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Investigating the Potential of the Flipped Classroom in Fostering Content Understanding, Promoting Engagement, and Facilitating Differentiated Instruction

Case study: First year Master Students of Language and Communication at Abdelhamid Ibn Badis University, Mostaganem

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Dedication

To my parents, my everything

To my brothers, sister and Wisou

To those who truly value academic integrity

Acknowledgements

Abstract

Academic communities in many parts of the world have embraced various digital innovations as tools to dispel the obstacles that have characterized the traditional way of teaching and learning. One exemplary outgrowth of this gravitation towards technology-enabled instruction, that Algerian higher educational system can exploit, is the flipped classroom. In essence, flipping the classroom is the model wherein the teacher's part of lecturing is moved from the usual institutional environment to a web-based platform where it can be accessed by learners at home. Hence, the better part of class time is allocated to discussion and activities as well as increased student-to-teacher interactions. Our initiatory purpose is to explore whether the model is utilised in the targeted context. Moreover, this study seeks to explore the model's potential in advancing students' understanding, elevating engagement and enabling differentiation strategies to be used. In view of the nature of these aims, a mixed-methods mode of investigation has been adopted to collect both qualitative and quantitative data from different perspectives for the present research. It encompasses an observation, an experiment and a students' questionnaire. The findings reveal that the flipped classroom is not practised in its form as described in the pertinent literature. To a considerable extent, inverting a classroom advances understanding of concepts and encourages learners' engagement. The results engender an insight into the fact that it is possible to differentiate the instruction within a reversed classroom arrangement.

Key words: the flipped classroom, understanding, engagement, differentiated instruction.

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To say that the 21st century educational spheres are blessed, is a major understatement. With the escalating prevalence of diverse technologies, teachers, educators and concerned scholars are offered seismic waves of new affordances for their ongoing pursuit for better teaching practices and, consequently, optimal learning experiences. In several corners of the globe, practitioners are experimenting with a range of digital innovations that facilitate the realisation of existing learning theories and paradigms that used to be incredibly challenging without current advancements. An increasingly renowned manifestation of this is the flipped classroom model of instruction.

The flipped classroom refers to the practice in which the traditional instruction of a course is inverted. This means that lecturing is shifted to a virtual space where it can be accessed, or "attended", by students using the electronic medium of videos in advance of the physical classroom session. In this manner, the totality of class time is redesigned for more active learning practices with a view to accomplish desirable educational outcomes such content understanding and facilitate engagement as well as accommodate students' subjective needs in the learning process.

In theoretical terms, these ideals associated with the flipped classroom represent a promise for the present educational system to remedy the pronounced cleavage between what we know and what we actually do in practice. Our knowledge of how generally learning occurs and how teaching must conform to it is as up-to-date as that of most others operating within a different system. The theories that account for learning abound on myriad philosophical, cognitive, and psychological fronts. And we are familiar with them. We recognise how to achieve deep understanding of concepts; we are aware of how to create immersive environments; and we are acquainted with students' differences that inevitably affect their learning trajectories. Yet, most of the teaching methodologies in the Algerian context are nowhere near effective enough to enable us to apply our knowledge of these three instances. Unfortunately, the ambitions of many teachers to accomplish them are stifled or pressured into suppression by the traditional demand to primarily complete curriculum objectives of imparting all content which consumes the better part of any session. Indeed, the grip of out-dated instructional customs still holds firm on to our pedagogical activity.

A further, though very common, justification for the urge to change, is in the undeniable reality that today's students belong to the exceedingly techno-fixated generation,

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one that is only moving headlong towards more digitalisation. Teaching them in the same manner our predecessors were taught in foregoing times of less technological ubiquity is one sure way to alienate learners of the future. With this argument in mind, it is of paramount importance that we consider stepping in the direction of stimulating sustainable interest in formal education by including in it students' inclinations towards the virtual world of screens, imagery, videos and so on. While many teachers do in fact attempt to correspond to this, the general instructional rationale is still not in accordance with the evolving culture of teaching with technology as it is portrayed to be by its advocates. To this end, we have formulated the following questions to investigate how the flipped classroom can bridge the gaps towards the three aforementioned endeavours in practice:

1- Is the flipped classroom practised in the context of English as a foreign (henceforth EFL) at Abdelhamid Ibn Badis University?
2- To what extent is the flipped classroom beneficial in fostering students' content understanding?
3- To what extent is the flipped classroom beneficial in promoting students' engagement?
4- How possible is it for the flipped classroom model to enable differentiated instruction?

To hypothesise, we assume that some of the teachers of the examined context apply what we term as "faux-flipped" in the sense that they sometimes suggest reading materials at home to be later discussed in class. We also speculate that students understand better in a flipped classroom. Furthermore, we conjecture that the majority of them will be engaged in the in-class part of the model. Lastly, we surmise that the teacher's focus within the classroom can, to some extent, be directed not only towards assigning activities and orchestrating discussions grounded on what students were exposed to in pre-class lectures, but also to guiding learners during the intricate process of applying what they learnt, eliminating different ambiguities in understanding, providing feedback as well as suggesting strategies appropriate for most individuals.

In consistence with these questions and hypotheses, the aim of this research is to discover whether the flipped classroom exists in the scrutinised context. Following this, the purpose is also to disclose the effectiveness of the model in promoting content understanding and persistent engagement. Finally, this study is a revelation of the model's potential in

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facilitating the incorporation of strategies to differentiate instruction.

The present dissertation is divided into three chapters. The first chapter presents a thorough overview of our driving subject of examination including its definition, underpinning theories, benefits. It is also a delineation of the model's implementation necessary to understand the entirety of the work. As for the second chapter, it describes in details the systematisation of the methodology we followed in the fulfilment of this research. The last chapter encompasses both the analysis of the data we accumulated through our data collection instruments and the deductions we arrived at after the interpretation of the findings.

Chapter One: Overview

1.   Introduction

The purpose of this chapter is threefold. First, it provides a comprehensive overview of the body of knowledge regarding the raising trend of instruction: the flipped classroom. It explores its conceptualization, background, as well as theories that support it to end up with the benefits stemmed from anecdotal and empirical reports. Additionally, generic procedures pertaining to its implementation are outlined. The second part is devoted to a broad look into the long-standing area of differentiated instruction. The last and chief aim is to draw a concluding explanation of how inverting a classroom realises the practice of differentiating it as set forth in extant scholarly discourses. Multiple implications of this correlation are recurrently interspersed throughout this theoretical segment of the work.

1.1.   Defining the Flipped Classroom

The flipped classroom is a student-centred paradigm of instruction wherein the teacher's part of lecturing is moved from the usual brick-and-mortar environment to an online space whereby the lecture content can be accessed by learners before coming to class; class time is, hence, allocated for discussions and hands-on activities for advanced application of the new concepts in a monitored arrangement (Tucker, 2012). The fundamental premise of this model is to harness the electronic medium of videos so that frontal instruction no longer dominates the better part of the classroom session (Horn, 2013; Johnson, 2013). In fact, a flipped classroom is "a combination of two established elements of education: the lecture and active learning" (Tétreault, 2013, p. 3).

An aptly put description of the transformational implication of inverting a classroom is in Harris, Harris, Reed and Zelihic's (2016, p. 1) words:

In this manner, teachers and students are collaborative learners targeting topics, threshold concepts, and other areas of learner weakness as needed to ensure better understanding of the course content. In other words, instructors make the kinesthetic-cognitive leap to learning in action in that they use class time for hands-on activities and group practical exercises. Class time is no longer a relay of information only; class is now an amalgam of discussion, listening, and doing.

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With the growing popularity of this pedagogical practice, interested academics have been spilling ink over the flipped classroom to oftentimes include definitions of their own phrasing. Many of these definitions are said to be too broad, oversimplified, or not entirely accurate. They cover traditional implementations of assigning readings as homework and having teacher-to-students discussions in class which do not conform to the original ideas of the flipped classroom's initiators. Therefore, Verleger and Bishop (2013) insist only on conceptualizations that specifically assert the rudimentary utilization of web-based videos as the sole delivery tool of the lectures as it was the use of this medium that brought it into mainstream use. Didactic instruction is followed by the versatility of interactive and collaborative activities carried out in class.

1.2.   History of the Flipped Classroom

The flipped classroom owes much of its increasing popularity to its most referenced proponents Woodland Park High School chemistry teachers Jonathan Bergmann and Aaron Sams (Bell, 2015). Although the pair disclaim any attributes to them as the originators of whole concept of flipping a classroom (Bergmann and Sams, 2012), they were the first to put it in a full-fledged application using video technology in 2007 (Finkel, 2012). The theoretical assumptions pertaining to the practice of reversing the traditional process of knowledge dissemination and application were not exactly unheard of before the current decade. As a matter of fact, an accumulation of pertinent ideas were conceived by the likes of Harvard professor Eric Mazur in 1997 (Correa, 2015). Lage, Platt and Treglia also developed similar ideas in a paper entitled "Inverting the Classroom: A Gateway to Creating an Inclusive Learning Environment" in 2000. Moreover, King (1993) published "From sage on the stage to guide on the side" in which she endorsed active learning practices within the classroom. The three of these established lines of scholarly thoughts are often invoked in the literature as components of the vast synthesis of theories that directly or indirectly led to the raise of the flipped classroom (Tétreault, 2013).

Bergmann and Sams' (2012) experimentation with class inversion yielded positive results; they reported that their students' performances improved which in turn gave them warranted endeavours to actively "publicise" their experience. Gradually, academics interest and recognition in the new pedagogical activity grew to spread across different disciplines on

a global scale (Teng, 2018). It has to be noted, however, that to date research has only tangentially covered its potential in the area of teaching English as a foreign language (Mehring and Leis, 2017; Lyddon, 2015).

1.3. Theories Underlying the Flipped Classroom

Educational practices and models of instruction of any kind are legitimised on the grounds of the established learning and teaching philosophies that underpin them. In this respect, the flipped classroom stems its validation from its association with the widely recognized learning theory known as constructivism.

1.3.1. Constructivism

Constructivism is a learning theory that stands at the forefront of relevant pedagogical traditions. Constructivism "has become de rigueur in educational circles" (Danielson, 1996, p. 1). Proponents of this perspective postulate that learners construct their knowledge and understanding of new information through direct and meaningful experiences. In their attempt to make sense of foreign concepts in a given material, learners refer back to existing knowledge and create internal connections between what is already learned and what is to be learned. In other words, personal and prior knowledge functions as the foundation on which new understandings are built (Kanselaar, 2002). With this view in mind, the constructivist approach is a valid shift from the delivery of decontextualised, and oftentimes totally teacher-determined content -or in Bernstein's (1999) "vertical knowledge"- towards the "horizontal" kind that is made to be concrete, self-directed, tacit and, especially embedded in realistic situations (Kanselaar, 2002).

A teacher who leads a classroom through constructivist lenses regularly involve learners in active discussions, reflections on concepts, problem solving activities and an array of tasks in which they can develop higher order thinking skills; the fundamental aim is to create channels for deeper and long-term learning that is also transferable to real life situations. In this vein, (as cited King, 1993), Mayer (1984) asserts that students are far more likely to remember the acquired knowledge for long-term effect and apply it in new situations. Thus, this approach to learning is consistent with information processing theories.

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Constructivism is a vast body of strands with diverse perspectives. One of the two main commonly invoked theories that is chiefly associated with Soviet psychologist Lev Vygotsky is social constructivism. The Vygotskian angle is one that views learning as a primarily socially driven phenomenon. In this respect, Greeno, Collins, and Resnick (1996, p. 17) draw an explanation of knowledge to be "distributed among people and their environments, including the objects, artifacts, tools, books, and the communities in which they are apart." Learners first develop their understanding through collaborative engagement with the collective to arrive at "internalization of information" in connected cognitive structures (Vygotsky, 1978, Wertsch, 1991) as cited in (Threlkeld, 2017).

