged in. They claim that more involvement from the part of other students will improve the forum. Students ask for *"all the others to participate in the interactions"* instead of being *"observers"*. A participant clearly mentions: *"It (the forum) can be improved by the involvement of all students in the forum"*. This point could be understood as the students appreciating to belong to a community of practice, and therefore claim for more social presence of the other learners (Vrasidas and McIsaac, 1999).

It can therefore be asserted that students acknowledge the importance of collaboration as described in the literature review. Collaboration in community means the participation of all the members in the process of meaning negotiation.

## **Conclusion**

The chapter has discussed the results in order to answer the three research questions of the study. While some of the hypotheses suggested in the introduction are confirmed, others are rather refuted. The interactivity of the students in the forum is shown to be more effective among just little number of them; the majority is rather passive in the platform. This is

reflected through students' behavior in the forum centered on "*reading information*" and "*downloading documents*" rather than "*posting*" or "*commenting messages*".

With regard to factors influencing students' participation, the respondents affirm that the major reason that incites them to get engaged is that they perceive the forum as a platform to receive information, that is, this makes them passively participate to the discussion (Salmon, 2003). In other instances, curiosity and the involvement of the instructor are shown as other motivating factors that incite the students to access as well as to mark their social presence (Moore, 1993; Wenger, 2002 and Salmon, 2004). On the other hand, the results revealed that the main issues that negatively influence students' interactivity are certified to be "difficulty to access, time constraints" as well as other factors such as the design of the forum or the lack of privacy.

For further concerns of the study, participants supply suggestions for the improvement of the forum. Thus, they advance the idea of improving the forum's design. Moreover, they report that the instructor needs to be more involved through providing more varied activities but also assessing learners' interactivity. As suggested by Salmon (2004), the e-moderator, who is expected to guide, encourage and stimulate the learners' interactions through well designed activities, but also to provide amount of feedback to students' queries. These participants' responses may serve as recommendations on how the forum would be improved and beneficial for the students as well.

## ***General Conclusion***

## **General Conclusion**

The study was set out to explore the social interactions among the participants in a virtual learning environment implemented at the Department of English at Mouloud Mammeri University of Tizi Ouzou, that is, to seek out how effective the platform has been in insuring students' interactivity. It also intended to determine the factors influencing students' interaction and engagement as well as it intended to reflect upon ideas to ameliorate the forum. The investigation in this area which is important because this subject is new especially at this university context was conducted on the basis of Moore's Transactional Distance Theory which has been reinforced by many works. Indeed, this theory points at the variables (structure, the autonomy of the learner and the dialogue) that influence interactivity in online learning process and also mentions the main types of interactions that take place in e-Learning platform. The results confirm some points of the hypotheses and the previous findings in literature as well as they refute others.

This dissertation assigned three major objectives. The first objective meant to determine the students' interactivity in the master forum in order to find out how it brings participants into collaboration relying on students' frequency of engagement. The second objective was to discover the factors motivating or inhibiting the students' participation. The third and last objective aimed at providing some objective suggestions on the basis of students and authors' views that might increase their interactivity in the Online Discussion Forum.

To answer the advanced research questions and to test the hypotheses of the study, a mixed method approach was selected, combining both quantitative and qualitative methods for the sake of analyzing data. These data, indeed, were drawn from two distinctive research sources. 45 master II students in Language and Communication from MMUTO were randomly chosen to respond to a questionnaire. Likewise, two teachers from the same setting and who were moderators were selected to be interviewed. For quantitative data analysis, a

computer program known as SPSS was used for the evaluation of statistical data. In addition to this statistical method, P. Mayring's (2014) Qualitative Content Analysis was adopted to interpret the data gathered from the two interviewees.

