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**Investigating the Implementation of ICT-based
Flipped classroom in the Algerian EFL context
during Covid-19:**

The Case of third year students and teachers at the English
Department of Bejaia University

A dissertation submitted in partial fulfillment of the requirements for a
Master's degree in Linguistics

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Abstract

The present research aims to examine the efficacy of ICT-based Flipped classroom as a strategic and a psychological alternative to support and motivate EFL students during Covid19. The participants of the study were third year students and teachers of the English department at Abderrahmane Mira university of Bejaia. Yet, an exploratory research was designed on the basis of a mixed method approach in addition to, the use of questionnaires and interviews for data collection. Therefore, an SPSS, Microsoft Excel software were used to descriptively and statistically convert and interpret the results, then present them in form of tables and diagrams. As a result, the research findings revealed that Google, Face book and Messenger are the most used ICT tools by EFL students. It also unveiled that FC's misapplication has engendered some notable psychological side effects on the EFL students. Accordingly, this study has set flipping EFL classroom as an inefficient way of instruction specifically with 3rd year EFL students of Bejaia.

Key words: ICT, Flipped classroom, EFL students, Covid-19.

Dedication

I dedicate this humble work to my source of strength and success

My family

To my beloved parents

To the candle of my life my lovely mother “Zoulikha” for her prayers that illuminated my way

To my precious father “Yahia” who encouraged me in all along my studies

Thank you for your unconditioned love and support

Words are not enough to express my love and gratitude

May God protect and bless both of you

To my oldest brother “Aghilasse”

My source of inspiration

To my sweetest little brother “Anis “

Who make me laugh even in the worse situation

To my little angel Lina

CELINA.

Dedication

With a great honor I dedicate this work to my beloved parents

To my father for his endless support,

To my dearest mother for her positive affections

To everyone was by my side all along my educational journey.

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List of abbreviations and Acronyms

CDC: Center for Disease Control and prevention

Covid19: COVID 19: CO: corona, V: virus, D: Disease, 19: year of 2019

EFL: English as a Foreign Language

E-Learning: Electronic Learning

FC: Flipped classroom

FTC: Flipping The Classroom

FCM: Flipped classroom Model

GNU: General public Licence (Moodle software licence)

IDC: International Classification of Disease

ICT: Information Communication Technologies

ICI: Information Communication Infrastructure

IT: Information Technologies

LMS/ CMS: Learning/ Course Management System

M-learning: mobile learning

SARS: Severe Acute Respiratory Syndrome

SNSs: Social Networking Systems

SPSS: Statistical Package for the Social Sciences

W H O: World Health Organization

Background of the study

General Introduction

The sanitary crisis experienced during the last couple of years due to the Coronavirus epidemic has led to significant changes in the operation of a number of sectors, most notably the educational infrastructure. All the educational institutions around the world and Algeria of no exception have witnessed a sudden transition from conventional instruction to distance learning. This is why the ministry of higher education has established the wave system (it is a system in which learners are divided to two waves and study in classes only three days a week by turn. The first wave studies the first three days of the week and the second one learn in the last three days) as an option to deal with the occurring circumstances. Henceforth, the integration of Information Communication Technology (ICT, henceforth) was considered to be a supporting initiative to keep contact, interaction and exchange learning contents between instructors and students. On this purpose, the concerned authorities have constructed several digital pedagogical platforms such as e-learning. In their turn, both learners and educators have deployed new electronic teaching and learning techniques to strengthen online interaction. For instance, E-mail, Facebook, Messenger and whats' app (Asynchronous delivery) in addition to video-conferencing tools like zoom and Moodle for live sessions (Synchronous delivery). Subsequently, Flipped classroom Model (FCM, henceforth) has emerged as an innovative approach, after the quarantine, which reverses the role of homework and classroom activities. Within this strategy, learners acquire knowledge at home; for instance via receiving learning materials through learning platforms, watching videos created by the teacher and putting into practice the skills in class under the guidance and the directions of the teacher.

1. Purpose of the study

For the sake of enhancing the pedagogical processes during the pandemic disease, the ministry of higher education opted for virtual/ remote learning using ICTs. In turn, instructors, to achieve the same goal, have adopted Flipped classroom instruction as an alternative to continue teaching and learning processes as well as to support and motivate students' learning (Xiu and Thompson, 2020). Therefore, the research problem lies in the effectiveness of the Flipped classroom strategy on Bejaia EFL learners and their involvements within this mode, since many inquiries have been raised after the quarantine period.

2. Research Questions

The present research attempts to answer the following questions:

- 1- What were the mostly used ICT tools during Covid 19 pandemic?
- 2- To which extent was the implementation of the flipped learning at Abderrahmane Mira, University of Bejaia successful?
- 3- What are the Psychological effects of Flipped classroom instruction on EFL students at the University of Bejaia?
- 4- How students and teachers do perceive the Flipped classroom strategy?

3. Hypotheses

Accordingly, the present study yielded the following hypotheses:

- 1- The most used ICT tool during Covid19 pandemic is flipped strategy.
- 2- ICT-based Flipped classroom Model is an effective strategy that supports the learning of EFL students of Bejaia.
- 3- FC is an efficient psychological alternative that motivates EFL learners.
- 4- Both students and teachers regard FC instruction as a positive strategy.

4. Aims of the study

The present work sheds light on the situation of teaching and learning in Higher education after the quarantine period. Namely, the real procedures applied by the university community as a substitution to the traditional instruction (the face to face interaction), in order to ensure the continuity of the educational process. The main goal of the research is to investigate the efficacy of integrating ICT-based techniques as well as implementing Flipped classroom into EFL context. Besides, it intends to reveal students' and instructors' opinions regarding the adoption of Flipped classroom Model in Higher Education. Additionally, it explores the psychological effects of this method.

5. Methods and Procedures of Data Collection

In the current study, an exploratory descriptive research design was adopted to gather the required data about the subject matter. It examined the implementation of ICT based Flipped classrooms during Covid-19 as a strategic and psychological alternative to motivate and support the EFL students. The research used on both qualitative and quantitative methods to collect and process data. The results obtained from the questionnaires and interviews were converted to descriptive and statistical data using the SPSS software.

6. Sample and Population

The participants of the present study were teachers and students of Abderrahmane Mira University of Bejaia (Algeria). The subjects were enrolled third year students during the academic year: 2021/2022 and their teachers. Thoroughly, the sample consists of 16 teachers and 52 students from the English language department.

7. Significance of the study

The principal interest of this study involves the viability of flipped learning in Bejaia University. Besides, it explores the effectiveness integrating of ICT-based Flipped classroom into the EFL context during the Coronavirus. It also studies the psychological impacts of this Model on learners. Moreover, it highlights the efficacy of incorporating ICTs in Flipped classroom instruction. Moreover, the research findings attempted to contribute in promoting online learning, Flipped classroom in particular.

8. Structure of the thesis

The present thesis contains two chapters. The first chapter is divided into two sections which are devoted to the literature review. The first part in general covers the teaching and learning under the sanitary crisis within the Algerian context and Bejaia University in particular. It also involves the teachers' and students' insights regarding the rapid shift to virtual education. While the second part focuses on the integration of ICTs and the implementation of Flipped classroom in higher education as a reinforced tool and a motivational strategy. It includes definitions of the research variables (ICTs and Flipped classroom) and the mostly used ICT techniques during the pandemic. Furthermore, it provides details on the integration of FC within the EFL context. And finally, it discusses the role of both instructors and students within the implementation of FC strategy. On the other side, the second chapter treats the research design and the methodology used. This part comprises two sections, in which the first one aims to describe the diverse methods, procedures and instruments used in the collection of input. While, the second section deals with data analysis, interpretation and discussion.

Chapter one

Theoretical Framework

Chapter 1: The Theoretical Framework

I. Introduction

The following chapter underpins the three main research variables: Covid 19, ICT and Flipped classroom. It is split into two sections. The first section is entitled “Teaching and learning under the sanitary crisis”. It gives a brief overview on the state of the teaching and learning processes during the Covid-19 pandemic. It includes a concise scientific description of the Corona virus disease and its impacts on the higher education teaching and learning processes in the Algerian context in general as well as in Bejaia University on a specific scale. Furthermore, the second section under the title “The implementation of ICT and the integration of the Flipped classroom in Higher Education as reinforcement tools and Motivational strategies.” It is devoted to define what is meant by ICTs and Flipped classroom as well. Then, it focuses on putting under scrutiny the main ICTs-based techniques implemented in online learning and how the Flipped classroom had been integrated in Higher Education particularly the EFL context to reinforce and motivate students, to cope with the situation caused by the pandemic.

Section one

Teaching and Learning under the Sanitary Crises (Covid-19)

1.1. What is Covid-19?

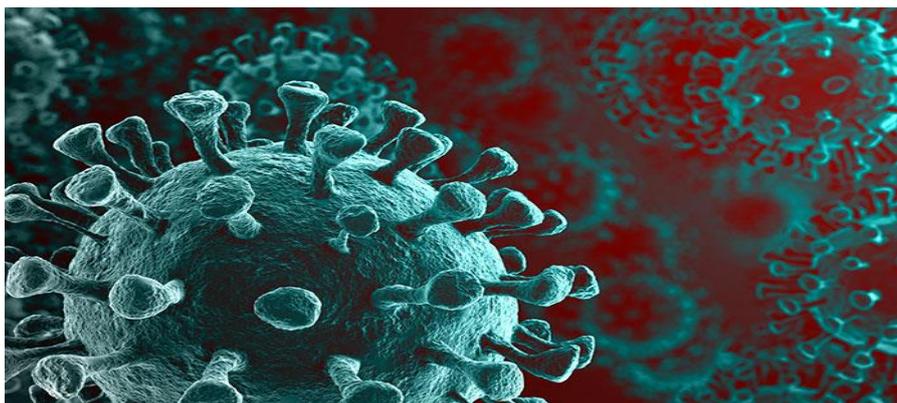
"Covid-19", as a term, was given by the World Health Organization in the International classification of diseases (IDC, henceforth) on February 11th, 2020, to symbolize the "SARS cov-2". (Vergnaud, 2020). However, this term is used as an acronym to signify the

Corona Virus Disease which was first emerged in Wuhan city, China, on December 2019. This latter came from a Zoonotic origin (Maciej et al, 2020; WHO, 2020). Besides, Covid-19 is used to imply the SARS-COV-2, which stands for the Severe Acute Respiratory Syndrome (SARS) caused by the Corona virus, followed by number two “2” to allude the second outbreak of the SARS-cov after the SARS-COV-1 occurred in 2003. (Hopkins, 2022).

“Corona” as a term, is of a Latin origin which means "crown". This name was given referring to the spikes on the surface of the virus which have the form of crown”. (Covid-19 Dictionary).

Image 1

3D rendering of the 2019-nCov Coronavirus under the microscope. (Adobe Stock/Creativeneko, 2020)



The center for Disease Control and Prevention (CDC, henceforth) has reported a list of symptoms that will appear on an infected person in 2 to 14 days after catching the virus. The symptoms range from mild to severe illness such as: fever or shills, cough, shortness or difficulty to stand up, muscle or body aches, headaches, new loss of taste or smell, sore throat,

congestion, diarrhea and nausea. As it was stated, the risk of the disease depends on the person's health conditions (CDC, 2022, March 22

<https://www.cdc.gov/coronavirus/2019-ncov/symptoms-testing/symptoms.html>).

The novel SARS-cov-2 is mainly transmitted by micro-droplets generated in the air way of an infected person and ejected during cough, sneeze and ordinary talks (Jaguszewski, 2020).

1.2. The Impact of Covid-19 on the Higher Education Teaching and Learning Processes

1.2.1. In the Algerian Context

From the onset of Corona virus outbreaks, Algeria has witnessed a colossal of a multilateral research works concerning the influence of Covid-19 pandemic on many spheres of human lives; social relationships, economy, business, trade and mainly education. A plethora of studies had put under scrutiny the impact of Covid-19 on Education in general and on Educators and Learners in particular. As an illustration, Chelghoum and Chelghoum (2020) have conducted an exploratory research study on the Covid-19 pandemic and Education in Algeria. Their study uncovered the main obstacles encountered by teachers within the online education, mainly internet accessibility, students' engagement and motivation. The same results were determined by Lamraoui (2021) who added that Algerian teachers struggled due to lack of technical support and training. Likewise, Merine and Maldi (2021) explored the impact of Covid19 pandemic on the Algerian context. They came out with the same hindrances as the previous mentioned researchers. However, Merine and Maldi (2021) claimed that these obstacles led students to develop a feeling of anxiety and stress.