The flipped classroom is indirectly modelled in parallel to constructivists' views (Reidsema, Kavanagh, Hadgraft, and Smith, 2017) With the part of information delivery being automated and moved outside of the classroom, the time spent within the classroom is repurposed "on more interactive problem-solving activities that achieve deeper understanding – and foster creativity" (Martin, 2012, p. 27). The practices conducted when flipping the classroom realizes constructivist principles in the sense that learners wade through the raw content, as presented in the video lecture, in independent or collaborative practice. In clearer terms, they receive and manipulate new information to generate new and personal interpretations; such interpretations are likely to be accentuated by shared enquiry (Scott, 2011). The teacher is no longer a mere lecturer, but also facilitator whose role is to identify and rectify or reaffirm learners' understanding of concepts, provide guidance throughout the course of the activities and immediate feedback on end results applications.

1.4. Benefits of Flipped Classroom

The flipped classroom comes with a solid number of advantages that warrants experimentation, adoption and partial or complete integration of the model.

Perhaps the most frequently acknowledged tenet of the flipped classroom is increased and consistent student engagement. Pertinent research attests that learners are more involved in the flipped classroom environment in comparison to the traditional one. Additionally, active participation is more evenly shared across the entirety of the classroom attendants (Millard, 2012) as cited in (Basal, 2015). It is conceded that a decisive contributor to this is pre-class preparation and timely familiarity with the subject of interaction. Moreover,

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Greenfield (2009) as cited in (Rivera, 2016) suggests that the presentation of content through technological outlets expectedly reaches 21st century learners and sustains their attention as the digital platform is their "language of proficiency". This is exponentially reinforced by the fact that video lectures are edited to be short in order alleviate cognitive overload and maintain coveted concentration span (Engin & Donanci, 2015). In line with enhanced engagement, the literature in concern reveals that student-to-student as well as teacher-to-student interaction is equally elevated (Basal, 2015). Bergmann and Sams (2012, p. 27) accounts for the former by saying:

> We notice the students developing their own collaborative groups. Students are helping each other learn instead of relying on the teacher as the sole disseminator of knowledge. Some might ask how we developed a culture of learning. We think the key is for students to identify learning as their goal, instead of striving for the completion of assignments.

("In-class Activities and Assessment," 2018) further puts in perspective how peer-instruction within an inverted classroom setting unfolds: "Each student will bring their own individual understanding of the content to the lesson, and together, in small groups, they will be able to draw on each other's knowledge and understanding of the material to forge new understandings."

As for the teacher-student interaction, Bergmann and Sams (2012) observed that the transformational effect of flipped teaching lies in the fact that teacher no longer has to stand in the front and face rows of learners for the majority of school time every week. Reversed classroom practitioners are more mobile as they regularly cover many areas of the physical environment. Rows are restructured to better accommodate independent and group work sitting arrangements. The teacher is constantly manoeuvring around to individually interact with all elements of these settings. He is liberated enough to be attuned to students' occasional needs to deliver modified mini-lectures when needed (Bergmann & Sams, 2012). Teacher's attentiveness that is granted from his or her role's transitioning to that of a guide is expanded and distributed to moderately include more students, a feature that is severely lacking in a typical lecture-based form of teaching.

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In his flipped instruction trajectory, which he described to be rippled with positive effects, Bergmann inferred that the foremost benefit is profoundly human: "I now have time to work individually with students. I talk to every student in every classroom every day" (Bergmann, 2012) as quoted in (Tucker, 2012, p. 82). The teacher is given more time and space to build better and deeper rapports with every element that constitute his classes.

Enfield (2013, p. 1) sets forth another favourable outcome to a classroom reversal in that it "increases self-efficacy in students' ability to learn independently." The natural course of a typical classroom lecture proceeds in a way "that assumes the perceptual and intellectual uniformity of all learners" (Foreman, 2003). To put it differently, in a regular classroom students are forced to follow the teacher at the pace of the collective regardless of the individual subjectivities in aptitude and concentration span. However, with the automation of content dissemination, learners are given control over the manner, speed and frequency of information reception (Fulton, 2012). While watching a video lecture, they can pause, rewind, or skip certain parts on their own volition. Meanwhile, they are also able to conveniently grasp, process and jot down notes of freshly stimulated understandings of the presented material. Hence, the flipped classroom nudges and encourages self-paced learning in many ways (Basal, 2015).

The aforementioned arguments that validate the practice of flipping a classroom are all intertwined to help realise the ultimate objective: content retention and transferability of the acquired knowledge to real life contexts. The literature in this respect is replete with associations to Benjamin Bloom's Revised Taxonomy, particularly the cognitive domain. The taxonomy is a framework of viewing a student's progress in the learning process that goes beyond the mere achievement of amassing an influx of information towards the development of what is conventionally termed as "higher order thinking skills".

According to Bloom, the assessor judges the learner's mastery of a lesson on the grounds of 6 abilities: to remember, understand, apply, analyse, evaluate and create (Clark, 2015). For some reasons, the taxonomy was disfavoured for its alleged impracticality in most educational institutions, namely those with large classes (Ramakrishnan and Priya, 2016); nevertheless, the introduction of the flipped classroom to the teaching profession has come to be seen as the proverbial fertile soil wherein this conceptual framework can be rendered feasible. To elucidate, pre-class exposure to the lecture falls under the first two categories of

remembering and understanding, while in-class time is allocated for applying, analysing, evaluating and creating. Having stated that, practitioners must not overlook the fact that learning is a highly complex, personal, and changeable process and the way we approach a new concept may differ from the way we do another; therefore, the development of the levels of this taxonomy should be open to various flexible re-orderings.

1.5.   The Flipped Classroom Implementation

The flipped classroom practitioners and educators concur on the fact that a fixed methodology or a single prescriptive way to apply it does not exist (Rotellar and Cain 2016). In fact, Basal (2015) states: "there are as many approaches to the flipped classroom as there are researchers implementing it." To this end, most suggested models in scholarly discourses are inclined to be generic and not as rigidly systematic so as to maintain the requisite eclecticism for teachers to incorporate personal ideas. An example of these proposed frameworks that can be readily adopted in an EFL context was delineated by Estes, Ingram and Liu (2014). It constitutes of three stages: pre-class, in-class, and post-class learning activities.

Before embarking on the explanation of these steps, it is imperative to consider the knowledge that inverting the entirety of a course is incredibly time-consuming and resource intensive. As such, not all lessons can or should be flipped at once in the beginning of the journey (Itap, 2013) as cited in (Harris et al., 2016). According to Reidsema et al (2017) and Roehling (2017), the necessity of the decision to invert a lesson is predicated on the needs to:

- Help students struggling to master a specific concept or grasp confusing content that the existing form of pedagogy fails to fulfil.
- Increase students' engagement with fundamental elements of a material that would otherwise induce boredom and irresponsiveness in the usual style of instruction.
- Extensively focus on hands-on activities to develop critical skills that use the newly acquired knowledge or concepts.

1.5.1. Pre-class

This stage is concerned with the asynchronous or outside the class environment where learners first gain exposure to the new lesson through a video. The justification for the

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preference of videos over other digital mediums of content delivery rests in Bishop and Verleger's (2013, p. 4) words: "video lectures are as effective as in-person lectures at conveying basic information." Similar views are upheld by the likes of Hartsell & Yuen, (2006) and Shephard (2003) as cited in (Basal, 2015).

Videos exist in diverse types and the choice of the form of creation depends, in large measure, on the skilfulness of the teacher with regards to technological operations. If due to limitations including workload, time and lack of advanced knowledge of computer operations the teacher cannot create a video, a recourse to using videos made by other professionals is a recommendable possibility (Neaupane, 2017; Basal, 2015; Straw, Quinlan, Harland, and Walker 2015; Mohan, 2018). Online platforms such as Youtube, the Khan Academy and MOOCS are rich repositories of instructional vodcasts available for free and open access.

One way a teacher can produce a video lecture is by using a video camera, Smartphone, or webcam and recording himself or herself imparting the content. The lecturer proceeds on the same tracks of instructing for an absent audience as he would do in the traditional way using a board to write on, visual aids to demonstrate with and a variety of other necessary materials. Bergmann & Sams (2012) and Gaughan (2014) recommend a script-driven session of recording to minimize pauses, maintain organization, and eschew lengthiness. Gaughan (2014) and Neaupane (2017) insist on limiting the duration of the video at 15 minutes. To account for this, Rotellar and Cain (2016) state: "pre-class work should not contain excessive detail, but should cover primary learning points." By utilizing video-manipulation softwares, the teacher can edit the recorded material to enhance its quality by adding graphic interfaces and side notes in form of callouts to draw and intensify the attention on key pieces of information (Bergmann & Sams, 2012)

Another option is the production of vodcasts of the screencasting variety. Roehling (2017) define screencasting as: "A digital recording of events that occur on the computer screen. Screencasting programs can be used to create lecture-like presentations. These typically take the form of narrated PowerPoint or Prezi presentations." A screencasting program can record the teacher's scripted narration over onscreen functions and visual or textual demonstrations of the lesson as outlined on the slides.

The internet is an enormous inventory of video production softwares that can aid flipped classroom practitioners in creating more evolved and high-quality vodcasts with the

sophisticated versatility of integrating images, animations, and borrowed snippets from other productions for the purpose of engrossing the learners in the direct instruction.

The teacher, thereafter, uploads or shares the video lecture through a learning management system (LMS) (e.g., www.edmodo.com, www.classroom.google.com, or www.schoology.com). These easy-to-navigate websites -requiring minimal technological literacy- are formal platforms wherein teachers can create virtual classrooms to distribute video courses, add quizzes to gauge preliminary understanding (Roehling, 2017), attach links to extra resources and an range of other functions to conveniently provide the students with an optimal online learning experience (Basal, 2015).

1.5.2. In-class

Although videos are deemed to be an essential component of the paradigm as a whole, they are still subordinate in significance to the second stage of the practice: the in-class activities (Neaupane, 2017; Bergmann & Sams, 2012). In addition to this, prospective practitioners must approach this part with a central view to the comprehensive coordination between the pre-class work and in-class interactive activities. Rotellar & Cain (2016) expound on this point in stating that "much of the success of the flipped approach depends on the interplay between pre-class and in-class activities. Off-loaded pre-class content must be presented in a fashion that students can readily comprehend and, be tied directly to in-class application."

This interconnectedness is led by the clearly set and carefully thought-out lesson objectives to be effectively accomplished through an assortment of tasks. With the didactic instruction being offloaded to the homework setting, face-to-face time is redesigned in a manner that follows a constructivism-oriented pattern (Estes et al., 2014). Typically, the session proceeds with general-to-specific questions formulated around the raw content absorbed at home. They also function as prompters to evoke their preliminary grasp of the presented information as well as potential enquiries on the students' part. Following this, a discussion is carried out with the teacher acting as a partner to the students to generate ideas, stimulate reflections and construct understandings of the newly learned concept(s). Having been exposed to the material, students feel prepared and, thereby, are confidently in tune with all the members of the same process. Subsequently, the teacher assign active learning activities: problem-solving, presentations, critical debates among groups, role-plays,

storytelling, case study and analysis, projects, etc. In sketching a descriptive account of the classroom activities, Estes et al (2014) pushes along the urge for student favourably endorsed peer-instruction and feedback in tandem with increased teacher-student interaction throughout the process. (Chickering & Gamson, 1987) as cited in (Estes et al., 2014) goes so far as to estimate these two as pillars in higher education.