Relying on the data analysis, the empirical findings were synthesized and thus provide answers to the research questions advanced in the study. As claimed by Holmberg who stresses on interaction as an outstanding factor in online learning, the majority of the learners perceive interaction as crucial to the online learning process. However, their attitudes towards the forum are rather contradictory as the result displayed a remarkable chasm. Thus, concerning the frequency of access, while few of the students access the forum several times a week, 80% of them access internet several times a week. Likewise, the majority are less actively engaged, affirming that they just *read information* and *downloading documents* in their access time. The passive fulfilment of the learners is demonstrated by 57.8% of the students admitting to act as "*observers*" when only few of them perform an active participant role. Although the majority of the students argue the forum has been helpful to them as it helps in "*improving knowledge development*", "*receiving new documents*" and "*build knowledge sharing community*". As well, the results show that participants to the forum were more concerned with learner-content interaction and were rather lurkers, that is, more passive in terms of collaborative learning with peers and instructors.

Understanding such behaviours of the students in the forum goes through analyzing the influencing factors. On the one hand, the findings state clearly that serving as "*platform for information sharing*" "*Curiosity*" and other positive aspects of the forum such as the *social presence* of the other participants as the major motivating factors. On the other hand, the results revealed that the respondents point at *difficulty to access* and *time constraint* as well as to other aspects such as the *forum's design* or the *monotony in the forum* as the chief factors affecting negatively their engagement into interaction within the forum. The findings

also shed light on some other negative aspects of the forum noticed by students. Some students express themselves discontent about *lack of students' interaction*. This demonstrates that the e-Learning platform is in need of improvement; what brings the students to provide suggestions about the way the forum would be more efficient through more interactivity.

First, students propose that the provision of more varied activities will increase learners' desire for logging in the forum. Other participants argue that the forum is in need for establishing more varied activities, including *exercises, games and videos*. Furthermore, more involvement from the part of the students is highly recommended by a part of the participants. That is, the active collaboration of all the students will lead to the improvement of the forum. As far as assessment is concerned, a considerable number, more exactly, 64.4% of the students suggest the assessment of their interaction may be not only an incentive to ameliorate their participation but also will foster their learning process. These ideas confirm what has been asserted by Gerbic (2006) that students mind what is assessed. Though perceived as enough by many learners, the role of the instructor is still more needed, as indicated in the results. Indeed, the instructor is expected to ask questions and give feedback very often so as to motivate them to participate. This idea suggested by the students is consistent with Salmon's (2004) statement arguing that for online learning to be effective, the instructor's involvement is needed. With regard to the forum's structure, it is suggested that it would be preferable if it were renovated; namely not only by improving the design but also "*by giving more responsibility to the students*" who would become able to launch a discussion. Therefore, these points should be carried out so that the forum would be more attractive.

In all, relying on the framework mentioned in the literature review of the study, especially, Moore's Transaction Distance Theory, the following conclusion is drawn: the e-Forum at the Department of English at MMUTO succeeded to create interaction and communication environment among learners themselves and with their instructors. However,

except for a few number of students who are active participants to the communication process, the interactivity of the majority of the students is rather passive and makes the implementation of the socio-constructivist approach to teaching/learning remain a challenge. More efforts need to be performed to reduce the inhibiting factors to interaction as depicted in this extended study for a more inclusive and interactive e-Learning platform.

It is a hope that the findings of this humble work as first investigation in this new field will contribute to a better implementation of learner-centered method to learning through tools such as the Online Discussion Forums at MMUTO. This would thus improve the learning process through a more interactive timeless and spaceless means of communication. It is also a hope that this research paves the way to future researchers interested in the same area to carry on the study focusing for instance on the level of interactivity in relation to either learner's grades in classroom or gender differences. Further researches could also reflect upon the language of the students in the forum in terms of how the turn taking process incites interactions among the participants.