Henceforward, it can be said that because of the overspread of the Corona viral infections at the first time in Algeria with the implementation of the quarantine period, a preventive measure against the Covid-19 contamination has been settled down. The Algerian Universities had endured an urgent and unexpected transfer from the usual direct way of teaching and

learning processes like any other country in the world (Guemide and Maouche, 2020), relying on the Internet technology, and the creation E-learning platforms such as video conferencing tools for instance Moodle, Zoom applications, and so on. These previous mentioned tools enabled teachers'/ students' interaction as well as it assured the availability of courses, in addition to the continuity of the learning and the teaching processes. Besides, the research work of Maouche (2021) and Bashitialshaaer et al (2021) demonstrated that the teaching and learning processes during the quarantine period have witnessed a great change. The transition first was in term of methods, that is to say, from traditional learning to virtual learning as well as shifting from teacher centered-approach to learners' centeredness, in which students became relying more on their own efforts. As they become depending more on their own sources. Second, it was in term of time. As it was asserted by Urdan and Weggan (2000) "online Education takes the form of full courses with any time and any where access to content". In other words, the shift occurred from rigidity to flexibility; learning at any time and from any place (Maouche, 2020).

Many studies have been conducted to explore the effectiveness and the assessment of the E-learning based implemented strategy during the period of the pandemic in the Algerian universities; for instance the work of Guemide and Maouche (2020) in which they have assessed the online learning in the Algerian universities during Covid-19. Meanwhile, the implementation of the remote education did not have a wide embarrassment due to the numerous struggles that both teachers and learners faced during their performances (Guemide and Maouche, 2020). Mainly, the students' demotivation and rejection of the distance learning engendered through the difficulties they face when they feel overwhelmed in front of so much theoretical information without explanatory guidance plus, the lack of Internet speed and the bad network quality, besides, the teachers' and students' unfamiliarity or the lack of training in the use of ICT based tools and techniques. Thus, both instructors' and learners' were not

ready for totally engaging in the online learning via electronic systems (Guemide and Maouche, 2020). The same previous findings were obtained by Bashitialshaaer et al (2021) in their exploratory study regarding to the obstacles faced to achieve quality in distance learning during the Covid-19 Pandemic.

Therefore, after the curfew regarding the aforementioned obstacles encountered by the university professors and learners, the adoption of the flipped pedagogy seemed the key solution to the post Covid-19 exceptional teaching and learning conditions at the Algerian universities (Bouguebs, 2021). Even Flipped classroom may seem to be an educational methodology that is incompatible with virtual teaching during the social distancing as, at the very least, it requires a semi-presential learning (Collado-Valero et al, 2021). This implies the combination of face to face classroom learning with online learning, where students start receiving instructions at home via E-learning tools. That is to say that the Algerian Higher Education is likely to have two forms: pure online format where teaching and learning activities take place outside the classrooms and a traditional face-to-face format where teaching and learning interaction takes place inside the classes (Guessabi, 2020).

1.2.2. Bejaia University Context

The University of Bejaia is one of the Algerian universities that have certified a transition in its Educational system from traditional direct way of Education to online Education as a preventive measure against the virus contaminations. Therefore, based on the research study conducted by Souar (2021), Abderrahmane Mira University of Bejaia has integrated the MOODLE platform as an alternative to continue the academic year during the outbreak period. This platform remained used even after the lockdown period for the sake of improving the quality of both teaching and learning processes. In fact MOODLE was carried in all departments of the University as it has been launched since 2009 before the emergence of the

Covid-19 pandemic. But it is worthy to mention that the exploitation of this platform reached its highest peak since the spread of the Corona Virus, in term of use.

Furthermore, the E-learning platform is considered as a learning environment system. This means that it has created a virtual learning environment through which both teachers and students can be unified and gathered for the sake of interaction as well as to facilitate communication in distance. Therefore, the platform is for free access; on the one hand teachers can post lectures, design tasks, activities and assignments to evaluate their students. On the other hand, learners can receive and download the courses and do the assessments and other activities required by the teacher (homework, quizzes and so on).

Meanwhile, Souar (2021) has investigated the means EFL teachers' and students' use to continue the teaching and learning processes while using E-learning during the quarantine period. Her findings revealed that they mainly focused on the use MOODLE platform and relied on E-mails as a means to transmit and receive lectures and assignments, since students find it more secure and academic equipments. While, she argued that students rejected all the synchronous settings such as: Google meet and Zoom applications, because they were unfamiliar with these types of applications. However they relied on the social media networks such as Face book and YouTube which are considered as non formal and non academic tools.

1.3. Teachers' and Students' Attitude and Perceptions regarding the rapid shift to virtual Education (MOODLE E-learning platform)

Teachers and students are regarded as the most important members in the educational systems that have been affected by the sudden shift to virtual learning due to the overspread of Covid-19 plug. This part of the research focuses on the learners' and tutors' responses regarding the applied MOODLE E-learning platform during the pandemic period.

In the Algerian context, avalanches of research studies have been executed to reveal both teachers' and students' insights and attitudes towards the online Education. As a result, Guemide and Maouche (2020) stated that:

“Despite the fact that the Algerian Universities were obliged to rely on online education because of the health protocol and confinement policies , 89% of the students (population sample) agreed that it is not the right time to fully implement online teaching and learning in Higher Education context”.

According to them, “many obstacles still exist and need to be resolved such as: the lack of full infrastructure implementation, the problems of internet access and availability, lack of the mastery of educational technology and online Education”. Moreover, within the same study the majority of students believe that E-learning does not enhance their motivation as it lowers their learning productivity. Even more, some students confirmed that they perform worse through online learning than they do in face-to-face classrooms, due to the encountered barriers. Likewise, the same insights were unveiled in the research of Berbar (2020) which was conducted on the EFL teacher's perceptions and experiences with the MOODLE platform during the Covid19 pandemic, at Mouloud Mammeri University of Tizi-Ouzou. The teachers of the same university found that teaching through MOODLE is less appealing, mainly owing to the absence of interaction with students and lack of training.

In addition to the unavailability of the technological supports. Hence, they preferred face-to-face teaching than online instruction.

Furthermore,, Benadla and Hadji (2021) carried out a research at the University of Mouldy Taher, Saida in which they uncovered that both tutors and students were not well prepared for the abrupt shift to online teaching and learning processes despite the enormous efforts of the Algerian government. That is to say, the research results highlighted the teachers' incompetence for distance mediation and education to accomplish their tasks. While students claimed that the lack of interaction with their teachers had hurt their ability to assimilate and understand the subjects taught during the courses. Even, some learners had believed that online training may harm their performances due to the non assimilation in the procession of information. Thus According to Benadla and Hadji (2021), learners became very distracted and may lose focus and motivation. Therefore, the University of Mouldy Taher was not yet ready to integrate E-learning in the teaching and learning processes.

On the other side, the research study investigated by Bourim and Beztoute (2020) revealed a positive point of view, and affirmed that the majority of students expressed their agreement and preference towards the use of E-learning platform, claiming that "learning electronically can improve their course performances, as it is an innovative way that must be encouraged." Another study was executed at the University of Bejaia uncovered that the virtual teaching and learning have double facets (negative and positive). On the one hand, the results obtained from her research study showed that the integration of online Education is positive in terms of mediation and usefulness. On the other hand, it is negative since other students preferred the face-to-face learning form. As well as, they were not well prepared to be integrated in electronic learning.

Section two

The integration of ICT and the implementation of the Flipped classroom in Higher Education

2.1. What do ICTs mean

ICT is a symbolism which stands for Information and Communication Technology means or tools. It is considered as an umbrella term that consists of two words, the first is information or informatics technology and the second is communication technology. These two concepts can be defined as follows: “Informatics Technology is defined as the technical applications (artifacts) of informatics in society” (Anderson and Weert, 2002, p.13). The previous authors referred to informatics technology as software applications including resources of telecommunication and information system. Whereas the second one was described as the technical equipments and hardware used to manage information and facilitate communication, learning and teaching such as networks and computers (Bruckner, 2015).

Accordingly, Sarkar (2012) stated that:

“ICTs can be divided into two components: Information and Communication Infrastructure (ICI, henceforth) and Information Technology (IT, henceforth). The first one refers to physical telecommunications system and network, while the other refers to hardware and software of information collection, storage, processing and presentation” (pp.31- 32).

Therefore, ICT comprises all the forms of technology that are employed for the sake of improving students’ learning and enhancing teaching methods.

2.2. Main ICTs based techniques used in education

With the progress of the internet technology and the raise of social media users, social networks begin to over spread information and news (Eastman et al, 2006) as well as ICTs.

But within a short period of time, ICT became one of the basic pillars of modern society (Daniel, 2002), which have also affected the system of education including teaching, learning and research (Yusuf, 2005). At the beginning, it was used to support teaching and learning. However, the educational system has witnessed the emergence of corona virus which tipped the scales and led ICT to become an important instructional tool that unfolds the potential to improve learning and teaching of the 21th century (Khlaisang and Koraneekij, 2019). Yet, integrating ICTs into education has made it very challenging for both instructors and students, particularly in critical circumstances like the current epidemic (Nantwi and Boateng, 2020).

In March 2019, with the Covid outbreak all human being activities stopped in almost all the fields. The pandemic deadly disease had brought a massive change in the education sector in which all the educational institutions were closed, and this urged the government to immediately proceed and move from traditional school to remote learning options, thus ICT was the only initiative to ensure the continuity of learning and teaching processes during the lockdown. Specifically, the education system was obliged to create and improvise blended solutions that combine components from online and distance learning, transferring the entire activities to online learning. Students and teachers have used many tools in order to follow their studies using personal computers, Smartphones, and tablets to get access to their instructors' online resources such as lesson notes, and PowerPoint presentations (Butler et al, 2021).

E-learning stands for electronic learning, also called online, remote or virtual learning.

In its most basic form, online education refers to a wide range of disciplines and programs that employ online instruction and training via the Internet connection that aims at providing students with knowledge (Friedman, 2019). Khan and Vong (2014) described Internet as “an

interconnection pattern or system which refers to the relationship between networks or networks of many computers”. Distance learning focuses on internet-based lectures and courses that are done through websites and platforms or sent via applications. Shahababi and Uplane (2015) divided online learning (e-learning) into two modes; asynchronous and synchronous delivery. To deal with the confinement, many devices were used to ensure the continuity of pedagogical activities using two different approaches: asynchronous delivery which is ranged from: Mobile learning, digital platforms, and paper-based packages sent via e-mail or social networking Systems (SNSs, henceforth) while synchronous delivery uses video conferencing technologies through zoom, and Moodle.

2.2.1. Asynchronous / an indirect e-learning mode

Hrastinski (2008) described asynchronous delivery as an indirect form of learning which take place in delayed time and location through employing independent learning approaches without depending on one another, for instance emails, online discussions, video, articles and other platforms. Within this mode, the teacher posts materials on the platform for which students have access at a convenient time. He can also provide his learners with offline learning content such as activities on textbooks, book references, and tasks and send them via e-mail or other media.

a. M-Learning

Smart phones and tablets have been also used as learning and teaching media to reach the desired and needed information (Pedro et al, 2018). In other words, Mobile learning (M-learning, henceforth) was defined by Pedro et al (2018) as an educational process that depends on mobile devices, and achieved in different settings. Chee et Al (2017) added that mobile learning is based on students’ centeredness and mobility. A study was made by Naciri et Al (2020) during the corona virus revealed that M-learning is a viable alternative learning paradigm that can provide exciting learning opportunities to learners who are unable to attend

school due to the Covid 19 or any future pandemic disease. M-learning enables students to adopt their own learning pace and style since it can occur in any place and at any time not necessarily in schools (Camilleri and Camilleri, 2017). Therefore, M-learning is an important educational technology that should be deployed in schools to follow education, particularly after the sanitary crisis.

b. Digital platforms (E- Learning)

The local authorities related to education set up and established central websites and platforms to permit students and teachers to have access to the learning content during the lockdown through the E-learning platforms. Hong et al (2017) described E- learning as a tool that is utilized to deliver learning materials through technologies and internet. The majority of universities have their own platforms designed for their students, instructors and faculties (Moore et al, 2011). This platform enables teachers to post lessons, organize tutorials, deliver instructions, test students (quiz and online exams), and also to publish marks in addition to the opportunity of interactions. Jawad (2021) argues that e-learning fulfills many goals at the level of both individual and society, and also promotes teachers' experience regarding syllabuses and materials design. During the shutdown, educational equipments have been provided to assist schools and universities since they are meant to facilitate students' learning particularly (Subedi et al, 2020).

c. Social Networking System (SNS): E-mails /YouTube / Face book and Messenger /whatsApp

Soon after the start of the pandemic disease and its learning constraints, social networks have been adopted increasingly into teaching and learning processes by teachers as strategies to deliver learning materials to their students (George, 2020). Mulenga and Marban (2020) have noted that social media have evolved into a dynamic platform for disseminating education knowledge around the world after the emergence of corona virus. Besides, they have

considered this sanitary crisis as a rebirth of a new teaching and learning strategy. Henceforth, Ficher (2013) added that this method employs face book and whatsApp to generate educational resources for learners and also discussions and interaction among students. Similarly, Toquero (2020) affirms that the social media as a teaching approach can be very beneficial for schools; during and after Covid 19 pandemic.