1.5.3. Post-class

The post-class stage is neither a mandatory nor a regular week-to-week occurrence to which teachers must attend. It is less systematized and more open-ended. Over the period of the days before the weekly session, the instructor is able to sustain learners' motivation and engagement through online communication. The LMS is regarded as an online classroom that transcends the temporal and spatial confines of the brick-and-mortar variety; students can continue discussing, sharing, conducting tasks to stretch out the in-class involvement. Nurturing the culture of intellectual generosity may very well incentivise larger number of students to make mature attempts at independent discovery. The ripple effect herein is that students are incessantly pushed to take responsibility of their own learning. Lastly, Estes et al (2014) point out the options of electronic portfolios available in LMSs as a way to keep records of each individual's learning progress.

1.6.   Challenges

Technology-enabled or mediated pedagogical practices can be challenging; the flipped classroom, in this regard, is no exception. The flipped classroom is characterised with a number of disadvantageous aspects that may render it less appealing for the academic community. To give an illustrative view of this, researchers have recurrently identified three familiar drawbacks.

Nielsen (2012) has stressed the "digital divide" that hinders the preparatory phase in advance of class time. As ubiquitous as we believe technological tools have become, students in less fortunate communities may still not be equiped with unlimited internet access and, thus, cannot easily watch videos every week. This argument is especially well-founded in the case of those who reside on campuses.

Ironically, for several reasons, it is the learners who sometimes may choose not to attend the virtual lecture (Correa, 2015). It must be asserted that the paradigm is largely

dependent on both the pre-class and in-class phases in equal measures. As a matter of fact, the effectiveness of in-class discussion and activities is ultimately contingent upon whether or not the learners did their "homework" (Herreid and Schiller, 2013; Reidsema et al., 2017).

Given the common propensity for teachers and students alike to express and demonstrate reluctance and resistance to new educational ventures (Bonk, 2009; Reidsema et al., 2017), the possibility that this model fails to thrive and persists is not entirely unexpected. (Harris et al., 2016) argues that the changes in roles are likely to drive all those involved out of their "comfort zone". This is a critical and, perhaps, unwelcome implication for those who prefer to adhere to long-standing familiarity of traditional instruction.

1.7.   Defining Differentiated Instruction

Differentiated instruction is a framework of a set of generic strategies the teacher incorporates for the purpose of addressing students individual differences that inevitably shape and regulate their learning processes (Blaz, 2006). It is based on a philosophy of teaching that recognises the reality of the richness in the diversity that characterises every educational classroom. As such, differentiated instruction epitomises a highly student-focused environment. The teacher who differentiates his or her classroom intends to generate a wealth of inclusive and adaptive learning experiences that are far removed from the unitary "one-size-fits-all" instructional practices typical of traditional education (Anderson, 2016; Tomlinson, 2001).

According to Carol Tomlinson, a prominent advocate of this teaching philosophy, differentiated instruction brings together substantial perspectives from the fields of neural science and cognitive psychology on the nature of learning (McCarty, Crow, Mims, Potthoff and Harvey, 2016). Each student's learning trajectory in a given discipline is predominantly driven by a range of varying aspects under the headings of three main areas: readiness, interest, and learning profile (Tomlinson, 2001). Learners' readiness is concerned with his or her "proximity to the desired educational outcome based on background foundational knowledge, past experiences, opportunities for learning, and skill level" (Dosch & Zidon, 2014, p. 344). Intrinsically oriented motivation, "a natural wellspring of learning and achievement" (Ryan & Deci, 2000, p. 55), is ultimately dependent on whether or not students are interested in a particular subject (Ryan & Deci, 2000). Lastly, a student's learning profile

encompasses the preferred learning style and the predisposition to certain intelligences as postulated by Sternberg and Spear-Swerling (1996) or set forth by Gardner (1993) in his Multiple Intelligences theory (Dosch & Zidon, 2014).

Differentiation revolves around the premise that the teacher proactively utilizes ongoing assessment from the outset to establish deep and personal understandings of students' subjectivities. Tomlinson believes that he or she ought to do so on the basis of the aforementioned elements so as to most suitably coordinate teaching with learning. On this account, every learner will be able to mitigate their gap areas and accomplish foundational learning outcomes. While formative assessment does feature in traditional contexts, it is oftentimes not as inclusive and thorough as differentiated instruction promises to achieve. Moreover, it enables the instructor to does so at earlier stages.

The consensus dictates that teachers can approach and realise differentiation of a classroom through four principal angles: content, process, and product (Blackburn, 2007).

1.7.1. Content

This area pertains to the input to be taught as fragmented in a given syllabus. By tapping into students' prior knowledge in relation to the targeted content of a lesson, the teacher builds an idea of where they stand with reference to their proximity to sufficient understanding. This aligns with Vygotsky's (1997) concept of Zone of Proximal Development. The teacher's role herein is to put assimilation of key concepts -or the development of crucial skills- within the grasp of everyone; when required, individual or group assistance is used as a recourse (Nordlund, 2003) Additionally, flexible grouping for peer-instruction is highly recommended (Tomlinson, 2001).

1.7.2. Process

Process signifies how the students absorb and understand information. This is most conveniently achieved when the content is presented in a manner that matches the preferred learning style(s). This area of differentiation is also concerned with the significance of versatility of teaching methods and techniques as a way to maintain coveted levels of engagement and motivation. A particular emphasis is, again, exerted on flexible groupings as well as a student-friendly environment in which they are allowed to choose whether to work individually or collectively with others (McCarty et al., 2016). "The best learning

environment offers a large variety of choices to satisfy individual abilities and talents" (Jensen 1998) as quoted in (Appelbaum, 2008, p. 73).

1.7.3. Product

Products are the activities and performances through which students demonstrate their understanding of a material and aacquisition of a skill. Products can be made more accessible and "applicable" for students through the continuous diversification of tasks (e.g., tests, projects, written work, or oral presentations) based on the compromise of what the teacher and his or her students deem suitable (Nordlund, 2003).

1.8.   Differentiated Instruction and Flipped Classroom

Differentiation of classrooms is as undeniably necessary as it is overwhelmingly challenging. The large scope of demands that it entails in theory is enough to inhibit teachers from putting into practice in any typical classroom setting. Two intertwined factors to this exist in the forms of time and class size especially at tertiary levels (Dosch & Zidon, 2014).

A recognized solution for this rests in the affordances that the flipped classroom offers. As elaborated earlier, by offloading the dominant part of traditional teaching outside of the classroom, e.i. lecturing, instruction is rearranged to "best maximize the scarcest learning resource—time" (Tucker, 2012, p. 82) In this way, the flipped classroom coheres with the conditions for differentiation strategies to be integrated (Doubet & Carbaugh, 2015; Bergmann & Sams, 2012; Tétreault, 2013).

1.9.   Conclusion

This chapter has laid out an all around account of the flipped classroom by covering both its theoretical and practical facets. Syntheses of the documentations which encompassed the definition, historical background, commonly referenced benefits as well as potential challenges of this instructional model have been presented. This overview has also included the implementation features and procedures as impart by scholars and practitioners. A part of this theoretical body has been devoted to a distinct, yet equally relevant educational practice known as differentiated instruction. Its conceptualization and foundational components have been put in succinct descriptions to end up with their ties to the paradigm of inverting a classroom.

Chapter Two: Research Methodology

2. Introduction

This chapter covers an exhaustive description of the research design and methodology followed in a systematic quest to gather the necessary data for this study. In more details, it outlines the procedure, the context and the population (sample) of our investigation. It also elaborates the data collection tools which consist of questionnaires, observation and an experiment conducted in the department of English, at Abdelhamid Ibn Badis University. The latter is laid out in a complete depiction of its design choices and implementation procedures.

2.1. Research Method

The utmost endeavour of any researcher is to conduct a study that yields data through which a given area of knowledge can be solidified and advanced. The choice of research tools rationalized on lucid bases play an essential role in generating rigorously substantial findings. Proceeding on this assumption, we have adopted a mixed methods mode of inuiry in order to adequately gather the data that that validate or invalidate the formerly stated hypotheses. A mixed methods research design denotes the pragmatist integration of two contrasting components known as qualitative and quantitative paradigms "to produce a fuller account of the research problem" (Glogowska, 2011, Zhang and Creswell, 2013) as cited in (Halcomb & Hickman, 2015, p. 3). At the macro level, quantitative research is the collection and analysis of data that is meant to be represented in numerical forms in sequential stages, whereas qualitative research involves "a process of building a complex and holistic picture of the phenomenon of interest, conducted in a natural setting" (Abawi, 2008, p. 5); it digs deeper into the studied contexts and its participants to consider a variety of possible perspectives.

The present study has interlinked the two quantitative and qualitative paradigms to draw on the strengths of both of them to expose in full light a multifaceted account of the issue under examination. The rationale for the use of the quantitative strategy lied in our need to gather multiple perspectives with respect to the flipped classroom and its addressed aspects as specified in the research questions. The data will be transformed into statistical form for the purpose of providing straightforward, conclusive and close-ended representation of the amassed information.

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2.2.   Procedure

We have conducted an experiment with first year master students of language and communication at the department of English language, Abdelhamid Ibn Badis University. The experiment, which took place during the second semester, lasted two weeks and was preceded as well as followed through with a six-session observation. In due course, questionnaire was distributed to the participants as a concluding phase.

2.3.   Context

The investigation was carried out at at the University of Abdelhamid Ibn Badis, in the department of English language. The gaps that motivated the demand for this enquiry were pinpointed and distinguished through periodic observations of higher education experiences within the same setting; thus, it was only reasonable for it to be the sole context of our scrutiny all along the fulfilment of this research.

2.4.   Participants

As previously stated, the selected sample is first year master students of language and communication belonging to the department of English language, Abdelhamid Ibn Badis University. 14 of them did agree to formally sign their consent to be part of the study and contribute to an accurate data collection process. This set of participants was advertently chosen in part due to an alleged, though minimized, exposure to the educational model in question initiated by their teachers and which is, then, put in parallel to the structure put forward in the literature and the implementation stages as laid out in the preceding chapter. This purposefulness in targeting this group is also in their developing acquaintance with educational technology and its concomitant trends of revolutionizing EFL teaching and learning.

2.5.   Data Collection Instruments

Over the course of conducting this study, three distinct data collection instruments were employed. These include: a classroom observation, a two-week experiment, and students' questionnaire.

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2.5.1. Observation

The observation as a research tool is fundamental to the commencement and progress of the present study through which various pieces and elements of the research were qualitatively joined together as we moved forward. We have conducted a structured in-class observation wherein "the observer specifies in detail what is to be observed and how the measurements are to be recorded" (Goodall, 2015 p. 2). It was predicated on two differing, and to be separately achieved, objectives across the six sessions of the researcher's practical involvement. The first four sessions took place before the experiment and the subsequent two sessions were during the experimental process.

2.5.1.1. The Pre- Experiment Observation

We have attended four sessions of 4 different modules in applied linguistics, e-learning (and human resources development), intercultural communicative competence and English for specific purposes. The aim was to determine whether the instructional practices of the teachers of these modules fit the description of the flipped classroom as demonstrated in the theoretical chapter. Accordingly, the parameters of observing included: references to pre-class preparation, the medium whereby said preparation was facilitated, and the structure of the in-class activities. For the first parameter, we have resorted to the students' official study group on Facebook to check for posted materials by the teachers if the classroom observation failed to assist us in determining that. The observational view of the researcher therein was, for the most part, narrow-angled so as to primarily confirm or refute the first hypothesis.