## ***Bibliography***

## Bibliography

- Anderson, T. (2004). *The Theory and Practice of Online Learning*. Athabasca University (AU) Press.
- Anderson, T. (2008). *The Theory and Practice of Online Learning*. Athabasca University (AU) Press.
- Anderson, T., & Kanuka, H. (2003). *e-Research: Methods, Strategies and Issues*. Boston: Pearson Education Inc.
- Balaji, M. S. & Chakrabarti, D. (2010). Student Interactions in Online Discussion Forum: Empirical Research from ‘Media Richness Theory’ Perspective. *Journal of Interactive Online Learning*, 9(1), 1–22.
- Bonk, C. J., & Cummings, J. C. (1998). A dozen recommendations for placing the student at the center of Web-based learning. *Educational Media International*, 35(2), 82-89.
- Bonk, C. J., & Reynolds, T. H. (1997). Learner-centered Web instruction for higher-order thinking, teamwork, and apprenticeship. In B. H. Khan (Ed.), *Web-based Instruction* (pp.167-178). Englewood Cliffs: Educational Technology Publications.
- Bonk, C. J., Ehman, L., Hixon, E., & Yamagata-Lynch, E. (2002). The pedagogical TICKIT: teacher institute for curriculum knowledge about the integration of technology. *Journal of Technology and Teacher Education*, 10(2), 205-233.
- Christenson, L., & Menzel, K. (1998). The linear relationship between student reports of teacher immediacy behaviors and perceptions of state motivation, and of cognitive, affective and behavioral learning. *Communication Education*, 47, 82-90.
- Dennen, V. P (2005). *From message posting to learning dialogues: Factors Affecting Learner Participation in Asynchronous discussion*. *Distance Education*, 26 (1), 127-148.
- Dewey, J. (1938). *Experience and education*. New York: Collier MacMillan Publishers.

- Dillenbourg, P. (1999) *Collaborative-learning: Cognitive and Computational Approaches*, Oxford: Elsevier.
- Dooly, M. (2008) Constructing knowledge together. In Dooly, M. (ed.) *Telecollaborative language learning. A guidebook to moderating intercultural collaboration online*, Bern: Peter Lang.
- Forum definition from:  
<http://www.oxfordlearnersdictionaries.com/definition/english/forum> . Accessed on 04 April 2015.
- Gerbic, P. (2006). To post or not to post: undergraduate student perceptions about participating in online discussions. In *Whose learning? Whose technology? Proceedings ascilite Sydney 2006*.
- Grice, H. P. (1975) 'Logic and conversation'. In P. Cole and J. Morgan (eds) *Studies in Syntax and Semantics III: Speech Acts*, New York: Academic Press, pp. 183-98.
- Guzdial, M. & Turns, J. (2000). Effective Discussion through a Computer-Mediated Anchored Forum. *The Journal of the Learning Sciences*, 9(4), 437-469.
- Harasim, L. M., Hiltz, S. R., Teles, L., & Turoff, M. (1995). *Learning networks: A field guide to teaching and learning online*. Cambridge, MA: MIT Press.
- Harman, K., & Koohang, A. 2005. Discussion board: A learning object. *Interdisciplinary Journal of Knowledge and Learning Objects*, 1, 67-77. Retrieved April, 2015 from <http://ijello.org/Volume1/v1p067-077Harman.pdf> .
- Hillman D. C.A., Willis, D.J., & Gunawardena, C.N. (1994). Learner-interface interaction in distance education: An extension of contemporary models. *The American Journal of the Distance Education*, 8(2), 30-42.

- Hiltz, S. R. (1998, November). *Collaborative learning in asynchronous learning networks: building learning communities*. Paper presented at the Web Net 98 World Conference of the WWW, Internet, and Intranet, Orlando, FL.
- Hirumi, A. (2002). The design and sequencing of e-learning interactions: a grounded approach. *International Journal on E-Learning* 1(1), 19-27.
- Holmberg, B. (1983). Guided didactic conversation in distance education. In D. Sewart, D. Keegan, & B. Holmberg (Eds.), *Distance education: International perspectives*. London: Croom Helm.
- Holmberg, B. (1995). *Theory and practice of distance education*. London and New York: Routledge.
- Holmberg, B. (2003). A theory of distance education based on empathy. In M.G. Moore &
- Hsieh, H.-F., & Shannon, S.E. (2005). Three approaches to qualitative content analysis. *Qualitative Health Research*, 15(9), 1277-1288.
- Jacques. D and Salmon. G (2007) .Learning in Groups: A Handbook for face-to-face and online environment.
- Jisc's e-learning definition from <http://www.jisc.ac.uk/elearning>, accessed on 04 June 2015).
- Johnson, D. W., & Johnson, R. T. (1996). Cooperation and the use of technology. In D. H.
- Juwah. C. (2006). *Interaction in Online Education* .Implication for theory and practice.
- Knowles, M S, Holton III E F and Swanson R A (1998). *The adult learner* (5th ed) Gulf, Texas.
- Laurillard, D. (1998) Multimedia and the learner's experience of narrative *Computer and Education* 31 229-242.