E-mails or the electronic mails are considered as the most popular medium of communication nowadays. Therefore, this application can be utilized as a feedback and communication tool between students and instructors. According to George (2020), e-mails are used as an instrument of consultation and evaluation which involve the instructors providing learners with tutorial topics. During the lockdown, students have been required to answer questions and do tasks at home, then scan their works and send them by email to their lecturer for assessment and correction. The teacher emails learners back with feedback (George, 2020). Yu and Yu (2001) pointed that “empirical evidence supports the usefulness of e-mail as a promising device that promotes student cognitive growth pertaining to computer knowledge and skills”. Also Tao and Boulware (2002) argued that e-mail communications assist teachers by identifying the focus of instruction and benefiting from authentic situation to fit their learners’ needs.

YouTube is a video sharing website, through which users download, share and watch broadcasts on the internet to achieve learning goals (Lo, 2012). YouTube provides valid and unbiased materials (Rittberg et al, 2015). This medium is also considered to be a source of knowledge that represents an imminent part and furnish great opportunities and unlimited explanation for students when seeking for information. Additionally, Jena (2013) states that YouTube videos have great impacts on students’ academic achievements and affirmed the effectiveness of smart class more than the traditional one.

In the time of the pandemic, many public universities in different countries have employed YouTube or the universities public sites to post instructional audios and videos lectures for their students created by their professors, the case in Egypt, Kenya, Uganda, and Algeria as well as South Africa (Bozkurt et al., 2020). Some others have been learning by using Social Media like Face book, YouTube, WhatsApp, Telegram (Selvan, 2020); for instance in Zambia all these latter have been encouraged to be used by the instructors and students for the sake of extending the range of learning methods (Hapompwe et al., 2020).

Face book and Messenger are popular social networking applications that have proved their efficacy in facilitating educational activities through sharing learning content, interaction, collaboration and participation (Choi 2013; Thoms and Eryilmaz,2014). These applications have a big potential for both teaching and learning processes. Therefore, it incites interaction and collaboration among learners and instructors (Lonn and Teasley, 2009; Graham et al, 2007). Moreover, video lectures and notes can be shared via face book within groups or to individual's profile and also shared via messenger within discussions in the format of links (Kalelioglu , 2016). During the crisis, these networks have been used as an alternative option for distance learning. Anggaro and Rueangrong (2021) found out that through these online platforms, teachers are able to help students through monitoring them, and providing them with feedback. Therefore, various files can be stored and shared using Face book and messenger, create groups to chat, send voice recordings, text messages, make calls (audio and video) (Gangneux, 2020). Avila and Cabrera Junior's (2020) research findings showed that employing Face book as a learning platform helped learners to enhance and ameliorate their academic performance. They have affirmed that both students and institutions should be prudent in using Social Networking Systems (SNSs) in the teaching and learning process, mainly Face book.

Likewise, Anggoro and Rueangrong (2021) claimed that Face book can be used as both a learning management system (LMS) and a teleconferencing tool in the same vein as for whatsApp.

WhatsApp is one of the most useful applications which have provided an immediate access to education in developing countries (Venturino andHsu, 2022). Church and Oliveira (2013) have portrayed whatsApp as a Smartphone-based application that enables users to exchange messages, ideas and multi-media content instantly, easily and cheaply. They have also noted that this medium is simple, accessible and efficient compared to the other instruments that can assist teaching and learning. It has greatly impacted the lives of many young people. Cetinkaya (2017) was convinced that it would have the same influence on learners' education outcomes. Besides, many universities have adopted this network for the sake of enhancing the exchange of information and incite collaboration among students. It also enables regular interaction between instructors and learners (Khubyari, 2016). WhatsApp has been proved as a very useful tool for education. Through it students are capable of creating groups within the application itself in order to collaborate, perform tasks and projects and communicate between them at any time and from any place (Yeboah and Dominic, 2014). WhatsApp is the most employed technology during the corona virus in which a study shows that 2 billion people use it around the world (WhatsApp, n.d).

2.2.2. Synchronous/ direct electronic learning mode

Synchronous delivery is equivalent to a real time feeling and physical classroom experience that enables interaction between teacher and students with a simultaneous access and direct communication, for instance video conferencing tools (Hrastinski, 2008). That is to say, synchronous mode is an approach to learning with a direct interaction

between teacher and learners that occurs at the same time but in different places depending on online techniques.

A. Video-conferencing tools

Video-conferencing tools are strategies that have been more initiated during the pandemic crisis where a range of tools have been used for both academic and professional purposes and activities, such as research meetings, attend virtual conferences and engage pair or group debates (Mutter and Marescaux, 2010); for instance: zoom and Moodle. Using video conferencing is not new; it has been employed by university teachers during many years for communication. Many researchers have been interested in the use of such instruments, among them: Knipe and Lee, 2002; Anastasiades et al, 2010; Ghazal et al, 2015. The use of video and audio conferencing significantly expands the scope and ease of engagement among all participants, as well as information access.

a. Zoom

During this critical situation, Zoom was an opportunity for many private and governmental agencies and universities and also individuals to continue their activities and at the same time respecting the safe hygiene protocol. Zoom is a means of communication, a cloud platform that provides both video and audio parameters, employed in conferences, online lectures and meetings through which users collaborate and chat across Smart phones and personal computer. Due to these circumstances, Zoom becomes available in many higher education institutions for students, teachers and administration. Zoom can hold 100 participants in a meeting and enables instructors to create an appropriate, interactive learning environment as creating small collaborative group works, facilitating class discussions through chatting (The Verge, 23 April 2020 <https://www.theverge.com/2020/4/23/21232401>). Certain researchers have conducted studies focusing on the use of zoom in classroom such as Maul et al, 2018; Archibald et al,

2019. It has proved that the medium was often used by instructors. Through zoom, every teacher is able to deliver a direct online lecture which allows him/ her to interact with his/ her students via video and provide them with clear and comprehensible lessons contents (Muhtarom, 2021). Yet this device makes learning and teaching easier and effective. In addition to the ability of recording and sending the online lecture or the links to Google drive or Whats app to enable the participants who missed the online seminars, or those who want to revise. Dominic et al (2020) carried out a study in Ghana, in which they noted that certain universities in Ghana, for instance Winneba, have facilitated teaching and learning using Zoom and other platforms. Warren (2020) stated that zoom is daily used by 300 million participants between February to April.

b. Moodle

The concept “Moodle” stands for Modular Object-Oriented Dynamic Learning Environment, which is a software package that serves as a learning management system (LMS, henceforth) or course management system (CMS, henceforth) for teaching and learning, which is mainly ICT- based. It is an open source computer program that can be employed freely under the General public Licence (GNU License, henceforth) (Veytia Bucheli and Ortiz, 2017) and it is available for everybody. Moodle fits all the users’ needs and it is utilized for education. Almost public universities in Algeria have set up the Moodle learning systems to start online learning. Hence, to help students to connect, interact and keep contact with their lecturers during the lockdown (Bozkurt et. al 2020). Indeed, universities acted accordingly to the Ministry of Higher Education’s instruction (Guemide and Maouche, 2020). Furthermore, Moodle-based online learning was developed in IAIN Surakarta to raise the effectiveness of online learning management technologies. This application also supports the creation of interactive learning styles during Covid 19 pandemic (Makruf et al, 2022). Rabiman et al (2020) pointed out that through Moodle,

lecturer can create an appropriate learning environment; via this platform teacher can give students access to learning content, and assess his learners'. Also students can submit their assignment, carry on online quizzes and a variety of other virtual activities. To use this application, students and teachers have to create an account and log using the user name and the password. Through Moodle, the instructor can design diverse types of online activities (Quiz, homework, forum, etc.) either individually or in groups. Many studies were conducted about blended learning with Moodle among them Al-Ani (2013) who stated that the use of Moodle in blended learning has shown to be very effective and improves the quality of students' outcomes, as it can increase learners' motivation and interest in learning. Another research carried out by Martin-Blas and Serano Fernandez (2008) affirmed that students' perceptions of this initiative have changed into a very positive one. This application has reinforced students' abilities and knowledge. Since on Moodle, tutor can share information through diverse types of tasks and projects by giving them instructions.

As social networking systems (SNS, henceforth) or social media, Moodle provides both teacher and learners the opportunity to interact with each other through which the instructor can guide and able them to check the deadline for the homework and projects, quizzes and so on.(Cole, 2005 as cited in Suppasetsee and Dennis, 2010, p.33). Moodle not only increases students' autonomy but it also gives them control over their learning as well as the ability to choose whatever activities and groups they want to participate in. Moreover, students can work not only with course materials but also have access to any web resource (Bouguebs, 2021). Technological progress has pushed the boundaries of learning and teaching activities, and has reduced time constraints in traditional classroom and created new course delivery options. One of these is flipped or inverted classroom (Lee and Park, 2018).

2.3. The implementation of the Flipped classroom in higher education as reinforcement tools and motivational strategies

2.3.1. Flipped classroom strategy

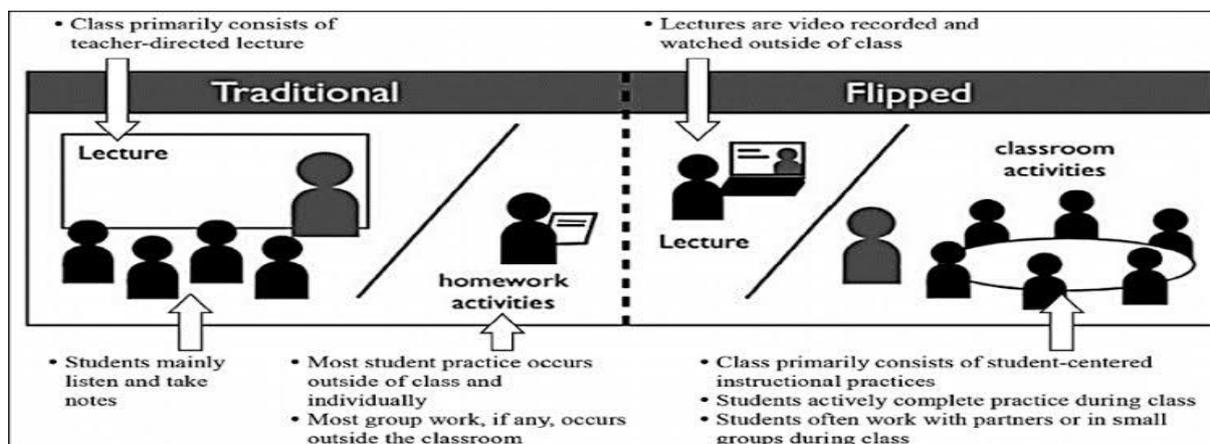
Flipped classroom (FC, henceforth) or flipping the classroom (FTC, henceforth) also called inverted classroom is an instructional strategy that was firstly used by Lage et Al (2000), then became known as an active teaching method thanks to Bergmann and Sams's (2012) study in which they have defined it as an approach where the location of the pedagogical activities changes, traditional face to face instruction and homework are reversed (retrieved from Aburayash, 2021). That is to say, what was previously done in classroom is now done at home, and what was done at home is now done in class. Flipped classroom can be split into two learning environments (Yen, 2020). Accordingly, in the out of class learning, students have access to the course materials by watching instructional videos or reading texts. As for the in-class learning, learners are encouraged to deepen their comprehension and increase their knowledge and skills through applying the instructional material during class. In other words, a flipped instruction is a Model where traditional courses and assignments of a lesson are inverted; in which learning content is delivered outside the classroom and homework is transferred into the class (Du, Fu, and Wang, 2014). Inverted classroom is a special kind of blended learning (Strayer, 2012). It has been regarded as an active learning strategy that encourages higher level of thinking and active students' participation (Rodriguez et Al, 2019). Therefore, this methodology implies to employ blended methods, whereby online resources, like videos, recorded lectures or texts are used to transmit information, and the aim of face-to-face classes is to consolidate the acquired knowledge through interactive exercises, for instance problem solving, role-playing games, discussions, debates, and collaborative work in group or pair (Rodriguez et Al, 2019; Khanova et al, 2015). Several research studies have focused the advantages

and impacts of FC Model on learners. One of which was conducted by Hana Khakaa (2016) who showed that the application of the FC has numerous benefits on students, the most important ones are promoting autonomy and self-learning, developing social networking skills like creativity and critical thinking, through the cooperative learning in the classroom and increasing students' level of motivation to learning (retrieved from Aburayash, 2021). Similarly, Davis et al (2013) stated that learners are able to learn through simulations and that they are motivated to learn independently and use their own styles. MC Laughlin et al (2014) added that FC approach will promote students' motivation in further learning. Another study undertaken by MC Givney-Burelle and Xue (2013) revealed that FC is created to satisfy learners' needs for competence, autonomy and relatedness, hence to increase the amount of intrinsic motivation. Furthermore, FC enhances learners' motivation that leads to student engagement; through active participation and hard working (Zepke et al, 2009). Moreover, this methodology provides instructors with enough time to monitor students instead of lecturing them (Wallace, 2014).