2.5.1.2. The During- Experiment Observation

The concentration of this wider-angled observation during the experiment was centred on students' engagement, content understanding and teacher's ability to respond to their needs with reference to the framework of differentiated instruction in a flipped classroom setting. In elaborate terms, the observer has attempted to determine whether the pre-class preparation could incentivise them to be more engaged in the following in-class processes. Because the flipped classroom is a suggested substitute to traditional paradigms these participants are accustomed to, we have decided to compare the events of the experiment with the remarks made in the 4 sessions that preceded it. Comparison has also extended to include students' understanding of the content. To orient the observation for this, we have used learners' output

during the discussions and the activities along with one-on-one interactions as cues. Furthermore, the experimenter remained attuned to the participants' reactions, comfort level, satisfaction, quality of performances, and responsiveness to her attempt at utilizing strategies that addressed their needs and preferences. All data gathered through this were used to reinforce the interpretation of the students' questionnaire.

2.5.2. Questionnaire

The questionnaire is the second instrument for which we have opted to collect both quantitative and qualitative data. The aim is to reveal students' perceptions with regards to the subject of the study. The details encompass the video lectures, the discussions and the activities. Additionally, a part of the survey is allocated to students' identification of their needs and preferences in accordance with differentiated instruction specifications and their stance within the structure of the flipped classroom.

2.5.2.1. Description of Students' Questionnaire

The survey is divided into two main parts. The first one is devoted to the informants' personal information; it proceeds with formulaic inquiries to obtain information about students' gender and age. The second larger portion is an examination of the students' experience and their resulting perspectives concerning the flipped classroom. As previously mentioned, it covers all aspects of the model as experienced in the last two sessions.

It consists of 14 questions: 13 of them are multiple choice questions with the recurrently added space for the respondents to further express and freely elaborate on their chosen answers; 1 is a direct open-ended question informants are invited to answer in a wider scope. The frequency of insetting open-ended questions is intended for the benefit of giving the analyst a profound qualitative insight that lies behind each ticked line.

The first 5 questions –numbered from 3 to 6 following the personal information section- are concerned with the videos assigned to the participants in the preparatory pre-class stage.

Question (3) looks into students' perceptions regarding the accessibility of the content presented in the first video; they are afforded a range of multiple choice answers to identify their ability to understand the lecture.

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Question (4) addresses similar views as those in question (3), but it is directed to the second video lecture; therefore, the array of multiple responses is reiterated.

Question (5) seeks to discover the informants' preferred duration of a video lecture.

Question (6) attempts to determine whether the manner of the presentations in the two videos were geared towards the learning style(s) to which the learners are predisposed. The suggested responses includes a direct yes, a direct no and a choice for the undecided; these were accompanied by the necessary space to provide referential justification for their answers.

Question (7) is an open-ended investigation of the participants' opinions on the difference between a traditional face-to-face delivery of lectures by the instructor and versatile video-mediated dissemination of lessons.

The 3 succeeding lines of enquiry are a sequence of questions related to the in-class phase; they are aligned with our attempts to form a closure to our second and third hypotheses.

Question (8) intends to unveil the connection between the pre-class preparation that is completed through the accessibility of the videos and students' ability to be readily and consistently engaged in the practical part of the course. To generate accurate results, the informants are given varying multiple choices to measure the extent to which that link exists.

Question (9) particularly pertains to the progression of content understanding through the students-led class discussion. The respondents are asked to scale this aspect from 1 to 10.

Question (10) bears resemblance to the previous one. It examines the effectiveness of follow-up in-class activities in advancing learning and mastery of a given topic through the lenses of students' experiential views. It inserts various options for them to gauge that with an attached textual room for further explanation.

The next series of questions are an investigation of our final assumption with reference to differentiated instruction and its place within the flipped classroom. They also explore general and concluding perspectives of the learners of the same model.

Question (11) quizzes the students about their in-class learning needs and preferences that fit into the differentiated instruction dictations. They are asked to specify personal concerns that they wish to be addressed in light of the teacher's transitioning role from a lecturer to that of a guide, monitor and feedback provider. The informants can tick more than one sentence from

the various ones that are listed thematically; in the probable case they need to add more, a void space is furnished for that.

Question (12) explicitly refers back to the experiment and is closely interlinked to the foregoing question. It is an attempt at discovering whether the students believe that the environment of the flipped classroom can help respond to those needs and preferences. It associates their perceptual feedback ensuing from the two-session experience with their theoretical views regarding the flipped classroom.

Question (13) inquires into the informants' preferred instructional paradigm in a comparison between the traditional way and the flipped classroom.

Question (14) is a consideration for the respondents to describe their level of satisfaction with the model of instruction under inspection. The typical formula for answering herein is the spectrum of "very satisfied" to the other extreme of "very unsatisfied".

2.5.3. Experiment

Probing students' intellectual perceptiveness regarding the flipped classroom in its established form without a pre-existing experience is not possible, especially not in a manner as thorough as the questionnaire indicates. To this end, obtaining reliable data collection for this work has necessitated empirical examination, i.e. experimentation. For further justification, Gay (1992) contends that the experiment is a convenient investigation tool in the field of education in general; "It represents the most valid approach to the solution of educational problems, both practical and theoretical, and to the advancement of education as a science" (p. 298).

As mentioned earlier, our experiment followed a four-session observation. The latter highlighted a number of cues that has helped to assert our decision to engage in the former. The first research question of whether the flipped classroom is practiced in the targeted context, which was solely the concern of the observation, set the stage for the experiment. We operated within the framework of the flipped classroom structure as set forth in the overview chapter. Moreover, the learners' active engagement and explicitly demonstrated understanding of concepts have been noted in their conventional settings. We have considered the classroom dynamics including teacher-students interactions. Before embarking on the next step, we explained our intended experimental procedures and asked the potential participants to sign their consent to take part in fulfilling the experiment. In doing so, we verified their ability to

access online platforms in order to watch the pre-class videos; we offered to supply them with alternative options for offline video access such as uploading the materials to USB drives or downloading the videos from another smartphone in to their own.

The description of this experiment is depicted in three stages: pre-experiment stage, during experiment stage, post-experiment stage.

2.5.3.1. The Pre-Experiment Stage

We chose to conduct the experiment in the applied linguistics tutorials for the practical nature and demands of the course. Students therein acquire knowledge and develop understandings of topics or concepts and then engage in contextualized applications afterwards. The two week experiment took place in late April and early May.

The flipped classroom is a model of instruction, and for it to be realized, this entails the construction of lessons. Lessons are a means to an end that were decidedly put together and planned on the grounds of the following conditions:

1. A study of the syllabus of the applied linguistics course to gain sufficient acquaintance with what master one students have studied thus far.
2. Keeping the topics of the-to-be devised lessons within the scope of the applied linguistics discipline so as to coordinate our independent variables and minimise their differences.
3. Deciding on the content with regards to the participants' "readiness" level.
4. Limiting the range of the content of the-to-be constructed lessons so as to fit into the allocated time for our intervention.
5. Choosing a topic upon which diverse higher order thinking skills activities can be assigned.

Taking into consideration these requirements, we designed two lessons and then flipped them in accordance with the framework proposed by Estes, Ingram and Liu (2014). Thus, we delineate in the following part the layout of our lessons in the two stages: pre-class and in-class.

2.5.3.2. During the Experiment Stage

Because it is a shared concern of both lessons, we deem it imperative to note ahead that it was not possible for us to create our own video lectures due to time limitations among other obstacles. For this reason, we resorted to the inventory of Youtube videos in the search for reliable materials made by professionals.

Lesson One

Pre-class

Our first topic for this experiment was entitled "Lesson Plan". Readiness-wise, most students said they had a minimal grasp of how to conventionally plan a lesson. Our choice of the topic was also encouraged by the commonly perceived importance and relevance for students' both as prospective teachers and weekly presenters in the applied linguistic tutorials. Learners ought to be able to plan their lessons before they perform in-class.

To impart the required information in order to meet that objective, we selected a video entitled English 377: The Lesson Plan Template which was created and published on 3 Jan 2012 by Jon Ostenson. The image of the vodcast shows a tiny and cornered view of the lecturer speaking over presentation slides in textual form. The language is formal and intelligible uttered at an average pace. The duration of the video is 14:59 in which the instructor elaborates a generic and flexible template of lesson planning. He clarifies in details all elements that should be filled in a typical lesson outline. A large portion is devoted to well-thought learning objectives that a planner should lists for each lesson whilst continually illustrating them with examples. This is followed by an explanation of details including the materials to be used, the strategies of instructing as well as the outline of lesson presentation.

We posted the video on the Facebook group of this cohort over a week before the session. For adequate preparation for the classroom phase, it was essential to give the participants sufficient time span to view and possibly re-view the material at their own pace.

In-class

The in-class stage lasted one hour and was divided into three parts. The outset proceeded with memory activating questions about the gist and details of the lecture. Next, students were prompted to share their constructed understandings and discuss each others'

newly built knowledge that might have gone beyond the fixed content of the presentation. The experimenter orchestrated the debate, evoked their critical thinking through deep questions or propositions and interfered whenever called upon. Lastly, participants engaged in one authentic task in which they applied the learned instructions. We handed them template sheets and asked them to fill in the details of a lesson plan. Basic differentiation dimensions were conceived and accordingly embodied in a set of strategies. The students were given the choice of working individually or collectively with their preferred group. We suggested that the few experienced students on the matter be scattered around the classroom for a balanced peer-collaboration. In this final stage, the facilitator circulated repeatedly around the classroom to correct misconceptions, elucidate or re-explain certain points , elucidate or re-explain certain points and bring struggling individuals closer in proximity to intended outcomes. For end products, feedback is provided for each member.

Lesson Two

Pre-class

The second lesson for this intervention was about the Revised Bloom's Taxonomy. In one of the observation sessions, we had confirmed that the participants had not dealt with this topic before. This translated into unitary readiness level for this particular content.

Our selection of the video to disseminate the ideas put forward by Benjamin Bloom fell on one entitled Revised Bloom's Taxonomy by Ariyah Nissen and Hollie Mitchell. It was published on 23 Aug 2017 by the former. The techniques of displaying the information differ from the last video as it combines oral, textual and visual forms. Nissen presents specifically the cognitive components of the taxonomy on a white board while Mitchell orally explains what is being written or drawn over a musical background. The duration of the lecture is 5 minutes which is considerably shorter than the last one. The video extends to 1 more minute and 20 seconds for the adduction of references.

The taxonomy accounts for the steps of development in each learning process. The categorization of the levels we achieve in the course of attaining full mastery of a topic helps us to understand the nuances of learning. In this manner, it coheres with the first lesson in the sense that it enables lesson planners to formulate accurate and well-designed learning objectives using precise terminology. This cohesion is ultimately beneficial in maintaining the interconnectedness of the two sessions.

We posted the video on the same platform and ensured that the participants had access to the group in advance of the classroom involvement. We also offered to provide them with offline measures for those who claimed their limited internet connection did not allow them to run the lecture.

In-class

The classroom phase for this lesson, which lasted 40 minutes, is similar in procedures to the first one. We probed their content retention and understanding regarding the topic. After that, the experimenter stimulated discussion among the participants and contributes when necessary as a partner. Students analysed and reflected on Bloom's ideas and the classification of learning patterns. Additionally, they shared their opinions about the use of this taxonomy in their future teaching practices and how it may help them understand and design objectives for their own learners. Finally, they were given an opportunity to apply the constructed knowledge to formulate objectives of lessons and activities as they customarily do in their tutorials using Bloom's Taxonomy as a guide with considerable flexibility. Attempts were made to incorporate identical differentiation strategies as in the first session.

2.5.3.3. The Post-Experiment Stage

In the concluding phase of the experiment, the interaction was transposed back into the virtual platform where the questionnaire has been handed to the students. The questionnaire was created on Google Docs and has been distributed to each participant individually via Facebook. it is worth mentioning that leveraging Google Docs is one effective way to automate the transformation of the data into numerical forms. However, the primary aim behind this online recourse was to give the participants time to assimilate their impressions of the recent experience and slowly reflect on the questions of the survey. The survey was one of the tools from which we have been able to gather data regarding the sample's attitudes towards the flipped classroom in promoting understanding and engagement as well as facilitating differentiated instruction.