- Lipponen Lasse et al. 2002. *Effective participation and discourse through a computer network: Investigating elementary students' computer-supported interaction*. Journal of Educational Computing Research.
- McNamara, C. (1999) General Guidelines for Conducting Interviews. From: <http://www.mapnp.org/library/evaluatn/interview.htm>. Accessed on <05-04-2015>
- Maguire, L. Literature Review – Faculty Participation in Online Distance Education: Barriers and Motivators, *Online Journal of Distance Learning Administration, Volume VIII, Number I, Spring 2005*.
- Marra, R. M., Moore, J. L. & Klimczak, A. K. 2004. Content analysis of online discussion forums: a comparative analysis of protocols. *Educational Technology Research and Development*, 52, 2, 23–4.
- Mason, R. B. (2011). Student Engagement with, and Participation in, an e-Forum. *Educational Technology & Society*, 14 (2), 258–268.
- Mayring, P. (2000). Qualitative content analysis. *Forum: Qualitative Social Research*, 1(2). Retrieved March 10, 2005, from <http://www.qualitative-research.net/fqs-texte/2-00/02-00mayring-e.htm>.
- Mazzolini, M., & Maddison, S. (2003). Sage, guide or ghost? The effect of Instructor Intervention on Student Participation in Online Discussion Forums. *Computers & Education*, 40(3), 237 - 253.
- Mokoena, S. (2013). Engagement with and Participation in Online Discussion Forum. TOJET: The Turkish Online Journal of Educational Technology – April 2013, volume 12 Issue 2
- Moore, M. G. (1989). Editorial: three types of interaction. *The American Journal of Distance Education*, 3(2), 1-6.

- Moore, M.G. (1990). Background and overview of contemporary American distance education. In M. Moore (Ed.), *Contemporary Issues in American Distance Education* New York: Pergamon.
- Ozer. O, Constructivism in Piaget and Vygotsky, *The Fountain Magazine*, issue 48, October-December 2004,
- Peters, K. M. (2000, August 29). Concrete steps for on-line discussion. *Online Teaching and Learning Newsletter*. Retrieved on March 8, 2005, from:  
[http://booboo.webct.com/otln/Asynchronous\\_Strategies.htm](http://booboo.webct.com/otln/Asynchronous_Strategies.htm).
- Piccoli, G., Ahmad, R., and Ives, B. "Web-based Virtual Learning Environments: A Research Framework and A Preliminary Assessment of Effectiveness in Basic IT Skills Training," *MIS Quarterly* (25:4), 2001, pp.401-426.(it's not a book).
- Qing Li. (2004). Knowledge Building Community: Keys for Using Online Forums Volume 48, Number 4.
- Robertson, H. P. (2002). *Interaction: What Is It, And How Can I Include It In Online Instruction?* Retrieved December 4, 2004 from:  
[http://www.indiana.edu/~istdept/R685molenda/interactions\\_in\\_online\\_instruction.pdf](http://www.indiana.edu/~istdept/R685molenda/interactions_in_online_instruction.pdf).
- Rose, E. (1999). Deconstructing interactivity in educational computing. *Educational Technology*, 39(1), 43-49.
- Salmon, G. (2002). *E-Tivities: The Key to Online Teaching, Training, and Learning*, London: Kogan-Page.
- Sanchez-Sweatman O.H. 2001. using problem-based learning in distance education. In E. Ride out (ed), *Transforming nursing education through problem based learning* (pp. 311-324), sudbury, MA: Jones and Bartlett Publishers.
- Santosa IP, Yeo GK, Lin J. 2005.Understanding Students' Online Forum Usage *Frontiers in Artificial Intelligence and Applications*; Vol. 133 Proceeding of the 2005 conference on

Towards Sustainable and Scalable Educational Innovations Informed by the Learning Sciences: Sharing Good Practices of Research, Experimentation and Innovation.