Figure 2

A comparison of the traditional classroom and the Flipped classroom approaches

(Dove and Dove, 2015, p. 19)



2.4. The Integration of FC into an EFL Context

Teaching English becomes a priority around the world, even though the instructional methods employed to teach are not always fitting the learners' changing needs. This is what triggered researchers to investigate new innovative instructional strategies in order to reach learners learning satisfactions for instance flipped learning.

Flipped learning or Flipped classroom has attracted the attention of many researchers and English teachers; hence they integrated it into the EFL context in order to satisfy learners' needs and motivate them to actively engage in learning as well as to make them exceed and master English language skills (Johnson et al, 2014).

Many instructors have applied this modern technique on EFL learners in order to develop their language skills including speaking, reading, listening, writing and grammar (Sung, 2015). Among them, there is the study of Cheo and Seong (2016) that focuses on the prominence of flipped learning on English as a foreign language context. It has been applied in diverse EFL skills such as the speaking skill.

Two other studies have been carried out about pronunciation; Bin-Hady and Hazaea (2020) conducted an experimental research about Yemeni EFL students' achievements level and attitude towards flipped pronunciation classrooms. The previous researchers found that learners perceived positively the Flipped classroom. Meanwhile, it promoted their pronunciation level. Also, Zhang et al (2016) have previously worked on the effectiveness of flipped pronunciation classroom with the Chinese EFL students. This study emphasized on comparing students' final pronunciation grades between flipped and traditional class. The findings showed that students of flipped class outperformed than those of traditional class, this in addition to the students' and teachers' preference to the flipped learning strategy.

The precedent studies revealed the potential of utilizing flipped learning for enhancing EFL students' pronunciation. Besides, other studies have been done on the other skills. Certain scholars sought for grammar such as Singay (2020) who has investigated the Bhutanese students' behavior on the flipped grammar class. He has found out that learners have been acquiring grammar more efficiently and showed positive perceptions toward the flipped learning. Al-Naabi (2020) in his turn has studied the impact of flipped grammar class on EFL students of higher education of Oman; he has dealt particularly with tenses. The findings have indicated that inverted learning have positive effects on enhancing students' knowledge and usage of grammar. Other investigators, like Karimi and Hamzavi (2017), have dealt with the efficacy of flipped learning concerning reading comprehension skill on Iranian EFL learners. They have divided their sample into two groups controlled group (traditionally taught) and flipped group, the results have showed that flipped one performed better than the controlled one and have also got a positive attitude toward FC.

Sebbah (2019) has also attempted to examine the impact of FC on the Algerian 1st year EFL students' reading ability at Algiers 2 university. She tested the reading ability of two groups: "A" controlled and "B" experimental group (flipped). Both groups have had one reading lecture in a week. This experience has lasted for 12 weeks and consisted of online learning at home via Moodle through watching video lectures about reading strategies lessons. In class, the experimental group was asked to engage in group work to read and answer the reading comprehension questions and clarify ambiguous ideas. The aforementioned study findings have demonstrated that flipped learning had a significant influence on improving their reading capacity when comparing them to the controlled group that was taught via traditional methods, and it has indicated as well their good perception toward employing flipped learning.

Moreover, several researches have been conducted for instance Lee Su Ping et al (2020) who have investigated the Flipped classroom among EFL students of Malaysia dealing with the writing skill. The study findings have confirmed that novice EFL students had good perceptions regarding the promoted flipped writing experience and had also suggested that this Model supports learners writing skill due to different elements which are: the increased preparation, promoting engagement and interaction, the raise of active participation and motivation, instant feedback in addition to self-efficacy.

Listening skill too has been a subject study inquired alongside with Flipped classroom. The work of Ahmad (2016) has undersought listening comprehension in flipped class with a case study related to Egyptian EFL students. She has used a test to examine the difference between the participants' scores. And the results have confirmed the hypothesis that watching a video and listening attentively to native speakers has helped the students to answer the quiz easily and has made learners aware of the difficulty of native English which challenges them to work hard and enhance their listening.

Furthermore, the availability of non-verbal communication that consists of facial expression and gestures are very helpful in addition to the possibilities the technical features of the video can offer (pause, review, subtitles...). In this respect, this study may help to enhance the efficacy of using videos to improve listening proficiency; indeed a lot of investigators have reached the same results; for instance Kuo (2009) and Wagner (2010).

2.5. The four pillars of Flipped learning (F.L.I.P)

From an academic stand point of view, the Flipped Learning approach encompasses four main standards; Flexible environments, Learning culture, Intentional content and Professional educators (F.L.I.P). It is explained by the Flipped Learning Network (FLN) editors (Flipped Learning Network Hub, 2014) as follow:

2.5.1. Flexible Environment: within this step, teachers are required first to identify a setting for learning as well as to schedule a manageable timetable for the students' learning comprehension and assessment, in order to form a flexible atmosphere for learning acquisition.

2.5.2. Learning Culture: the target point of this phase is to involve students in the learning process. In order to complete this process, students are assumed to use various technologies and multimedia tools. These latter seek to widen learners knowledge at their own pace and space before coming to class. Consequently, learners get actively engaged and motivated in class. This leads learning to shift from teacher centeredness to learners-centeredness, but still under the guidance of their instructor.

2.5.3. Intentional content: in this part it is up to the educator to set the content that should be held in class and what can be independently acquired, taking into account the time management, students' levels, their prior knowledge and the subject matter.

2.5.4. Professional Educators: are well trained and experienced instructors in the use of FC method. They have to be time/content managers, class controllers and reflective at the same time. Indeed, they are considered the essential ingredient that enables learning to occur.

From what has been said, to help both teachers and learners get more engaged in the Flipped learning process, FLN leaders had directed them to incorporate the four pillars of flipped learning (F.L.I.P). (Flipped Learning Network Hub, 2014).

2.6. The Roles the learner and teacher throughout the FC strategy

2.6.1. The Learners' Role

Flipped classroom instruction emphasizes on both student centeredness and practice. This means that learners make use of the knowledge they have acquired at home and apply it during the lesson (Pluta et al, 2013). This paradigm aims at raising students' comprehension and engagement in the learning process via participation, interaction and problem solving (Prince, 2004), in addition to increasing collaboration, creativity, and independency (Zainuddin and Attran, 2015).

Inverted learning approach encourages students to take charge of their own learning by giving them self-access to courses (Trebbi, 2011). Hence, the students' role shifts from passive receivers of input to active constructors of knowledge. This transfer may be challenging and motivating for some learners as it can be difficult for others.

Moreover, students are required to explore the content of the lecture in depth by themselves out of class, then to be involved and participate in acquiring knowledge in class (Lockwood, 2014, as cited in Sakulprasertsri, 2017). Besides, in FC environment, learners will no more spend their time listening to long teacher's talk and explanation during the lesson. They will have plenty of time for solving problems either individually or collaboratively. Furthermore, dynamic learners modulate their learning to explore and critically analyze their teaching/ learning content (Goodwin, 2013).

2.6.2. The Teachers' Role

Indeed, the instructor too plays a prominent role in ensuring the effectiveness of this Model. He/ she moves from a distributor of knowledge to a guide and a facilitator (Basal, 2015) in order to monitor and motivate learners (Sams and Bergmann, 2012). Because the flipped learning delivers training outside the class time, instructors have more time to tutor

and work with students and actively act as mentors or advisors to support students and coach them inside the classroom. On the condition that educators must be competent in specific subject areas and elicit knowledge from each student. By adopting such method, teachers will pass the whole lecture time visiting students individually and providing each one of them with immediate feedback and comments as well as clarifying misconceptions that may have arisen due to their own study (Sakulprasertsri, 2017) rather than standing in front of the board explaining and providing inputs. Other crucial responsibilities and roles of the teacher are to select appropriate topics, authentic materials and creating videos and podcasts then, sending them to learners via the Internet before the lesson time, since these are the focus in FC instruction in addition to elaborating new assessment forms for learners to evoke and show their knowledge (Bergmann and Sams, 2012).

II. Conclusion

Throughout this part, it has been showed that it is possible to provide a theoretical background of our research variables. The research variables have been split into two sections. So in the first section, we have dealt with teaching and learning under the sanitary crisis in Algeria in particular at Bejaia University. In the second section, we have defined two main concepts “ICT” and “Flipped learning”. Hence, we have got an understanding about these two notions which are likely to undergo the processes of teaching and learning. Moreover, we examined the integration of Flipped classroom in Higher Education, particularly in EFL context. Henceforth, we revealed through the compilation of the different studies guided in this path that the FC is a pedagogical and innovative strategy to reinforce students’ learning and motivation. Then, we ended with a clear highlighting about the inversed roles of both teachers and students throughout the FC strategy. The second part is devoted to the undertaken methodology and design to gather data. It is meant to provide our readers with ample information about the corpus, the objectives and

descriptions of the research investigative tools and approaches. The findings are going to be fully analyzed, discussed and interpreted to answer the research questions and prove the validity of the hypotheses.

Chapter Two

Methodology, Results and Discussion

Chapter 02: Methodology, Results and Discussion

I. Introduction

After addressing the theoretical background of the research variables, researchers move to the practical part of this study. Hence, this chapter attempts to present the data gathered using interviews and questionnaires, followed by a comprehensive analysis and interpretation of the findings. This research explores the use of ICT-based Flipped classroom to encourage and motivate EFL students during covid19. More specifically, this research aims at determining the influence of the new trend on EFL learners. This chapter is divided into three sections. The first part describes the different techniques and the equipments used for data collection, which is labeled methodology and research design. Then we go over the results and data analysis. The last section deals with the discussion of our findings and outcomes interpretation.

Section one: Methodology and Research Design

1.1. Research Context

Robson (2002) defines exploratory research as “a means to discover what is happening and to seek a new insight” (retrieved from Damaskinidis, 2017). The present study is an exploratory research since it seeks to investigate the reinforced integration of the flipped classroom and the ICT tools as a strategic, psychological alternative to motivate and support EFL Students. In addition, that it sheds light on discovering both teachers' and learners' insights regarding the implementation of the FC strategy. From this understanding, in order to answer the previous research questions and to come out with convenient results, an interview is directed to the University teachers. In addition to other questionnaires addressed to the EFL students of the same University, to get a full view of the issue.

1.2. Sample and Population

As mentioned so far, the study is specifically determined for the EFL teachers and learners who have experienced the rapid transition from the direct face-to-face to the online then the blended teaching and learning, by the onset of Covid-19 pandemic. That is to say, the population of the actual research work concerns the English foreign language educators and learners who witnessed the shift, occurred on the educational system from the traditional teaching/ learning to the inverted one. On the other hand, as a sample of the research, the third year level students from English department at Bejaia University were chosen to be the research participants of the study. Thus, through the process of collecting data, 16 out of the 30 teachers, have been interviewed, and 52 among the 266 students (retrieved from E-learning, Bejaia platform, 2022) were asked to complete the questionnaires. As a matter of fact, the selection of the students was done randomly from different sections. Then, it has been clear from the data analysis that the participants age ranges from 20 to 23 years old.

1.3. Data Procedures

1.3.1. Instruments

For the purpose of yielding a reliable output for the research analysis conduction, a short formal interview is designed for teachers of English at the University. Also, questionnaires were prepared then administrated for learners to come out with the adequate required data from the previous mentioned participants. The researchers opted first for a web-based questionnaire created using Google forms and transmitted to students through messenger class groups. After a week, researchers did not get any responses, so they went on site and directly distributed them to participants. The administration and data collection took two days to get complete responses from the respondents. On the other side, the interview issued to instructors was constructed using Google forms and sent to them via e-mail on 16th April

2022. On 19th April, researchers went to the University; since teachers' schedules were full of charge they could not afford even 15 minutes of their time to do an oral interview; on this purpose the interviews had been printed. Moreover, SPSS digital software was used to statistically analyze and interpret the obtained data, which were later interpreted in a form of tables and graphs using Microsoft Excel to present the obtained results. However, both questionnaire and interview were designed for the sake of addressing the research questions. All the data obtained through the procedures were combined for the sake of explaining and strengthening the interpretations.

a. Description of the questionnaire

To begin with, the questionnaire is the most obvious and successful research instrument (Walliman, 2010), it is utilized in this study in order to gather and obtain both qualitative and quantitative information from the participants. Moreover, a questionnaire is an efficient means to get a reliable and valid data (Luagloobi Nalunga, 2013); it allows researchers to solicit data directly from the students. In addition to, the use of questionnaire allows researchers to prepare the questions and obtain the responses without having to speak with each participant individually. Finally, distributing questionnaires to a group of participants saves time, that is to say in a short period of time researchers may get a large amount of data (Dornei, 2003). The designed questionnaire (see Appendix A) comprises a small introduction which is addressed to the participants, accompanied with a background knowledge, it consists of definitions of the key words and some illustrations.