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2.6.   Conclusion

Through this chapter, we have brought to light all the foundational elements of the methodology that characterised, drove and oriented this investigation. We have given details about the research method, the context, and the participants that contributed to the fulfilment of the present study. With respect to the data collection instruments, we have exhaustively described and clarified the students' questionnaire along with its aims. In addition to that, we have explained and outlined the empirical aspects of our research in their pattern of implementation, i.e. beginning with the observation and then moving on to the experiment. The organization, steps and procedures of conducting and completing the intervention have been unfolded. In the process, we have attempted to explicitly elucidate the existing link between the three data collection tools in their realization to maintain the intactness of the whole structure. The data accumulated through these instruments will be analysed, interpreted and discussed in the next chapter.

Chapter Three: Data Analysis and Results

3.   Introduction

This investigation has been carried out by means of well-established tools of researching. Observing, experimenting and direct questioning has led us to gather multi-angled data, the analysis and interpretation of which are the concern of this portion of the dissertation. The presentation of the results systematically follows the order of how our hypotheses were listed for the purpose of providing an organised closure to our research questions. Finally, we discuss in this chapter the findings and their implied significance for the scope of the context at large.

3.1.   Data Analysis

The differing nature of our primary hypotheses warrants a division of the analysis and interpretation of the data gathered to validate or invalidate them. This is the researcher's way to retain the clarity established in the previous section. Hence, we split this chapter into two main parts. The first one deals with our initiatory research question which pertains to the probability of the existence of the flipped classroom in the context under investigation; this has been the exclusive aim of our pre-experiment observation. In the second part we reveal and analyse the findings generated from the students' questionnaire and the during-experiment observation.   The points of focus herein have been to figure out students' perceptions on their content understanding and engagement in the flipped classroom as well as the model's potential in enabling differentiated instruction; this has been consolidated through the researcher's observation over the course of the intervention.

Part One: The Probability of the Practice of the Flipped Classroom

3.1.1. Analysis of the Pre-Experiment Observation

As formerly stated, our structured classroom observation has been conducted in 5 different modules in applied linguistics, intercultural communicative competence, English for specific purposes and e-learning (and human resources development). We attended one session of each of these modules at different intervals during the second semester to collect data on whether the concerned teachers flip their classrooms in a fashion that is consistent with the portrayal given in the theoretical part. We analyse the compiled data on the same basis of observation elements: references to pre-class preparation, the medium of the pre-class lecture, and the arrangement of the in-class activities.

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Session One: Applied Linguistics

This one begun with the instructor and the students referring to conceptual components related to a certain method learners were somehow exposed to before coming to class. The teachers raised some questions for reflections and discussion in which only a few students attempted to participate and pick up each others' lines of expression. Through our personal familiarity with the teacher's style of teaching in conjunction with the students' attitudes as observed, we deduced that the instructor had informed them the week before about the method to be studied next. We remarked that there was no mention, reference or a general recognition of a pre-class preparation facilitated by the instructor through a video, or even a reading material for that session in particular. Instead, the students were pushed to look for sources and discover the details of the method on their own accord. It is not difficult to envisage that this was the instructor's purposeful strategy to encourage their autonomy and further inculcate a sense of responsibility for their own learning. This is typically gravitated towards only those few individuals with unwavering tendencies for diligence; thereby, a large number of students looked detached and could not contribute to the discussion.

After that stage, the teacher dictated bullet points to account for the principles of the studied method while the learners jotted them down. This falls under unitary didactic instruction which is not a feature of the in-class phase in the flipped classroom. The teacher then ended the session with the promise to dedicate the next one to applications (in form of presentations) of the learned method. Through our observation of the teacher's attitude and the students' responsiveness to the pattern on which the session proceeded, we could infer that this was generally the usual occurrence in the tutorials of this module. With these notes in mind, we conclude that while the course of this teacher's instructional practices are distinctive on their own merits, their nature, seeming objectives and structure of realization do not exactly correspond to those of the flipped classroom.

Session Two: Intercultural Communicative Competence

Our observation for this session coincided with the students' presentations on a topic tackled in the foregoing week during which the researcher had not been present. One individual presents for some specific minutes. After that, the learners are invited to comment, discuss and share prior experiences. Throughout it all, we could not observe any references to a pre-class online attendance of the lecture in concern; therefore, we had to verify their Facebook study group for any shared material by the teacher or even the students' delegate.

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We did not find anything in relation to the module at hand. Although prolonged periods devoted to orally demonstrated understanding of certain concepts could be done in a flipped classroom, there was otherwise no indication that suggests this classroom in particular had been inverted.

Session three: English for Specific Purposes

This session proceeded in a manner that is familiar to all learners. In a traditional pattern, the lecturer read from the screen of her portable computer which was connected to the data projector so the students can follow along on the board. The session, as a whole, lasted 1 hour and 30 minutes. The majority of the time was spent on the teacher explaining points in details and giving multiple illustrations whilst occasionally prompting her students to share their perspectives. The teacher was also very open to any interruptions or requests for further clarifications in her efforts to adequately feed their inquisitiveness. The fact that the lecture was delivered in class directly eliminates our first observation parameter for pre-class involvement. The intermittent attempts at discussion could not freely linger due to the teacher's obligation to fulfil her instructional objectives. Conversely, the practice of flipping a classroom is carried out in part to allot more time for discussions.

Session Four: E-learning (and Human Resources Development)

The teacher of E-learning and HRM holds the sessions for these two modules in 3 consecutive hours; thus, we saw it fitting to treat them both as one extended session. It started with the teacher making references to an article she posted on the online group. This was an instance that proved that the teacher was present in the same virtual setting -at the very least in advance of the specific classroom session we did attend. However, she merely enquired whether the students had read the material and what they thought about it, to which very few of them showed minimal reactions. No answers were listened to about the shared content as the teacher apparently had to move forward to the actual topic of the day. We did not notice any mentions of a pre-class exposure made in relation to the latter. As a matter of fact, the lesson was seemingly initiated in class by a video which the learners watched twice for better recall of the gist and details. Next, they were asked to write their understanding of the imparted content to be then read aloud. After 3 students volunteered to share the result of their efforts, the instructor orchestrated thoughtful directions for their reflections in a distinct constructivist fashion.

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In the second module, we observed that the students' anticipated the topic and we learned thereafter that its focus was revealed earlier on Facebook. The instruction in this case was conducted using the same strategies with PowerPoint slides displaying key points instead of an audio visual means. Knowledge building through individual reflections and collaborative inquiry among the students as well as the teacher acting as a partner dominated the entirety of the extended session.

Out of the four sessions, the instruction in this module probably came closest to having common components with the flipped classroom. This is manifested in the highly constructivist discussions that encompass large parts of both of the compared paradigms. Having stated that, actual reversal of the class through assigning the lecture to be structurally learned at home was not an observed occurrence. In other words, the pre-class stage did not feature in the teaching process of this session.

Part Two: Content Understanding, Engagement, and the Model's Potential in Enabling Differentiated Instruction

3.1.2. Analysis of the Students' Questionnaire

As elucidated in the description of this questionnaire, we have attempted to cover all areas of the students experience in the two sessions of the intervention in order to gain an all-around insight into their perspectives. To this end, we have decided to approach the analysis of the assortment of their responses by categorising them into the targeted aspects of our hypotheses: content understanding, engagement, and the differentiation of instruction.

Content understanding

The following graph is a numerical analysis of the first question concerning the intervention. The figure demonstrates the participants' answers on their ability to absorb the first video lecture (lesson plan). It is in response to the accessibility of the content. (See appendix, question 3)

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Students' Understanding of The First Video

16.70%

50%

33.30%

- Easy to understand
- Somewhat easy
- Somewhat difficult
- Difficult
- I did not understand anything
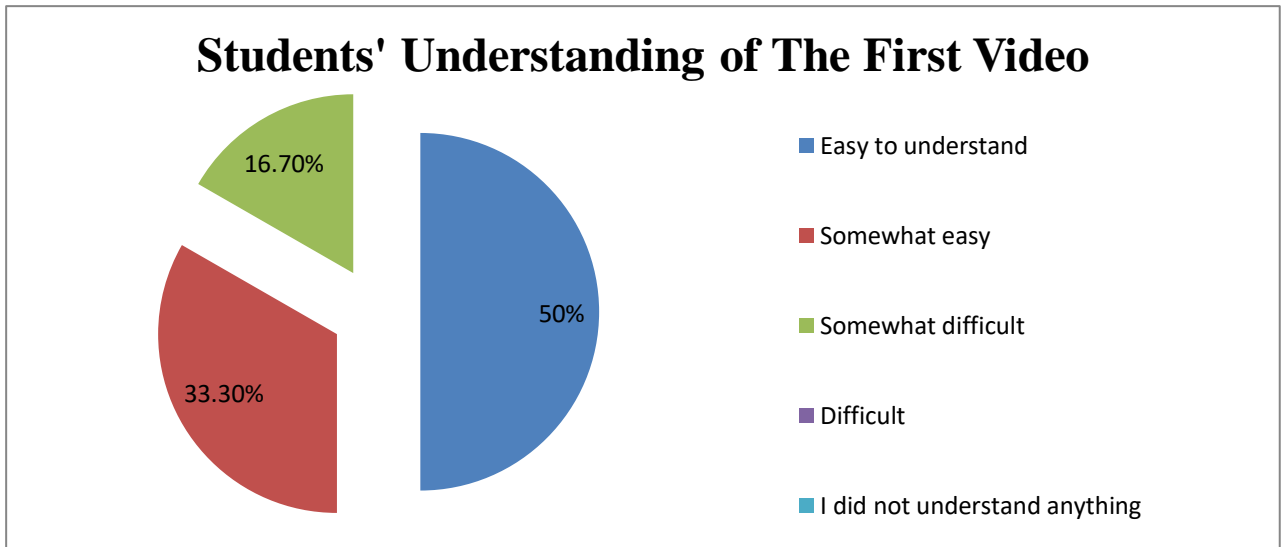
Graph 1: Students' Understanding of the First Video

To varying extents, the graph shows that 83.3% of the respondents found it easy to comprehend the first video lecture. Only 16.7% of them have stated that it was somewhat difficult.