- Sims R. (2000). An interactive conundrum: Constructs of interactivity and learning theory. *Australian Journal of Educational Technology*, 16(1), 45-57.
- Soo, K. S. and Bonk, C.J. (1998). Interaction: what does it mean in online distance education? *Paper presented at the Ed-Media and Ed Telecom 98 Conference*, Freiburg, Germany
- Harstinski, S.(2008). Synchronous and Asynchronous e-learning,
- Sutton, L. (1999). *Vicarious interaction in computer-mediated communication: Comparative impact on student achievement and satisfaction*. Paper presented at the 16th Annual Arizona Educational Research Organization Conference, Flagstaff, Arizona.
- Sutton, L. (2000). *Vicarious interaction: a learning theory for computer-mediated communications*. (ERIC Document Reproduction Service No. ED 442 817).
- Sutton, L. (2001). The principle of vicarious interaction in computer-mediated communications. *International Journal of Educational Telecommunications*, 7(3), 223-242.
- Stewart, I., Hong, E., & Strudler, N. (2004). Development and validation of an instrument for student evaluation of Web-based instruction. *American Journal of Distance Education*, 18, 131-150.
- Swan, K. (2002). Building learning communities in online courses: the importance of interaction. *Education, Communication and Information*, 23–49.
- The Virtual College logo is a UK registered trademark UK00002593539 of Virtual College Limited. All rights reserved virtual College 1995-2015 .
- Thorne. K. (2003). *Blended learning: How to Integrate Online Learning*. Great Britain and the United States: Kogan Page.

- Vrasidas, C., & McIssac, M.S. (1999). Factors influencing interaction in an online course. *American Journal of Distance Education*, 13(3), 22-36.
- Vygotsky, L.S. (1978) *Mind in Society*. Cambridge, MA: Harvard University Press.
- Wagner, E. D. (1994). In support of a functional definition of interaction. *The American Journal of Distance Education*, 8(2), 6-26.
- Wagner, E. D. (1997). Interactivity: From agents to outcomes. *New Directions for Teaching and Learning*, 71, 19-26.
- Watson. (2008). Developing Teaching Practice for more Effective Use of Asynchronous Discussion: A Preliminary Investigation.
- Wenger, E. (1998) *Communities of Practice: Learning, Meaning, and Identity*. Cambridge: Cambridge University Press.
- Willis, B. (2003). The benefits/costs of distance education: are the benefits worth the costs. *Educational Technology*, 43(6), 55-57.
- Zhang, D, J. Leon Zhao, Lina Zhou, and Jay F. Nunamaker Jr., "Can E-Learning Replace Classroom Learning?" *Communications of the ACM*, vol. 47, no. 5 (May 2004), pp. 75–79.
- Zoltán D. (2003). *Questionnaires in Second Language Research: Construction, Administration, and Processing*. Lawrence Erlbaum Associates, Publisher. Mahwah, New Jersey, London.

# *Appendices*

## ***Appendix 1 :Students' Questionnaire***

### ***The student's questionnaire:***

***Dear Student,***

This survey investigates the efficiency of our E-forum via students' interactions. Your answers are very important for the present study. Therefore, you are kindly asked to answer the following questions that would help gather authentic data about the Master forum's effectiveness, the factors influencing students' interaction as well as your own suggestions to increase students' interest in the forum. Your answers will be definitely anonymous and confidential, so please feel comfortable to provide sincere responses to the questions.

*Please use a cross (×) to indicate your chosen answer, and use your own statements where required.*

Thank you very much for your contribution.