Therefore, the questionnaire is divided into four sections and it is structured as follows: the first one covers the personal information of the respondents. The second section deals with the ICTs role in teaching and learning during Covid 19. This part encompasses eight questions, a mix of close-ended (yes or no) questions and open-ended questions. These latter are employed to provide the population with a complete liberty to express their

perceptions regarding the matter. Besides, multiple choice questions were given to select more than one option as necessary. The third part handles the second variable which is the Flipped classroom instruction and perceptions; it is composed of 12 entries. In this section students were asked about their points of view regarding the Flipped classroom instruction. The first question is a close-ended question, pursued by two single choice questions that require ticking only one answer. Then, one multiple choice entry; followed by several single choice questions (7 questions). Finally, an open-ended question was demanded to freely express their opinions concerning the long term adoption of the FC Model. The last section is dedicated to additional ideas and suggestions related to any of the variables of the research. In this section, there is only one question which is an open-ended asking the respondents to suggest ideas and solutions to improve learning in FC Model. Some of the questions were designed by the researchers themselves in response to the study's circumstances, while others were adopted from earlier studies.

b. Description of the interview

Interview is considered as an efficient and appropriate instrument once qualitative knowledge is needed for queries that necessitate inquisitory to obtain data (Walliman, 2011). The interviews' major goal was to provide the researchers with an in-depth comprehension of the instructors' views toward the implementation of ICT-based Flipped Classroom Model within EFL context. All the interview questions were created after doing a detailed review of literature and piloting in the relevant domain. The structured interview contains a set of open-ended questions in a predetermined order created by the researchers. It contains two sections; the first part is concerned with some personal information. It consists of three single choice questions. While the second part is devoted to teachers' perceptions, experience and difficulties in integrating ICT and Flipped classroom trend into EFL teaching and learning at the time of the epidemic. This section includes a range of

queries associated to the subject under study. This part contains seven questions; a mix of closed and open-ended questions (see Appendix B).

4. Methods of data collection

According to the previous used research instruments, it might be said that a mixed method research design has been applied. For the sake of increasing the validity and reliability of the study two research tools have been employed to gather data, questionnaires aim at retrieving both qualitative and quantitative data as well as interviews which are specifically designed to obtain qualitative information concerning the investigation issue. Tashakkori and Teddlie (1998) described mixed method research as a genuine and viable research methodology that can stand alongside with time-honored designs like experiments, grounded theory, and so on. They added that when a study includes both qualitative and quantitative data, the findings might be more enriched in ways that a single form of data does not allow. As a matter of fact, through the research tools which have been used, participants were asked to provide both quantitative and qualitative details and arguments to express their views regarding the matter. Thus the study is based on a mixed method for collecting data.

II. Conclusion:

The precedent research part has been devoted for the description of the techniques and procedures based on during the data collection. It encompasses a brief reminder of the research context, a detailed description of the research participants, tools, and methods as well as the findings interpretation.

Section two: Results interpretation

The following section reports all the findings and the results of the research study which are presented and described in details. At this level, the collected data from the questionnaires are interpreted and summarized in sort of quantitative and qualitative descriptions through the use of frequencies and percentages. Furthermore, the instructors' interviews deal with qualitative data which are transcribed and analyzed carefully taking into consideration all the instructors' opinions. This part attempts to answer the research questions by converting the collected data into descriptive and statistical results in order to either validate or deny the hypotheses. Finally, all the interpreted and analyzed results are presented in a form of tables and graphs for a better understanding of the matter.

2.1- Analysis of the questionnaire results:

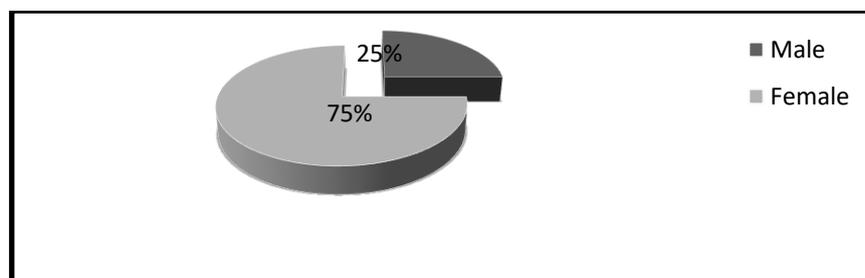
This section is devoted to the interpretation of the questionnaire results. It includes three parts.

2.1.1. Part 1 : Personal information.

a. Question 1 : Gender consideration

Figure 3

Learners' Gender



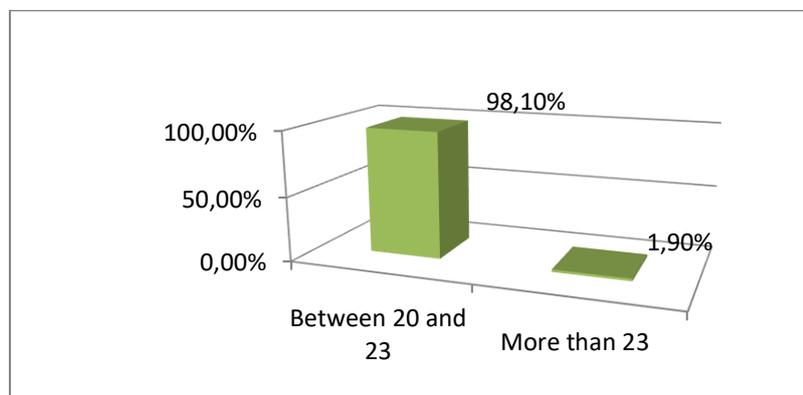
The above Figure demonstrates how many student males/females took part in our research conduction. The statistics says that 39 among the 52 students were females with the rate of (75%), whereas only 13 among them were males with the rate of (25%). The results are represented in the pie chart indicated that the number of female

questioned is more than that of male.

b. Question 2: Age considerations

Figure 4

Students' Age



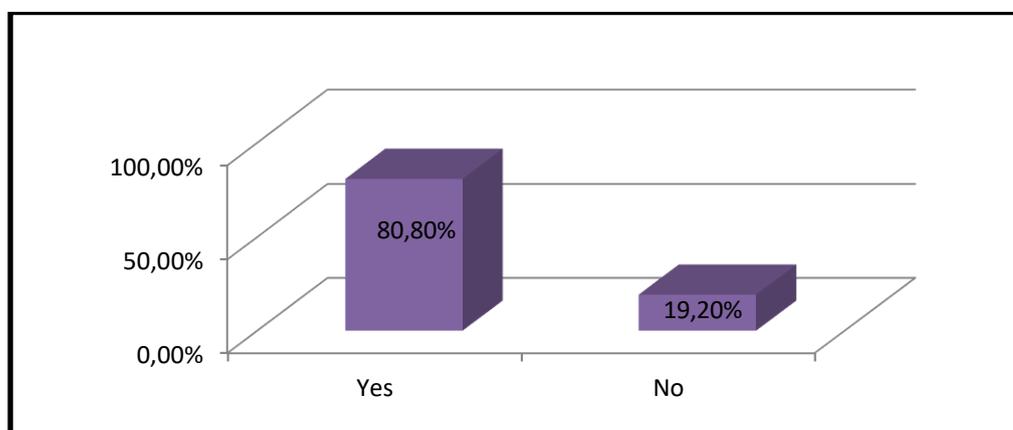
The previous Bar states the age range of the respondents; it clearly shows that 51 (98.1%) of them range between 20 and 23 years. And only one (1.9%) of them was more than 23 years old. Hence, according to Figure 2 the students have been studying English for 10 years.

2.1.2. Part 2: Questions about the topic of investigation.

a. Question 1: Have you ever used ICT tools to study with before Corona virus?

Figure 5

ICT use before quarantine period



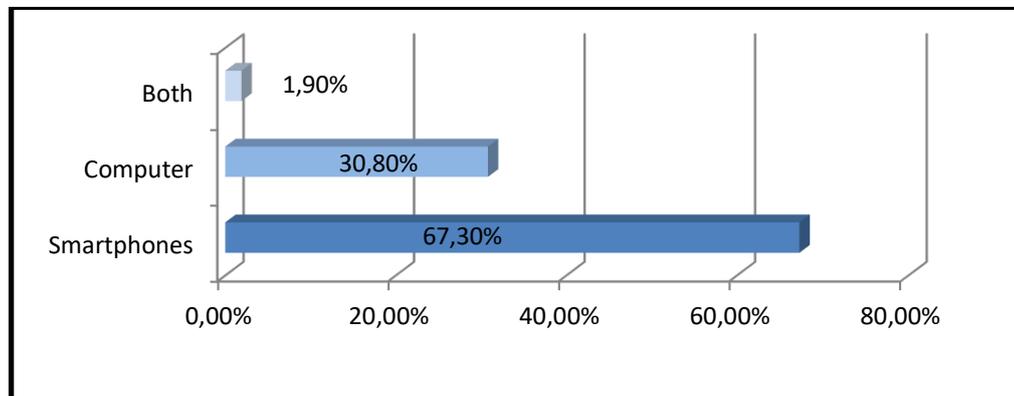
The Figure 5 displays the statistical analysis carried on; in order to rate the frequency, use of ICT tools for studies before the quarantine period. Thus, 42 of the

learners with the rate of 80.8 % said "yes", while 10 of them with the rate of 19.2 % said "No"

b. Question 02: Which technology you used the most during the Covid19?

Figure 6

Most used technology during Covid19

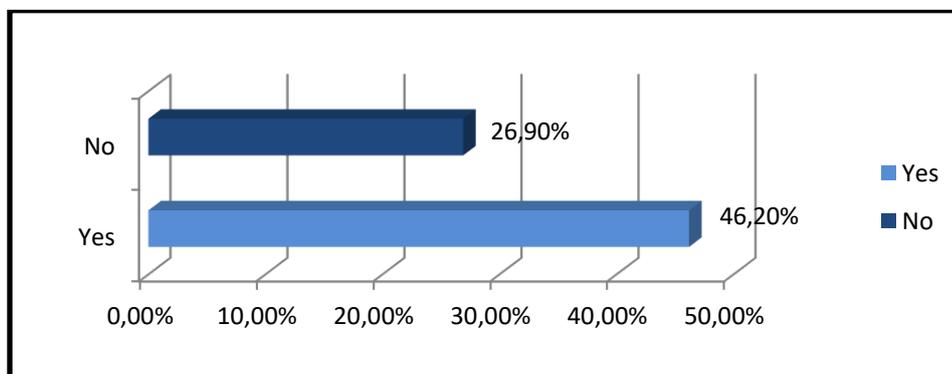


The above Figure analyzes the frequency use of technology by students, during the pandemic. Figure 6 reports that 35 (67.3%) of the participants used Smartphones for studies. While, 16 respondents (30.8%) chose computers and just one person who represents 1.9% of the sample employed both technologies.

c. Question 3: Do you manage to understand the learning content posted in E-learning Platform?

Figure 7

The clarity of posted lessons



As shown in Figure 7, 24 (46.2%) of the respondents comprehend the posted lectures in E-learning. However, 14 (26.9%) of them face difficulties and obstacles in

understanding the lessons published by the teachers. 14 (26.9%) of the participants did not respond to this question.

- d. **Question 4:** Do you use social media networks in your studies? if the answer is yes which application you mostly use?

Table 1: Social media use Frequencies.

Options	N	Percent
Facebook and Messenger	40	74,1%
WhatsApp	0	0%
Any other one	14	25,9%

Looking at the Table 1, it is assumed that the majority of the participants (74.1%) employed Face book and Messenger applications in their studies. 14 students (25.9%) used other applications for the same purpose and non among the respondents utilized WhatsApp.

- e. **Question 5:** Which technology do you use most to help you clarify and understand things?

Figure 8

Technology used in case of confusion

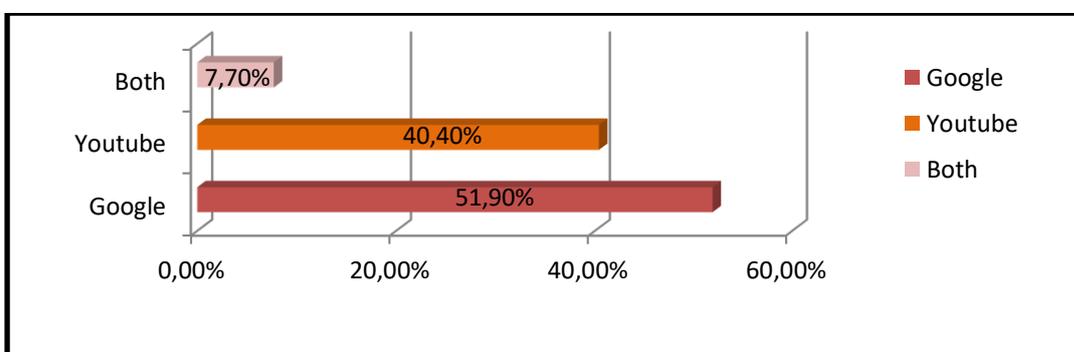


Figure 8 highlights the technologies utilized by learners to support their learning; it indicates that the largest part of the respondents constituting 51.9% (27) used Google to assist them during studies. 21 of the students (40.4%) preferred to watch videos on Youtube about the lessons. Concerning the rest of the respondents about 7.7% (4) used both technologies.

f. Question 6: Have you used tele-conferencing technologies during the pandemic crisis? If yes which one?