The graph below displays analysis of answers to a similar question as the preceding one with regards to the second video in which the students gained knowledge about the Revised Bloom's Taxonomy. (See appendix, question 4)

Students' Understanding of the Second Video

14.30%

42.90%

42.90%

- Easy to understand
- Somewhat easy
- Somewhat difficult
- Difficult
- I did not understand anything
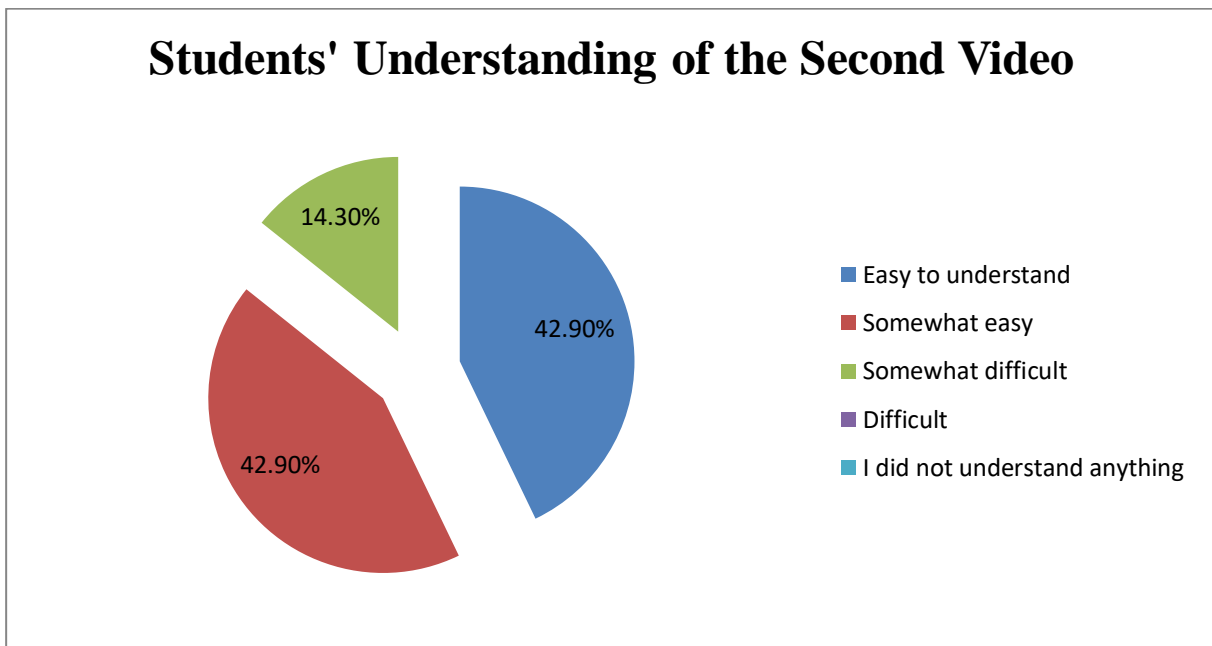
Graph 2: Students' Understanding of the Second Video

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As it can be observed, the results are not different from those of the previous question. 85.8% of the informants could easily grasp the content of the second video with merely 14.30% of them reporting that it was less accessible.

Having gone through an experiment in which both lessons were disseminated through the use of that digital medium, students were asked to compare between attending a video lecture and having the teacher actually deliver it in the physical classroom. The aim of this open-ended question (appendix, question 7) was to discover whether the participants could notice and make use of the particularities of vodcasts and how that assisted them in reaching full comprehension. Some of the clearest revelations are as follows:

"In contrast to classroom lectures, in videos you can repeat the presentation as often as you like. If you do not catch it the first time, you simply rewind the video to the beginning."
"Learning a lesson through a video gives more access to information. There is also the fact that visualising the input contribute to a better learning process."
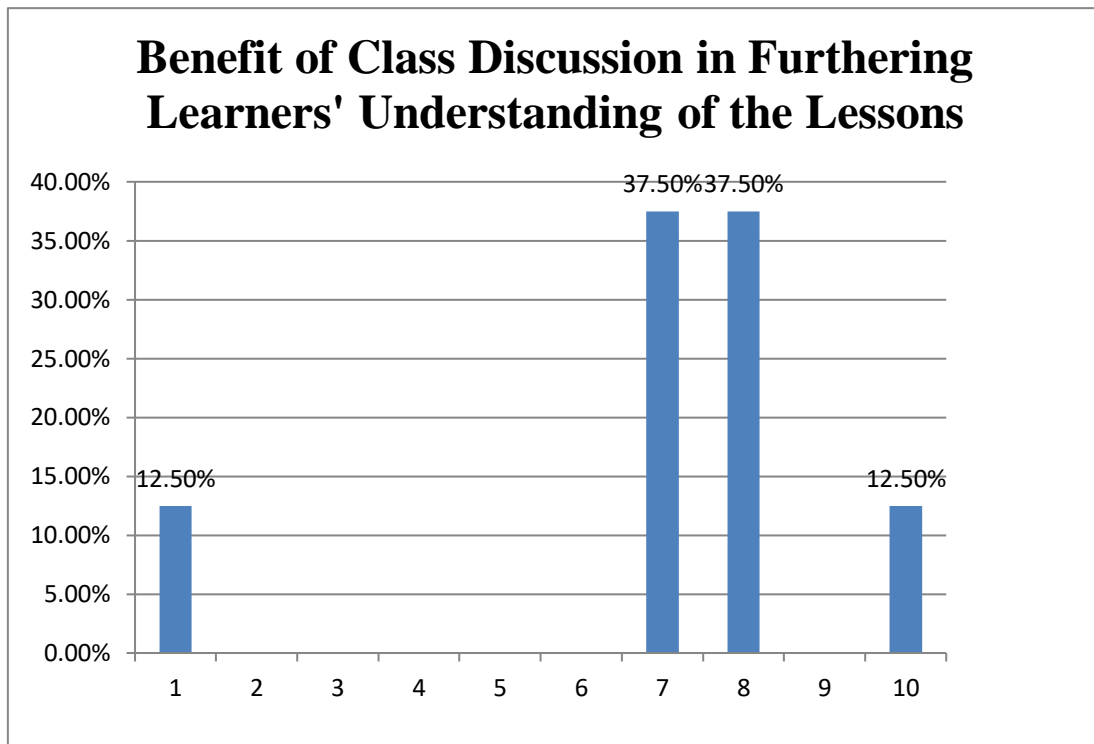
"In a way, videos are beneficial in the fact that you can repeat the parts that may be unclear until it they become clear. However, the major shortcoming lies in the fact that you cannot ask questions directly to the teacher for more clarifications."

"Students will have more opportunities to discuss the content of the lesson in class afterwards. The teacher is no longer the only knowledge provider; thus, students can take part in controlling their learning process."

These comments show that the distinctive conveniences of video technology that affords us the ability to pause at any given moment, rewind an entire segment or skip certain parts of the electronic lecture do indeed help students in achieving the required assimilation of the content. From a different dimension, videos incorporate multi-sensory modalities of processing information which, as illustrated by one of the answers in the visualisation of content, evidently reinforces reception.

Next, the graph below is a numerical presentation of the responses we obtained from question question 9 (see appendix). Participants were asked to scale the extent to which in-class discussion of the lesson learned before the classroom session increased and deepened their understanding of it.

Benefit of Class Discussion in Furthering Learners' Understanding of the Lessons

[Bar chart showing percentages across ratings 1 to 10. The y-axis ranges from 0.00% to 40.00%. Bars are shown at: rating 1 = 12.50%, rating 7 = 37.50%, rating 8 = 37.50%, rating 10 = 12.50%.]

Graph 3: Benefit of Class Discussion in Furthering Learners' Understanding of the Lessons

Clearly, we notice that the majority of the ratings (87.5%) are variably on behalf of the belief that class discussion is an effective strategy to advance students' understanding. In the process of reading the graph, one's attention can be drawn to the two equal percentages of 12.50% that stand on completely opposite extremes; one side of this spectrum has considered the strategy to be utterly efficacious, whereas the other side has given it the lowest rating. Students have elaborated on their choices of ratings in the upcoming terms:

"Discussing a subject in classroom helps a lot to advance my learning and mastery of a particular topic since everyone gives his or her opinion about the topic in the classroom. At the end of the discussion I choose what is beneficial for me to fill all any existing gaps in my learning of concepts."

"Discussions in this case involves more of the essential peer-instruction which I reckon helps me assimilate the lesson much better. This is certainly elevated the easier student-to-student communication becomes."

"Discussion may open my mind to different points that will surely diversify my perspectives of viewing the studied concepts."

The last findings to be analysed in relation to this hypothesis concerns the concluding phase of the flipped classroom, i.e. activities. We sought to know through question 10 (See

appendix) whether the tasks –carried out individually or collectively- that followed the discussions could aid the students in accomplishing relatively sufficient mastery of the addressed topics. The figure below depicts their ensuing responses:
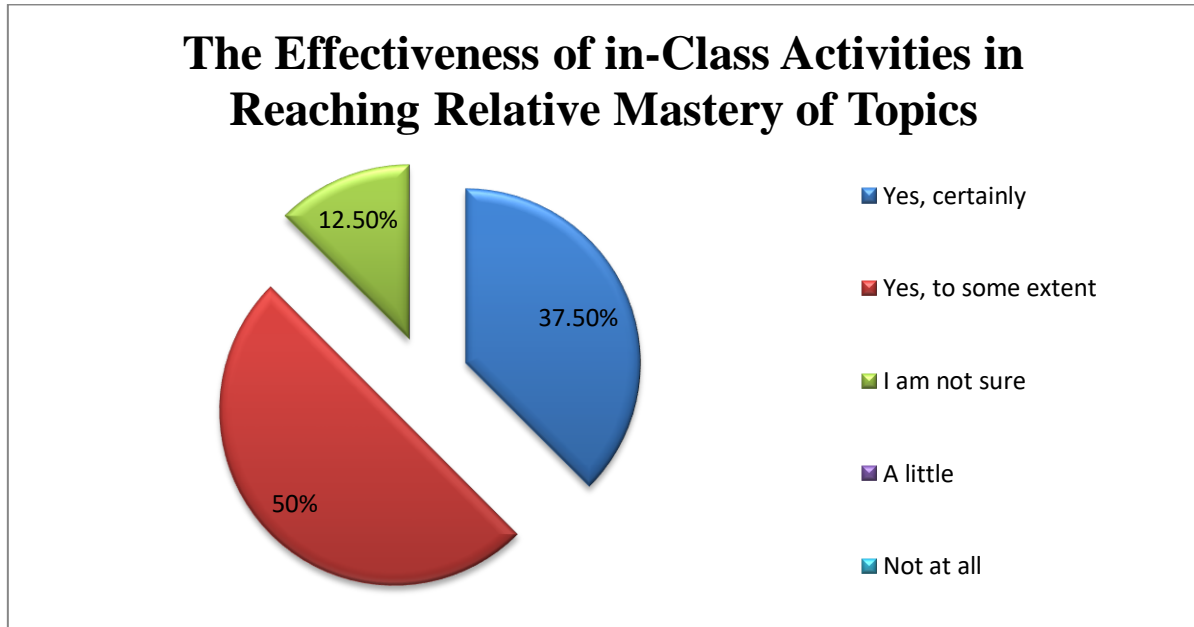
Graph 4: The Effectiveness of in-Class Activities in Reaching Relative Mastery of Topics

The gathered data shows that 37.5% of the informants are in favour of the idea that in-class activities boost their ability to climb the ladder of Bloom's Taxonomy in no specific order. This most definitely includes enhanced content understanding. 50% are, to a lesser extent, in agreement with the formers while the minority (12.5%) could not translate their impressions into certain words. Some of them have justified their answers in the following lines:

"I think initiatory vocalized contemplations and knowledge sharing are a theoretical side of the tackled topic, the understanding of which or lack thereof manifests concretely through authentic tasks. It is easy to put in practice the previously learned concepts."

"I suppose that without the follow-up activities, it is difficult to check whether we fulfilled the objective of grasping concepts and ideas."

These qualitative reflections denote that our respondents deem in-class activities that succeed discussions are effective in demonstrating and, consequently, consolidating their understanding.