#### **Section one:** student's profile

**Q1.** Degree:

**Q2.** Specialty:

#### **Section two:** Students' interactivity in the forum

**Q3:** How often per week do you access to the social networks (Facebook, Twitter, viber, whatsapp)?

☐ Everyday

☐ Several times a week

☐ Once a week

**Q4:** How often per a week do you access to the forum?

☐ Everyday

☐ Several times a week

☐ Once a week

**Q5:** Are you interested in interacting in the university master forum?

☐ Yes

☐ Little

☐ No

**Q6:** Do you perceive interaction as a significant element of online learning?

☐ Yes

☐ No.

Why?.....  
.....  
.....

**Q7:** What do you do when you access the e-forum?

- ☐ Read information from the teacher      ☐ Upload or download books  
☐ Ask questions      ☐ Comment messages

**Q8:** What is the role you perform in the forum?

- ☐ An observer      An average participant      ☐ An active participant

**Q9:** How often do you read the posting?

- ☐ Very often      ☐ Often      ☐ Rarely      ☐ Very rarely

**Q10:** How often do you post messages?

- ☐ Very often      ☐ Often      ☐ Rarely      ☐ Very rarely

### **Section three: Students' evaluation (perception) of the forum**

**Q11:** How do you find the master forum?

- ☐ Very useful      ☐ Useful      ☐ Useless

**Q12:** How satisfied are you with E-forum?

- ☐ Very satisfied      ☐ Satisfied      ☐ Unsatisfied

**Q13:** How does the forum platform help you in your learning process?

.....  
.....  
.....  
.....

**Q14:** What are the positive aspects of the forum?

.....  
.....  
.....  
.....

**Q15:** According to you, what are its limitations?

.....

.....

.....

**Section four:** Factors influencing students' participation

**Q16:** What are the factors that prevent you to interact?

- ☐ Lack of the assessment from the instructor   ☐ Lack of confidence   ☐ Difficulty to access
- ☐ Dependence on teachers   ☐ Inability to use internet   ☐ Novelty
- ☐ Time constraint   ☐ Lack of interest   ☐ Other

**Q17:** What are the factors which motivate you to participate?

- ☐ Timid students' platform   ☐ Curiosity   ☐ Place for information sharing
- ☐ Frequent involvement of the instructor   ☐ Formative assessment   ☐ Other

**Q18:** To what extent does the instructor of the forum participate?

- ☐ Very often   ☐ Often   ☐ Rarely

**Q19:** How do you find the intervention of the instructor in the forum?

- ☐ Sufficient   ☐ Average   ☐ insufficient

**Q20:** How much do you agree with each of following statements?

	strongly agree	agree	disagree	strongly disagree
Your instructor provides you with attractive activities.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Your instructor provides you with feedback to each comment and activity.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**Section five:** students' suggestions for the improvement of the forum

**Q21:** Do you think that relating frequency of interaction to marks could motivate you to interact in the forum?

☐ Yes

☐ No

**Q22:** According to you, how could the forum be improved?

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**Q23:** Do you think that more varied activities in the forum will stimulate your participation?

☐ Yes

☐ No

Why?.....

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**Please use this section for any additional comments you would like to add**

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Thank you!

## ***Appendix 2 :Instuctors' Interview***

**Instructors' Interview:**

**Section one:** demographic information

**Q1.** When have you started using the e- Forum of the university?

**Section two:** Teachers' attitude towards the master forum

**Q2.** How often per week do you access to the forum?

**Q3.** How does the forum platform help you in your teaching?

**Q4.** How satisfied are you with the interaction of your learners?

**Q5.** How do you classify the level of students' participation in the forum?

**Q6.** According to you, what inhibits your students from taking part in the forum?

**Section three:** Instructors' role in the forum

**Q7.** What are the roles you perform?

**Q8.** Do you provide your learners with activities and tasks to stimulate their interaction?

**Q9.** How often do you provide a feedback to students' questions and discussions?

**Q10.** Do you assess students' participation in the forum?