Table 2: Tele-conferencing technologies Frequencies

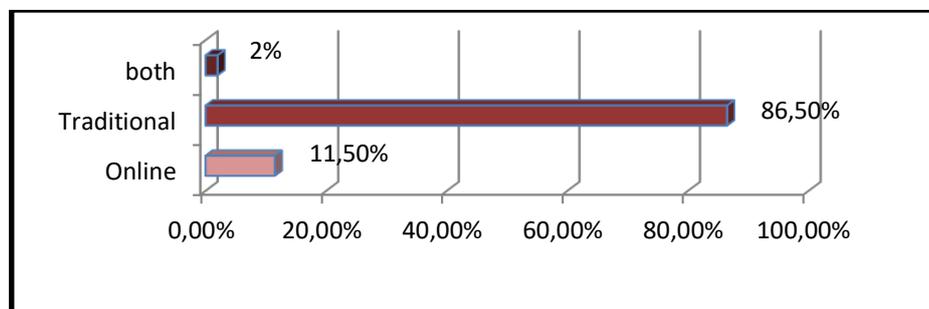
Options	N	Percent
Moodle	2	8,7%
Zoom	9	39,1%
Skype	8	34,8%
Microsoft team	4	17,4%
Total	23	100%

The results from the Table 2 revealed that only 23 respondents have used video-conferencing tools during the corona virus disease. From the analyses provided above, we notice that 9 (39.1%) of the participants used Zoom, while 8 (34.8%) of them employed Skype and 4 others (about 17.4%) utilized Microsoft Team and only 2 (8.7%) used Moodle.

g. Question 7: Which format do you prefer most: online learning or traditional face to face learning?

Figure 9

Flipped learning Vs Traditional learning



The above Bar uncovers which of the traditional learning/FC was preferred most. Hence, the results show that 7 of the students (11.5 %) preferred online learning, while 45 of them with the rate of (86.5%) favored the traditional learning. Then, one (2%) among them chose the use of both methods.

2.1.3. Part 3:

a. Question 1: Did your teacher implement FC strategy during the pandemic?

Table 3: The implementation of FC during Covid 19

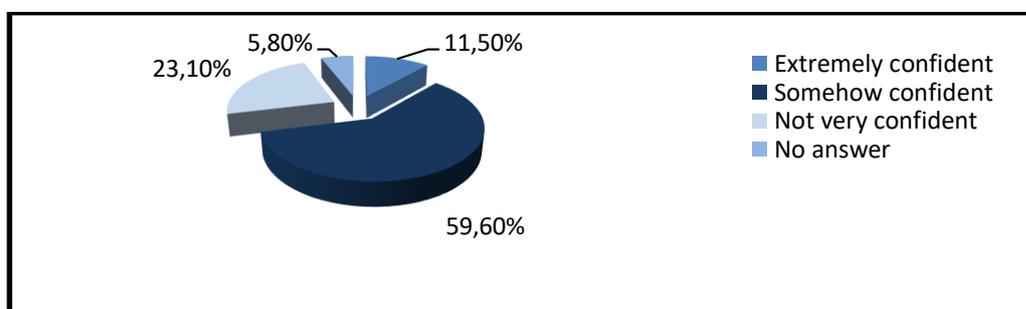
Options	Frequency	Percentage
yes	32	61,5%
no	19	36,5%
no answer	1	1,9%
Total	52	100%

As shown in Table 3, 32 (61.5%) among the students claimed that educators applied FC in their lessons. Whereas, 19 of them (36.5%) answered by “no”. Accordingly, FC instruction was applied due to the actual sanitary crisis, and this is why some respondents were not conscious of the real application of this strategy. One student did not respond to this question.

b. Question 2: How confident do you feel about the course content after reading it at home?

Figure 10

Out class learning content confidence



The previous pie-chart demonstrates how confident students are regarding the delivered online courses. Hence, 6 learners (11.1%) said they are “extremely confident”. (59.6%) which equals 31 students replied that they were “somehow confident”. While 12 others (23.1 %) said “not very confident”. Whereas the rest 5.8% which equals 3 participants did not answer the question.

- c. **Question 3:** How confident do you feel about the course content after reading it and putting into practice in class?

Figure 11

In class learning content confidence

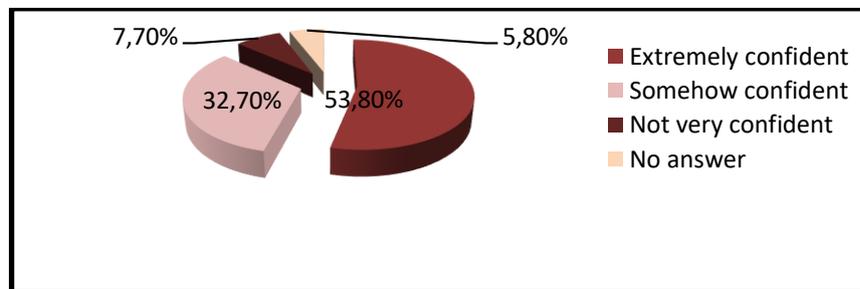


Figure 11 indicates how confident are students regarding the online posted courses after reading it at home and applying it in classes. Statistics says 28 students with the rate of 53.8 % were “extremely confident”, while 17 of them (32.7 %) were “somehow confident”. And 4 learners (7.7%) were “not very confident”. While, the rest 3 learners (5.8%) did not reply.

- d. **Question 4:** What do you think about FC strategy?

Figure 12

Students' Perception of FC Model

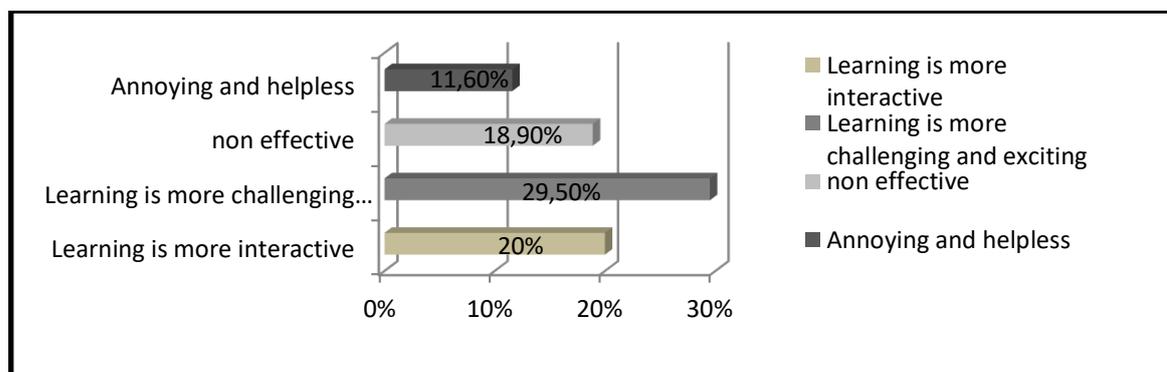


Figure 12 reveals the different opinions concerning the Flipped classroom strategy, in which 29.5% (28) among the subjects stated that within FC Model learning is more

challenging and exciting, and 19 of them (20%) argued that it is more interactive. While, it seemed very difficult to manage to 19 others (about 20%). In addition to the 11 students (11.6%) who find it annoying and helpless and also it was considered as a non-effective instruction by 18 (18.9) participants.

Question 05: Agree/ Disagree type of Questions

Table 4: Students' Perceptions of FC instruction

variables	Totally agree		Agree		Disagree		Totally disagree	
	N	%	N	%	N	%	N	%
1-FC motivates and encourages learners to practice	8	15,4	24	46,2	12	23,1	5	9,6
2- FC is more engaging than traditional teaching and learning	2	3,8	12	23,1	22	42,3	13	25
3- FC improves interaction and collaboration work	7	13,5	27	51,9	10	19,2	4	7,7
4- I have developed self-study and self-management skills via FC	7	13,5	23	44,2	18	35,6	0	0
5-I fully comprehend the course content via FC activities.	6	11,5	17	32,7	23	44,2	2	3,8
6- FC enhanced my level and grades.	3	5,8	22	42,3	19	36,5	4	7,7
7- Flipped classroom enhances interaction and lowers stress and the feeling of isolation experienced during lockdown period	6	11,5	27	51,9	15	28,8	0	0
Total							52	100%

On the basis of Quantitative results exposed in the precedent Table, it shows that:

Item (1) demonstrates the frequency levels of students' agreement regarding FC impact on learners learning. It shows that 8 (15.4%) of the subjects approved that FC motivates and encourages learners to practice. 24 (46.2%) of them totally agree. However, 12

(23.1%) of the respondents opposed to this statement and 5 (9.6%) have completely disapproved it. In addition to the 3 (5.8%) students who did not answer.

Item (2) reports that the majority of the respondents, 22 (42.3%) have refuted that FC instruction engages learners more than traditional one. 3 others (25%) shared the same view and totally disagreed. In contrast, 12 (23.1%) among the sample affirmed the statement. Similarly, the 2 (3.8%) remaining individuals totally admitted that FC involves students in learning more than traditional instruction. As noticed 3 (5.8%) of the subjects did not respond this entry.

Item (3) carries the statistics obtained through the analysis conducted to uncover the degree of FC enhancement for students' interaction in classes. Thus, the findings show that 7 students (13.5%) totally agreed with the idea; 27 (51.9%) others agreed, While, 10 others (19.2%) disagreed with the statement. 4 other ones (7.7%) totally disagreed. Then the 4 others (7.7%) did not answer.

Item (4) statistically uncovers the extent to which students have developed their self-study and management skills via FC activities. It reports that 7 students (13.5%) totally agreed. 23 others (44.2 %) agreed. whereas, the remaining 18 with the rate of 35.6% disagreed and 4 learners (7.7%) did not answer.

Item (5) shows the results that have been done to statistically analyze how students fully comprehend the course content via FC activities. As the findings show, 6 students (11.5%) totally agreed with the idea. 17 of them (32.7%) agreed, while 23 learners (44.2%) disagreed and 2 of them (3.8%) totally disagreed. The 4 remaining others did not answer.

Item (6) indicates that 42.3% equivalent to 22 learners support the saying: “Flipped classroom enhances students’ level and grade” and 3 learners (5.8%) totally agreed, whereas,

19 respondents (36.5%) disagreed and refuted the previous sentence. Also, 4 (7.7%) of the participants completely disapproved this notion, the 4 (7.7%) left participants did not respond.

Item (7): 27 of the respondents (51.9%) agree with the sentence that FC enhances interaction and lowers stress and the feeling of isolation experienced during the lockdown period. 6 (11.5%) of them have totally agreed as well. Contrary to the 15 subjects (28.8%) who disapproved the previous statement. 7.7% of the participants did not answer this question.

To sum up, the obtained results from Table 4 indicated that the respondents expressed agreement and disagreement regarding the influence of FC instruction on certain essential related elements; 46.2% of the students agreed on the concern that FC motivates and encourages learners to practice. 42.3% among them rejected the idea that FC is more engaging than traditional instruction. 51.9% of the respondents confirmed the fact that FC enhances collaboration, interaction and lowers stress and isolation caused by the lockdown period. Besides, most of them affirmed the points that FC has strengthened and developed students' autonomy and self-management competences and increased their level and grades as well. Furthermore, through experiencing this strategy, learners' developed positive and negative views regarding its efficiency.

2.2. Analysis of the Interviews Results:

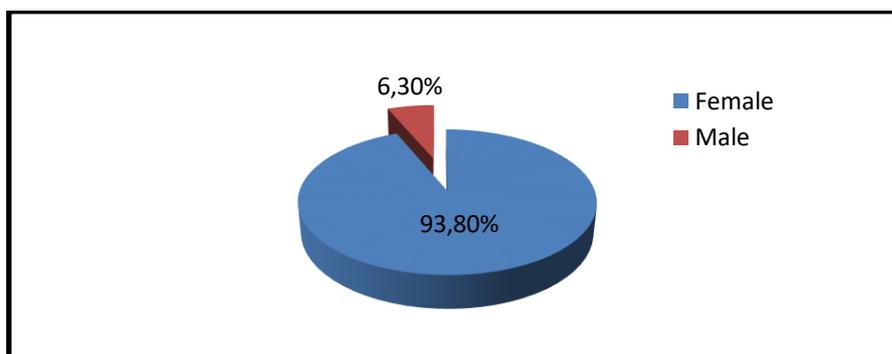
The following section is dedicated to the interpretation of the interview findings. It consists of two parts.