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Engagement

Persistent learning engagement has been empirically attested to be exceedingly induced in a flipped classroom environment in large part due to pre-class preparation prior to the session. We reformulated this fact in a form of an enquiry (See appendix, question 8) to explore whether this was applicable to the case of our participants. Students' answers to that question are portrayed in the following graph:
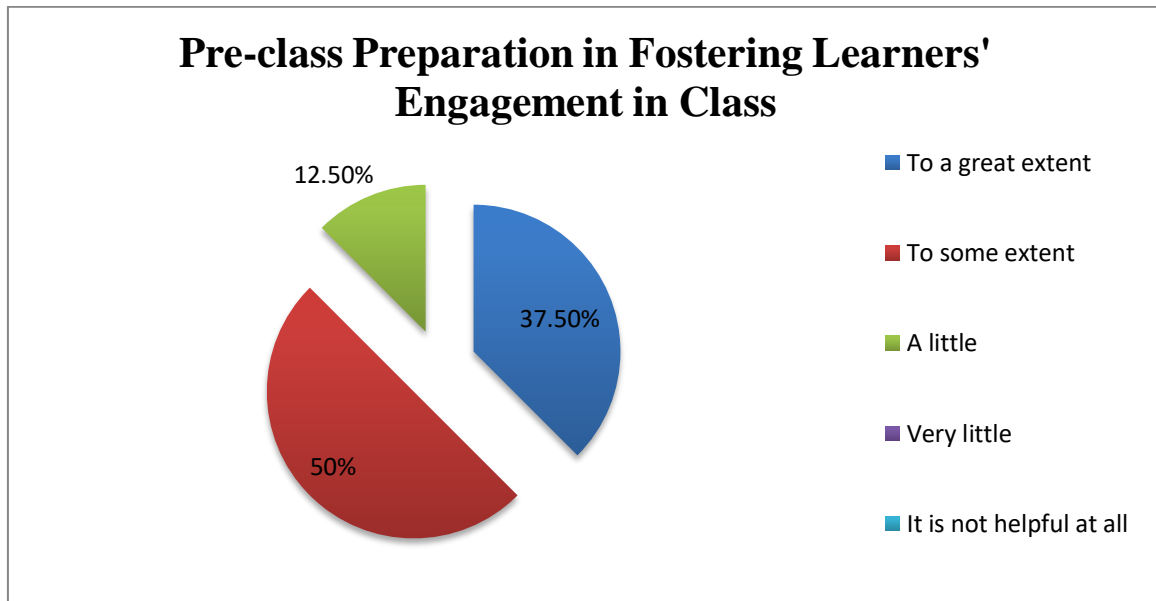
Graph 5: Pre-class Preparation in Fostering Learners' Engagement in Class

As it is noticed, 87.5% of the responses indicate that the learning environment during the experiment was more or less in line with the established belief that the flipped classroom encourages learners to be more engaged in class. However, we remark that 12.5% of the participants do not attribute the stimulation of active engagement as a particular tenet to the model in light of the experiment.

Differentiated Instruction

In the figure below, as answers to a yes or a no with an option for the undecided (See appendix, question 6), we present the participants' views on whether to the presentation of the content in the video suited your learning style(s).

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Videos Presentations' Correspondance to the Students' Learning Style(s)

- 14.30%
- 85.70%

Legend:
- Yes
- No
- Undecided
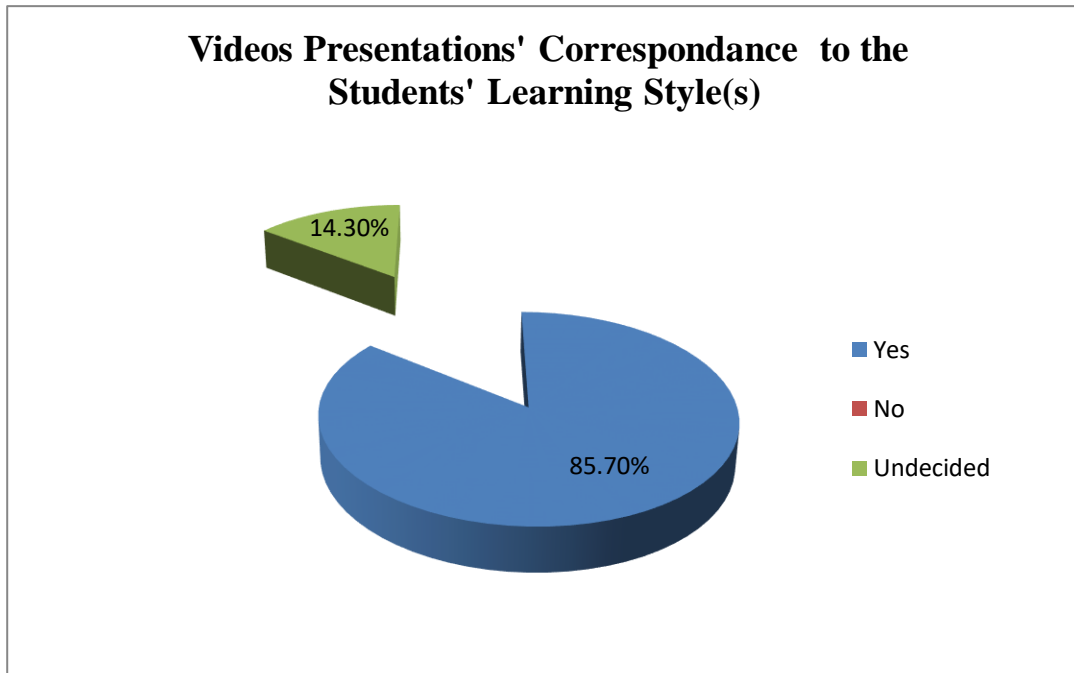
Graph 6: Videos Presentations' Correspondance to the Students' Learning Style(s)

The data gleaned and analysed lean heavily towards positive results. In more details, 85.70% of the respondents have stated that the lecturers in the vodcasts catered to their preferred style(s) whilst only 14.30% of them claim that they were not on the receiving end of this advantage.

Lastly, we listed a number of formulaic sentences to describe one's individual needs in his or her learning process (See appendix, question 11). These basic lines fit into the categories of students' subjectivities in terms of readiness, interest, and learning profile as set forth in the first chapter. The informants were given the option to tick all the expressions that resonated with them. Next, they were asked to evaluate whether the flipped classroom environment allows for differentiation to be appropriately conducted (See appendix, question 12). To put it differently, we have investigated if they believed in the teacher's ability to respond to those needs within this arrangement. The graph below represents their stances.
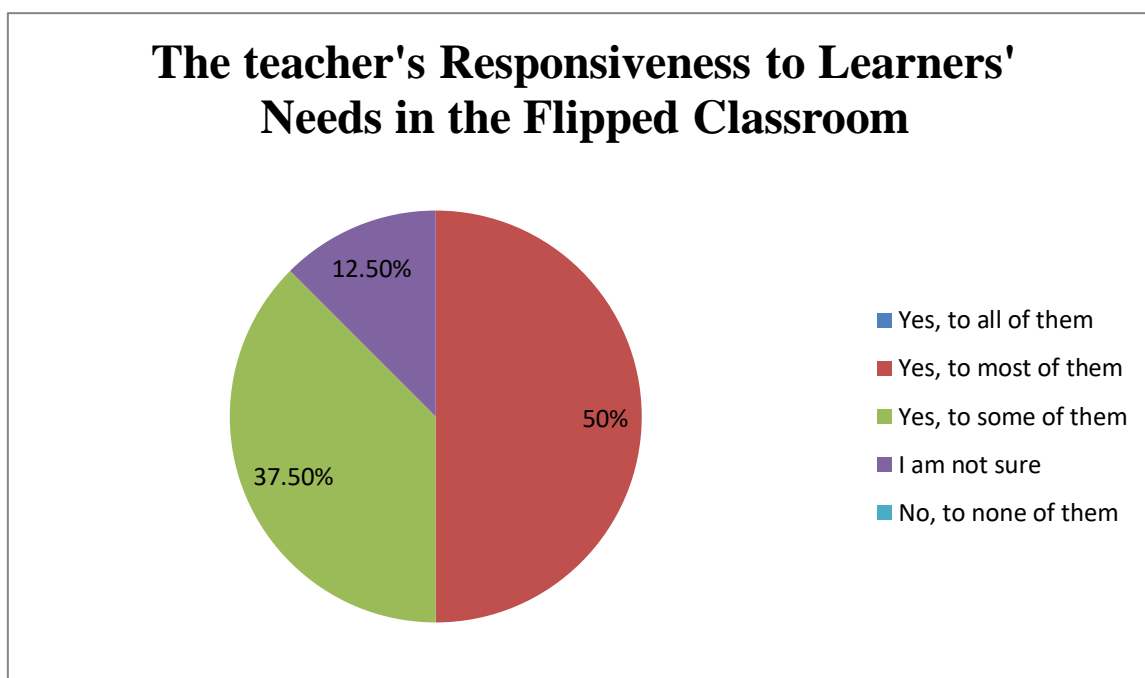
Graph 7: The Teacher's Responsiveness to Learners' Needs in the Flipped Classroom

According to this figure the dominant percentage (50%) of the participants contend that the flipped classroom furnishes the necessary arrangement for differentiation endeavours to be accomplished. 37.5% maintain that the teacher can only meet a limited number of their needs working with this model. Nevertheless, the recurrent percentage of 12.5% of the respondents has declared their skepticism regarding the position of differentiation in the flipped classroom paradigm.

3.1.3. Analysis of the During-Experiment Observation

The angles of the during-experiment observation were in conjunction with the same three dimensions of investigation that we followed in the questionnaire. The purpose of analysing the remarks we made in the two sessions of our experiment is to add a qualitative value to the results presented above. Thus, we have put into explicit terms qualitative answers to our research questions of content understanding, engagement and differentiated instruction.

Session One

Content Understanding

An expected, though unfortunate, occurrence that the flipped classroom practitioners characterise as the most conspicuous challenge is students coming to class without having

watched the video lecture. This was the case of our participants as a number of them did not attend the frontal instruction at home. Nonetheless, with the enriching contribution of those who did their "homework", we could successfully facilitate a discussion wherein all elements articulated their thoughts. Those who retained firm ideas of the components of the vodcast vocalised their restatements and comprehension of the content whilst the others reflected back on their peers' words to somehow constitute ones of their own. The experimenter asked questions to elicit critical examinations of the content throughout this phase. We put their seeming knowledge construction and assimilation to the test in a group work activity. The end products as well as one-on-one interactions with the learners showed that the majority were able to reach the objective of absorbing the lesson and applying it.

Engagement

In this session, as elaborated in the preceding chapter, we dealt with lesson planning which is a topic not at all foreign to the student's academic ear, at least not on a surface level. We reiterate that although not every learner saw the video lecture, the whole classroom could participate and engage in the follow-up task. Students exhibited eagerness to actively share and debate with their peers. The suggested reasoning for this is their existing familiarity with the subject of interaction. It means that they had solid ideas they could use to open zones for involvement in the acts of communication. Hence, we conclude that structured pre-class preparation which is converted into immediate prior knowledge and sufficient familiarity is conductive to learners' engagement.

Differentiated Instruction

The experimenter sought to differentiate the three areas of instruction: content, process and product in no specific order. The versatility and proliferation of videos extant on multiple websites afford the teacher with a plethora of means to customise the presentation of a given content as well as the input itself. We could find vodcasts in which the recorder(s) present in textual, audio and visual forms to meet the requirements of as many learning styles as we were allowed. Videos also were diversified in terms of complexity, intelligibility, simplicity of input; hence, we could find means of information transmittion that suited the overall readiness of our participants. This particular area was also effectively attended to when needed through mini-lectures during the in-class stage. We interacted personally with each individual to assess their "proximity" and help them achieve it. As for the product, students were permitted to decide whether to work alone in isolation or in groups of their own

choosing. We circulated constantly to provide feedback on each member's progress and final products. On these bases, we infer that differentiation is, to variable extents, possible to carry out in the flipped classroom.

Session Two

Content Understanding

As opposed to the practice of planning a lesson, the Revised Bloom's taxonomy was a completely new topic. Before the exposure to it, learners were on an identical level of readiness in the sense that they had no pre-existing knowledge about Bloom or his concepts. In this situation, we could not improvise to include those who had not accessed the video lecture in advance of the session. As a consequence, the discussion was mostly within the intellectual grips of those who had realised their pre-class preparation. A few of the others started making occasional attempts at participation as the phase matured and they were slowly clued into the content. Notwithstanding, we have chosen to support or disprove the hypothesis that concerns content understanding specifically on the grounds of what the former group demonstrated. When asked to summarise the content of the material, we observed that they had sufficient rudimentary grasp through which they can build knowledge. We answered their questions for clarifications and rectified misconceptions. We also kept evoking original thoughts related to all the facets of Bloom's prepositions. After that, we went along the same procedures of assigning an activity and circulating around the place for individual interactions to gain concrete insight into their level of comprehension. In a short period, most of them were able to successfully complete their assignment.