2.2.1. Part 1 : Personal information.

a. *Question 1:* Gender consideration

Figure 13

Teachers' Gender

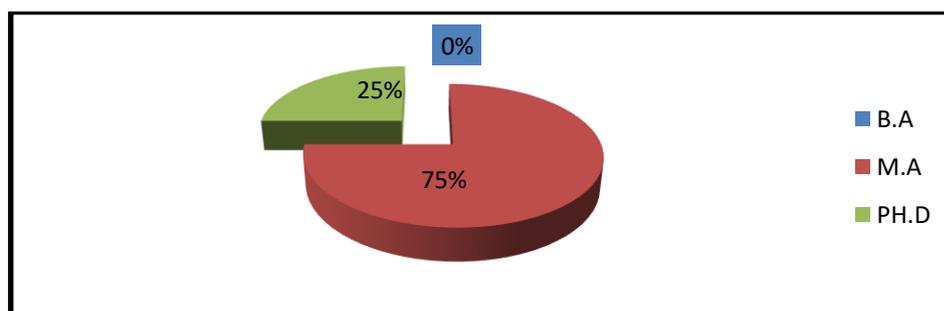


The results presented in Figure 13 demonstrate that 93.8% of the interviewed instructors are females. Whereas, 6.3% of the interviewed instructors are males. Accordingly, it is found that female's rate is larger than males at the English department of Bejaia University.

b. *Question 2:* The Degree hold

Figure 14

Degree of profession



After reading the results presented in Figure 14 above, it shows that 12 of the participants constituting 75% are holding M.A degree. They are part-time teachers. An M.A degree is one of the basic requirements of teaching in the Algerian universities. While, 4 (25%) of the interviewee possesses a PHD degree.

- c. **Question 3:** How many years of experience do you have in teaching English language?

Figure 15

Teachers' Experience

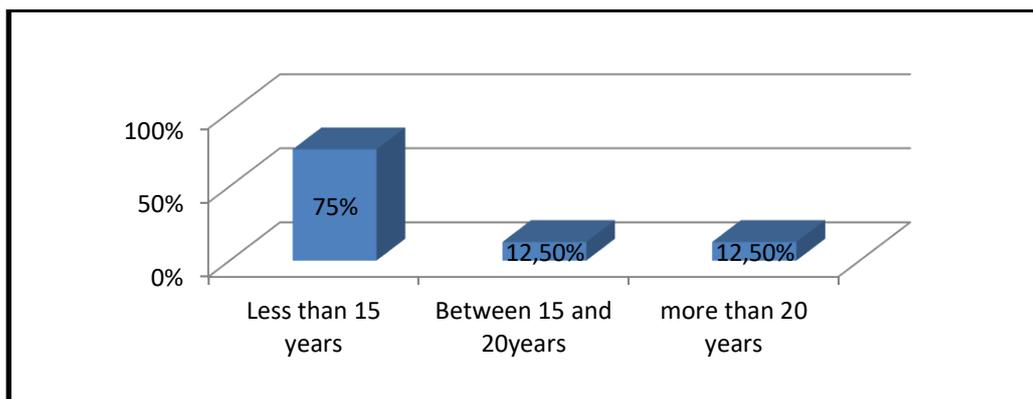


Figure 15 reveals that most of the respondents (75%) have less than 15 years of experience in teaching English at Bejaia University. Whereas, only 12.5 % have instructed English language for more than 20 years as long as 12.5 % of the interviewee have educated between 15 to 20 years.

2.2.2. Part 2: Entries about the topic under investigation.

- a. **Question 1:** Have you faced any difficulties in integrating ICTs techniques.

Table 5: Frequency difficulties faced by teachers in integrating ICTs

Options	Frequency	Percentage
Yes	13	81,3%
No	3	18,8%
Total	16	100%

Considering the statistics which has been illustrated in the Table 5, it can be said that the majority of Educators (81.3%) had announced that they faced struggles during their integration of the ICTs. While 18.8% just said "No".

- b. Question 2:** Have you applied flipped learning in your classes before the quarantine?

Table 6: Flipped instruction implementation before quarantine period.

Options	Frequency	Percentage
Yes	8	50%
No	8	50%
Total	16	100%

According to the previous Table, 50% of the interviewed instructors have applied Flipped learning before the quarantine period, as a supplementary method to support and enrich students' comprehension and skills. While the other half (50%) did not apply FC instruction before the lockdown.

- c. Question 3:** Do you think that FC instruction help your learners engage more actively to improve their learning skills?

Table 7: The effect of FC in improving students' learning skills

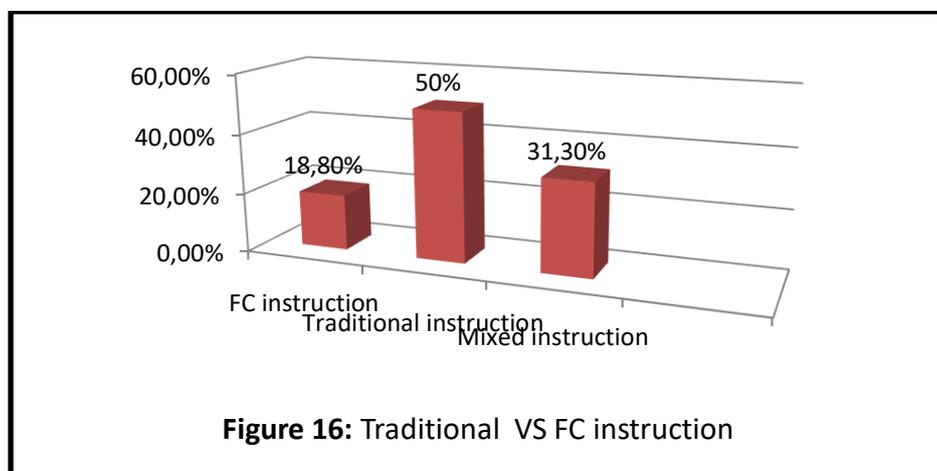
Options	Frequency	Percentage
yes	7	43,8%
No	9	56,3%
Total	16	100%

Table 7 shows that 56.3% of the interlocutors argued that FC does not improve students' learning skills, contrary to the rest of the respondents (43.8%) who affirmed FC effectiveness in enhancing learners' skills.

- d. **Question 4:** Which Instruction is more effective in your opinion: traditional instruction or FC Model?

Figure 16

Traditional instruction Vs FC instruction



According to the statistics stated in the Figure 16, it is clear that half of the teachers with the rate of 50% find that the traditional way of teaching is more effective than the inverted teaching. While, 31.3% of them preferred the use of mixed instructions (both traditional and FC Model). Whereas, the other 18.8 % consider FC as the more effective.

Section three: Discussion

The implementation of ICT-based Flipped classroom on EFL students at Bejaia University was the core of our research. Throughout this part, we tend to broadly discuss the major findings obtained from the questionnaires and interviews in order to achieve the research objectives which are considered as the road map of our exploratory research. In this section, researchers tend to respond to the research questions. In particular, the ones directed to examine educators' and learners' point of views regarding the adoption of ICTs techniques and flipped strategy as well as the effects it caused on students' psychological lives. In addition to the numerous intriguing recommendations to improve the FC Model.

1. Research Question 1: *what were the mostly used ICT tools during Covid-19 pandemic?*

Concerning the ICT use, it has been clear from the previous findings that EFL students of Abderrahmane Mira Bejaia University used to employ smartphones and to depend on social media more specifically on Facebook and Messenger as the main electronic means to communicate, transmit information and to exchange lessons content between them and their teachers, during Covid-19. As it has been proved, most of the learners relied on Zoom application to have a direct interaction with their instructors. Besides, most of them employed "Google" website to support their learning and get a clear comprehension of their courses. From all what has been analysed, EFL students prefer to depend on social media applications in their studies even though it is considered academically not formal, but they find it a more practical instrument as long as educators and learners are most of the time available. In the other part, most of the interviewed teachers utilized E-learning as the basic strategy to set and apply FC Model in teaching and learning after the lockdown.

2. Research Question 2: *What are the Psychological side effects of FC instruction on EFL learners at the University of Bejaia?*

In accordance with the obtained results, it has been proved that FC instruction has both positive and negative impact on the psychological lives of Bejaia EFL students. Yet, researchers depended on the questionnaire to elicit those major effects. As mentioned previously, flipped classroom is a learner-centered approach which signifies that it totally focuses on learners' autonomy. Within the students' responses, it has been noticed that most of them are dependent learners who consider the presence of the teacher with his explanations as a necessity to reach learning effectiveness. While the remaining minority, are independent students who completely rely on their own capacities and curiosity to acquire knowledge. Furthermore, through FC Model learners have developed self-reliance and self-management skills. Those cognitive skills enable them to be responsible of their own learning, so as to develop critical thinking and personalized learning. Also, it paves the way to the field of research.

Even more, this new trend has affected students' motivation. Some of the learners feel less motivated since they have difficulties to be adapted to the FC instruction due to significant factors; internal and external ones. On the one hand, internal factors consist of individuals own capacities, for instance the perception and acquisition levels. Those learners are not able to manage learning alone because they have difficulties to understand. Hence the teachers' feedback is basically needed. On the other hand, external factors including the limited accessibility to network connection and technical support. In other words, the absence of the necessary technologies influences the motivation and the performance of students. Despite all what have been said, this does not deny the fact that FC is a good instruction. As evidence, almost subjects claimed that FC is an interactive strategy that boosts their motivation level due to the challenges and excitement that they

are exposed to, in order to achieve learning goals and to exceed their constraints. In line with these results, Xiu and Thompson (2020) found out that motivation and performance increase during flipped learning.

In the same vein, it is worthy to mention that self-confidence turn to be an issue in this transition. Some of the research participants expressed uncertainty and low self-esteem before and after putting the acquired knowledge into practice. In contrast, most of the students felt extremely confident since they prepare the lecture at home before attending the classroom. Henceforth, they have the freedom to search and enhance their understanding. That is to say they are not limited to the posted lessons and the ability to use different learning styles and technologies that fit them. These findings are coherent with that of Zainuddin (2018), who argued that learners expressed strong confidence and competence when involving in class activities because of pre-preparation aspect.

The feelings of Isolation and anxiety are two other concerns that were influenced by the FC method. Considering the respondents' answers, the feelings of isolation and anxiety decreased, because FC mode affords learners time to prepare and read the learning materials and do research at home. Then attending the classroom to discuss, interact and collaborate with both the instructor and the classmates. Similar results were set up by Abdullah and Hussin (2021).

In turn, knowledge acquisition and retention has been also impacted by flipped approach. Certain learners claimed that their knowledge acquisition and retention have diminished, since learners acquire knowledge alone consequently, there is no direct interaction with the instructor. Whereas, in traditional learning students get immediate correction and feedback which facilitates the retention mechanism. The results also showed that the majority assumed that they acquired more information and take advantage of

flipped instruction. Moreover, this strategy enables students to control the learning speed, be self-organized and constantly access knowledge. Even more, the ability to control the acquisition process (pause or rewind). In line with these results, Newman et al (2016) discovered that learners took advantage of flipped approach and gained more knowledge which allows them to enhance engagement and performance levels and raise their persistence.

In all along the study, researchers have encountered contradictory points of views concerning the FC Model. When responding to the questionnaire students were haunted by the feeling of ambivalence. Specifically, in the last question which is concerned with the adoption of FC for a long term usage. This provokes a sense of confusion. This means that students, on one side, were attracted since it is an innovative strategy which allows them to develop diverse skills and competences. On the other side, they repulsed it due to its insufficiency in term of knowledge acquisition and productivity.

3. Research Question 3: *What are the students'/ teachers' perceptions regarding the FC strategy?*

The EFL students' expressed both positive and negative opinions regarding the obligation of integrating ICT tools during the Covid-19 Pandemic. On one hand, it was the only solution to ensure the continuity of teaching/learning processes, as well as to keep contact between educators and learners during the curfew period. As an evidence, one of the respondents said: *"It is very useful to include technologies in our studies since we discover new methods of studying and we will be open up to the world"*. Other one replied, *"It was a good way to protect ourselves from the disease and continue our studies"*. That is to say, learners perceived the integration of ICTs as a good initiative. On the other hand,

some of the participants had complained that it was boring, what makes them lazier and easily get distracted.

4. The teachers'/ learners' recommendations to improve the implementation of FC strategy

The findings collected from teachers' interview indicated that instructors showed a strong interest and desire to enhance and ameliorate FC instruction. As a matter of fact, the interview results unfold diverse suggestions on adjusting the FC Model. Since the majority of learners are not aware of the implementation of this strategy, on this purpose one of the interviewee had recommended: "*First to provide learners with appropriate guidance so as to make them know what they need to know or be able to do when they come to the classroom, and finally provide them with a formative assessment so as to help them to understand exactly what they need to know*". In other words, teacher has to introduce FC instruction to his learners, to explain it and make it clear then apply it so as to make them conscious and ready to experience Flipped learning; hence, create an appropriate evaluation to reach a better comprehension. Another teacher suggested: "*It is hard in our context, since there are many challenges that cannot be solved like internet access, controlling students and motivating them. There should be a real curricula created especially for Flipped classroom*". That is to say, educators and learners' have to be provided with the necessary materials that they need to apply FC instruction. Henceforth, curricular should be designed specifically to fit Flipped classroom strategy and to motivate students. Furthermore, both instructors and students suggested using FC instruction alongside with traditional method in order to fulfill the gaps of each strategy and satisfy learners' needs and ensure the efficiency of teaching and learning processes. One of the teachers stated: "*I believe that one should complement the other, so FC must complement conventional education in order to achieve learning effectiveness*". Accordingly, students allude "*It should be done in*

parallel with traditional learning”, another one replied: *“It (FC) should be balanced with traditional way of learning”*.

To conclude, considering the students’/teachers’ answers researchers came to result that the success of this alternative needs the cooperation of both educators and learners. They also believed that instructors have to design appropriate learning contents and activities, while students have to be actively engaged and do more efforts.

II. Conclusion

This last part of the chapter is specifically designed to discuss the data collected in the analyses; it is also constructed for the purpose of either validating or refuting the research Hypotheses. Therefore, considering all what has been tackled and proved in the discussion, it is worthy to say that the two first hypotheses saying “the most used ICT tool during the Covid19 pandemic is the flipped strategy” and “ICT-based Flipped Classroom Model is an effective strategy that support the learning of EFL students of Bejaia” are denied. In another hand, the third hypothesis “FC is an efficient psychological alternative that motivates EFL learners” is neither confirmed nor inferred since FC caused both positive and negative psychological side effects on the EFL students. The same regard concerns the forth hypothesis, since both educators and students expressed positive and negative insights regarding the FC learning approach.

General Conclusion

The present research has attempted to study the issues of Flipped classroom and the integration of information communication technologies during the Covid-19 period in Bejaia University. In fact, the idea of integrating the ICT means and the adoption of innovative approaches for educational purposes is a good alternative. However, the object matter in the adoption of this strategy is the consideration of FC's essence pillars. Therefore, the targets of this research work concerns the exploration on the viability and the effectiveness of FC on EFL Bejaia university learners during the Covid-19 period. It also uncovers the students' perceptions regarding the use of ICTs for learning processes.

Hence, the whole work contains two chapters. The first one is split into two sections which are dedicated to review all what has been carried in relation to the research variables. While, the second chapter encompasses two sections, in which the first one is designed to present and make clear the diverse methods, procedures and tools which have been depended on for the collection of input. As explained before, the study is an exploratory research, through which researchers relied on both qualitative and quantitative methods and tools throughout their data collection. Yet, the last section concerns the results interpretation and discussion. Within this part the gathered data had been analysed then depicted in form of graphs and tables, and the discussion is constructed to present the final findings of the study.

As a reached conclusion, researchers ended up with some unexpected outcomes. First, asynchronous applications (Google, Face book and Messenger) were the most used ICT means during the pandemic phase. Second, the implementation of FC by the EFL teachers/learners has failed in its first attempt for application. Since, it was never adopted before. It is considered as a new approach to be applied in the department of English of Bejaia University. Taking into account what has been explained in the theoretical

background concerning the four main standards, which should be incorporated in the flipped learning, researchers of the current study revealed from the interviews analyses that none of the previous mentioned basics (F.L.I.P) are applied by teachers'/ learners' of the English department of Bejaia University. It is true that the literal act of inverting the learning as a process is implemented however teachers'/students' are not fully committed to the basics of this innovative approach, mainly in term of learning engagement and training experience. Third, FC did not get a wide acceptance in the University due to various factors. Particularly, it was reinforced to be implemented in a helpless condition (The sanitary crisis), within the lack of material supports, the technical problems. As a result, all these struggles triggered the students' distraction and psychological affections. From what has been said, it is worthy to say that the investigators of this study have proved the non-viability of the Flipped Learning in the English department of Bejaia context.

Throughout the conduction of our research study, we have encountered several restrictions which made achieving the research objectives quite difficult especially in the period of covid19 at two stages. The theoretical part, it was challenging and struggling to find out the required documentation and resources to construct our literature review due to the tendency of the topic (in English department of Bejaia University in particular). On the other side the practical part, the first limitation we faced was the insufficient duration consecrated to this section, especially with the wave system. Our study had a small sample; 52 participants among 266 students as long as 16 interviewed from 30 instructors, mainly because of the full time schedule of lecturers. The second limitation we faced was in the operation of data collection, the required number of respondents from the sample was difficult to reach; we opted first for the online administration of interviews via E-mails for teachers and questionnaires through messenger class group to get the needed number of participants. Yet, we got only few answers contrarily to our expectations. The last limitation,

concerns the absence of students' responses concerning some important questions and even they did not provide the required answers to some questions which hindered the full investigation of the issue. Consequently, the outcomes of our study could not be generalized in term of population as well as in term of appropriateness which is why we recommend that more research studies could be undertaken to broaden the results. Then, it is worthy to suggest for future researchers in their coming studies to examine the matter from a various and wider perspectives, for instance, the effect of FC on other learning skills, such as its impact on the vocabulary or grammar performances of students, its impact on teachers' professional level comparing to the old one, Females perceptions Versus males' ones. Also researchers could focus students' re-adaptation or adjustment to the FC strategy during the post period or any other similar contexts.

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Appendices

Appendix A: Questionnaire

The Implementation of ICT-based Flipped classroom in EFL during Covid 19

*Case of 3rd year students Department of English Language and Literature, University of Bejaia
Academic year: 2021-2022*

Introduction:

The following questionnaire is part of a research that will be done at the University of Bejaia's English Department. It is about using an ICT-based Flipped classroom as a motivating and supportive educational technique for EFL students during the Corona virus. Please take your time and honestly answer all of the questions below. Your personal information will be kept totally secret and used solely for academic reasons.

The researchers.

Background Knowledge:

- ❖ ICT: information communication technologies (internet, technology, social networks...)
- ❖ Flipped classroom (FC)/ inverted learning: an instructional strategy that was adopted during Covid 19 in which the pedagogical activities were reversed, what was traditionally done in class (lecture) is now done at home, and what was done at home (homework) is now done in class

Section 01:

1. Gender:

Male

Female

2. Age:

3. What is your preference in studying English language (interest)?

.....

...

4. E-mail :.....

Section 02:

We are gratefully asking you to answer the following questions and put (X) where necessary:

1. Have you ever used ICT tools to study with before Corona virus?

.....

2. Which technology you used the most during the Covid19?

Smart phone

Computer

3. Do you manage to understand the learning content posted by your teachers in E-learning platform? If no, explain why?

.....

.....

4. Which technology do you use most to help you clarify and understand things?

Google

Youtube

5. Do you use social media networks in your studies? if the answer is yes which application you mostly use?

WhatsApp

Messenger/ Facebook

or any other one

6. What was your opinion concerning the obligation of integrating ICT tools during Covid 19?

.....

.....

7. Which format do you prefer most: online learning or traditional face to face learning? Please say why?

.....

.....

8. Have you used tele-conferencing technologies during the pandemic crisis? If yes which one? (Multiple answers are aloud).

Moodle

Zoom

Skype

Microsoft team

Section 03:

1. Did your teachers employ Flipped classroom in any of their lectures during the pandemic?

.....

2. How confident do you feel about the course content after reading it at home?
 (Choose one answer)

Extremely confident

Somehow confident

Not very confident

3. How confident do you feel about the course content after reading it and putting into practice in class?

Extremely confident

Not very confident

Somehow confident

4. What do you think about FC strategy?

Learning is more interactive
 exciting

Learning is more challenging and

Not effective

Annoying and helpless

Very difficult to manage learning

5. Flipped learning motivates me and encourages me to practice.

Totally agree Agree Disagree Totally disagree

6. FC is more engaging than traditional teaching and learning.

Totally agree Agree Disagree Totally disagree

7. FC improves interaction and collaboration work.

Totally agree Agree Disagree Totally disagree

8. I have developed self-study and self-management skills via FC

Totally agree Agree Disagree Totally disagree

9. I fully comprehend the course content via FC activities.

Totally agree Agree Disagree Totally disagree

10. FC enhanced my level and grades.

Totally agree Agree Disagree Totally disagree

11. Flipped classroom enhances interaction and lowers stress and the feeling of isolation experienced during lockdown period.

Totally agree Agree Disagree Totally disagree

12. What do you think about adopting this strategy for longue term usage?

.....
.....

Section 04:

13. Which ideas would you suggest to improve learning in FC?

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

Thank you For Your collaboration.

Appendix B: Teachers' Interview

The Implementation of ICT-based Flipped classroom in EFL during Covid 19

Case of 3rd year students Department of English Language and Literature, University of Bejaia
Academic year: 2021-2022

Introduction:

This interview is part of a master's degree in applied linguistics and English language instruction that will take place at the University of Bejaia's English department. It looks into the implementation of ICT-based Flipped classroom on EFL during the pandemic as a way to support and motivate students.

All the data you provide will be kept totally confidential and used solely for academic reasons.

Background Knowledge:

- ❖ ICT: information communication technologies (internet, technology, social networks...).
- ❖ Flipped classroom (FC)/ inverted learning: an instructional strategy that was adopted during Covid 19 in which the pedagogical activities were reversed, what was traditionally done in class (lecture) is now done at home, and what was done at home (homework) is now done in class.

Section One: Personal information:

1. Gender: Female Male
2. Degree (s) held: B.A M.A
 PH.D
3. How many years of experience do you have in teaching English language?
 - Less than 15 years
 - Between 15 to 20 years
 - More than 20 years

Section two: please respond to the following questions:

1. Have you faced any difficulties in integrating ICTs techniques to your classes?

.....

- 2. Have you applied Flipped learning in your classes before the quarantine period?
.....
- 3. What would be your point of view regarding the application of FC instruction for EFL subjects as a part of the structured syllabus?
.....
.....
.....
- 4. Which strategy do you use and set to apply this new trend in teaching and learning?
.....
.....
.....
.....
- 5. Do you think that FC instructions help your learners engage more actively to improve their learning skills?
.....
.....
.....
- 6. If no, what do you recommend to adjust in FC strategy to ameliorate the students' performance?
.....
.....
.....
- 7. Which one is more effective in your opinion: traditional instruction or FC Model?
.....
.....

Thank You For Your Assistance.

Résumé :

La présente recherche vise à explorer la mise en œuvre de la classe inversée fondée sur les Technologies d'Information et de Communication (TIC) comme solution de rechange, pendant la pandémie du Coronavirus et aussi autant qu'alternative stratégique et psychologique afin de soutenir et de motiver les étudiants d'Anglais de l'université d'Abderrahmane Mira, Bejaia. Les participants de l'étude étaient des étudiants de troisième année et leurs enseignants du département d'Anglais. Cependant, une recherche exploratoire a été conçue sur la base d'une méthode mixte. De plus, des questionnaires et des interviews ont été utilisés pour la collection des données. Les logiciels SPSS, Microsoft Excel ont été utilisés pour convertir et interpréter les résultats. Suite aux résultats de la recherche Google, Face Book et Messenger sont les outils les plus utilisés par les étudiants d'Anglais. Ils ont également révélé que la mésadaptation de la classe inversée a engendré certains effets psychologiques sur eux. En conséquence, cette étude a défini le basculement vers la classe inversée comme un moyen inefficace d'enseignement, spécifiquement avec les étudiants d'Anglais de Bejaia.

Mots clés : TIC, Classe inversée, Etudiants de la langue Anglaise, Covid19

ملخص

يهدف البحث الحالي الى دراسة موضوع الصف المقلوب القائم على تكنولوجيا المعلوماتية والاتصالات كبديل للدراسة العادية ودعم استراتيجي ونفسي لتحفيز طلاب اللغة الانجليزية في جامعة عبد الرحمان ميرا بجاية، خلال وباء كورونا. شارك في البحث طلاب ذوي مستوى الثالثة جامعي بالإضافة إلى أساتذتهم من كُلية اللغة الانجليزية. البحث قائم على منهجية مشتركة باستخدام استبيان ومقابلة مطروحة على العينة للحصول على بيانات كمية ونوعية. لإكمال هذه الدراسة تم استخدام برنامج SPSS و Microsoft Excel بهدف تحويل النتائج و تفسيرها وصفيًا و إحصائيًا ليتم تقديمها في الأخير على شكل جداول و رسومات بيانية . كشفت نتائج البحث أن Google, Face book, و Messenger هي الوسائل التكنولوجية الأكثر اعتماداً. كما بيّنت البيانات أن هذه الاستراتيجية لم تطبق على أكمل وجه، مما أثر على الجانب النفسي للطلاب. وعليه أكد أن الصف المقلوب بديل غير فعال خصوصاً على طلاب اللغة الانجليزية.

الكلمات المفتاحية: تكنولوجيا المعلوماتية والاتصالات، الصف المقلوب، طلاب اللغة الانجليزية، وباء كورونا.