Engagement

With the exception of those who did watch the video, the majority of the others were more or less absent from the interaction. Logically, they could not possibly join a discussion revolving around concepts without minimal acquaintance. By contrast, those who had viewed the lecture were invigorated to take part in arguing, commenting and explaining their opinions on the scholar's perspectives of the learning process.

Differentiated Instruction

The strategies that we incorporated to customise the three educational areas of content, process and product in order to address the disparate needs of the students were not different

from those of the past session. However, doing so under the highlighted circumstances of this session was immensely challenging, if not impossible. The lack of commitment or interest in the experiment on the part of some students created a cleavage between them and those who had watched the video. Consequently, the classroom in this situation consisted of two groups of learners who were on strikingly contrasting ends of proximity. Bridging this vast gap signified that we had to teach them the topic from the very outset. In view of the unattainability of this implication, we are led to conclude that differentiation in the flipped classroom can only occur if the students do commit to the imperative of attending the virtual lesson.

3.2.   Discussion of the Results

The findings reveal that the pedagogical practices utilized in the examined context do not fit the mould of what researchers and scholars are touting as the flipped classroom. It may seem that in many of the depicted occasions of our observation that the classroom was indeed "flipped" in its own way if we do consider the broad, oversimplified and inaccurate definitions of this paradigm. It may also appear to be the case if we chisel and dull the rigid edges of the structure comprising of the model's phases. In line with the latter possibility, we might deem the mere online disclosure of the theme of the topic to be in fact a pre-class preparatory stage. Still, in none of the sessions we attended did we observe the existence of a pre-established agreement among the learners and the instructor that they were part of a flipped classroom. Moreover, some of the teachers' attitudes showed that virtual attendance of the lesson –regardless of the form in which it had been- was not at all mandatory in the same way pre-class preparation in the flipped classroom is absolutely prerequisite.

Subsequent results confirm that this model is, to a large extent, beneficial in promoting content understanding, learners' engagement as well as facilitating differentiation. Through moving didactic teaching to their personal space, students are handed the "remote control" to manipulate the procedure of information reception. In this way, they can control the pace of learning an inverted lesson in a manner that proved satisfactory for a number of our participants. Class time is redesigned for students to enquire for clarifications, profoundly discuss the concepts they retained from the lecture, connect the ideas they built with others and arrive at full understanding. The optimal quality of students' palpable involvement in the course of the in-class stage is a direct outcome of the pre-class phase. When students have prior knowledge they perceive to be valid enough, they will be encouraged to take part in the

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intellectual interaction. The reality of this was visibly evident in the first session of the experiment.

For those who are inhibited by several factors, pushed to fall back in the collective learning process, and are permanently overshadowed by their higher achieving peers, the reversal of a class put them in the appropriate arrangement in which their teacher can attend to them. In the likely case when certain students are still struggling to grasp some conceptual points or acquire competencies that hinder their process of attaining mastery, the tutor can redirect his or her attention to them for harmonious customisation. The core of differentiation, rendered less challenging through this temporal allotment, is to bring the teacher closer to his or her students on an individual level in order to eliminate all ambiguities that cloud their areas of strengths and weaknesses. By filling the abstract columns of each learner's profile, the intuitive professional will be able to figure out how to devise inclusive paths for coveted progression within a given course. A significant effect to this intensive one-on-one personalisation that should not be overlooked is the highly humanised essence of the teacher-student rapport. Learning and studying become more than a pragmatist task of amassing information and passing exams to gain semestrial hooks to the next grade; learning and studying become a deeper sort of immersion in which students are weekly attempting to exhibit signs of valuable advancement and intellectual maturity for their source of inspiration, i.e. the mentor.

In spite of this favourable picture of inverting a classroom, objective reasoning of the low fluctuations in the results lead us to concede that the model is not the answer to not even most of our academic deficiencies. Some informants have pointed out well-founded disadvantageous aspects that might lessen its appeal to varying extents. It is, nevertheless, the majority's positive attitudes that do tint it with the green light of sufficient validation. The flipped classroom represents a welcome change for which the necessity cannot be stressed enough. It can indeed be the solution that dispels a few of the negatives for which outdated teaching is denigrated. Didactic teaching and direct focus on dissemination objectives consumes teachers' awareness and vitiate it from addressing every element that constitutes his or her classroom. To this end, many students barely wade their way through the curriculum, yet still manage to advance to the next academic grade with alarming gaps in their knowledge and defects in their skills.

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The flipped classroom is an innovation away from the deeply rooted clutches of traditional education. Its feasibility exists in the fact that it is not so far away a trend so as to suggest a dramatic overhauling of our Algerian academic contexts for which many teachers are not ready. Across many other parts of the developed world, educators are experimenting with technologised practices that realises all theoretically established teaching ideals. In an instructional system wherein digitalised pedagogy has yet to be made a reality, the flipped classroom as a widely legitimised model, can be our step towards the new culture of learning that leverages humanity's greatest achievement: the internet. In addition to this, what makes it easily attainable is the fact it does not nullify the lecture as a method of instruction to which our system is still tightly wedded; it merely relegates it to a subordinate position in favour of active learning practices and more productive use of time -the currency of education.

The findings of this study have been reported within a framework of honesty and objectivity. Our utmost goal is to contribute to the development of the educational quality in our context.

3.3. Conclusion

This chapter has been an orderly documentation of our study's revelations. We have discovered through the pr-experiment observation that the flipped classroom is not a practiced model in the targeted context. Furthermore, we have reported positive results pertaining to the effectiveness of this paradigm in promoting content understanding and encouraging learners' engagement. At last, we disclosed the possible potentiality of the model in allowing differentiation of instruction to be properly performed.

General Conclusion

General Conclusion

The relentless pace of technology development in the Information Age has paved tremendous pathways for the emergence of novel educational trends. While the majority of practitioners recognise the fact that technology is not the catalyst for successful teaching and learning, thoughtful educators harness the supreme advantages it endows to enable the application of certain pedagogical philosophies. Many of these theoretical perspectives were previously immensely demanding with some of them representing the face of impossibility in disguise. To realise them in practice requires time and resources. The methodology of inverting a classroom has commanded interest in an increasing number of disciplines as an effective way to gain more time in a view to achieve various desirable outcomes.

Propelled by the call for these outcomes in the Algerian academic settings, this research has investigated the reality of these theoretical assumptions in actual practice. We have centred our research concentration on three main areas. The first one was content understanding without which one cannot be said to have progressed in a given course. This was followed by the element of active engagement in the course of this progress in the classroom. We have ended up with the considerably broader scope of differentiation. The aim herein was as to put forward solutions for learner-inclusive environments and study their incorporation within the scrutinised model.

Chapter one laid out an overview of the current literature regarding the flipped classroom. In this sense, we defined the model, elucidated how it came into existence from a historical standpoint, referred to its benefits, depicted its implementation, the knowledge of which are necessary to understand the procedures we run through to complete this research. In this connection of necessity, we also provided a synoptic account of differentiated instruction for the reader's comprehension of the strategies we utilised in the practical finalisation of the study that attempted to entangle these strategies with the phases of the flipped classroom.

The methodological courses of action were meticulously described in the second chapter. We used a mixed methods research design to glean thorough data. The totality of 6 sessions involved our conduction a pre-experiment and during the experiment observation on the modules of master one students of language and communication to compile qualitative information. After the experiment, we distributed a questionnaire to the students so as to collect data about their resulting perceptions on the intervention.

General Conclusion

The findings we arrived at though the pre-class observation were analysed step by step in the final chapter. Afterwards, we displayed students' answers and construed them. The results were put in concomitance with the remarks we made throughout the experiment for conclusive interpretations. We also discussed these results to make better sense of them and phrased the significance of their implications.

In a nutshell, we have discovered that the practice of inverting a classroom as the literature delineates is not adopted in the targeted context. We have disclosed the model's effectiveness in deepening learners' understanding of their courses that is ideally transferable to authentic situations of knowledge application. We have also unveiled how active engagement is induced through the strategy of preparing students before the classroom session and equipping them with ideas to facilitate learners' involvement. This research has revealed the existence of sufficient coherence between the structure of the flipped classroom and strategies of customisation in the time granted from the reversal gives way to more teacher-to-student interactions. This enables the instructor to build profound ideas of the learning patterns of a larger number of students than in strictly traditional lecture-based instruction. Going forward in the teaching process, such ideas orient the instructor to proactively and productively interact with his learners for incrementally richer feedback.

Hence, the proposed hypotheses have been proved and supported. We did expect that the flipped classroom is not included within the teachers' range of actual pedagogical activities. We also estimated that the intervention would, to varying extents, live up to the benefits as portrayed in the theoretical portion of this dissertation. Specifically worded, we assumed that the model would be efficacious in laying ground for elevated content understanding, boosting engagement and paving the way to the utilisation of differentiation strategies.

Given the inevitably subjective views academically involved members bring into their reading experiences, this study may lend itself to certain misassumptions. In anticipation of this, we assert, again, that the intention is not to put the model forth as the magic wand to erase deep-seated educational deficiencies. As a matter of fact, the chief and humble aim is to raise awareness of the existence of a variety of trends by illustrating one of them through a systematic investigation. We wish to evoke intellectually rich debates on how to nudge us to take a step forward in the direction of development in the hopes that it soon becomes a reality.

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Appendices

Students' Questionnaire

Investigating the Potential of the Flipped Classroom in Fostering Understanding, Promoting Engagement, and Facilitating Differentiated Instruction

This questionnaire aims at collecting data to investigate the potential of the flipped classroom as a pedagogical model in prompting learning EFL. Simple and honest answers will greatly contribute to the credibility and accuracy of the research. All responses will be kept confidential.

Part one: Personal Information

Gender: Male ☐

Female ☐

Age: Less than 20 ☐

21-24 ☐

Over 25 ☐

Part two: the Potential of the Flipped Classroom

After having watched the two selected videos at home, you are asked to respond to the following questions:

3- How did you perceive the content presented in the first video?

☐ Easy to understand

☐ Somewhat easy

☐ Somewhat difficult

☐ Difficult

☐ I did not understand anything

4- How did you perceive the content presented in the second video?

☐ Easy to understand

☐ Somewhat easy

☐ Somewhat difficult

☐ Difficult

☐ I did not understand anything

5- How long do you think a video lecture should be?

☐   5 minutes

☐   5-10 minutes

☐   10-15 minutes

☐   20 minutes

☐ Longer? How much?

[_____]

6- Did the presentation of the content fit your learning style? (Audio, visual, etc)

Yes   ☐   No   ☐

Why?

[ ]

7- How was your experience when watching a video lesson? And how is this different from having a teacher explaining it to you in class?

[ ]

8.Please specify to what extent is watching the video lesson helpful for you to be engaged and well prepared to participate in class

☐   To a great extent

☐ To some extent

☐   A little

☐ Very little

☐ No, it is not

Comment:

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9- **On a scale from 1 to 10, to what extent does class discussion with the teacher and your classmates help further your understanding of the lesson?**

1 ?	2?	3?	4?	5?	6?	7?	8?	9?	10?

10- **Do you think that in-class activities -that follow discussions- advance your learning and mastery of a particular topic/concept?**

☐ Yes, certainly

☐ Yes, to some extent

☐ I am not sure

☐ A little

☐ Very little

☐ Not at all

Justify:

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11- **In the flipped classroom, the teacher's role shifts from a lecturer to a guide, monitor and feedback provider. Please specify the preferences that you wish to be met in light of this transition**

☐ I need the teacher to regularly correct my mistakes and misconceptions

☐ I need the teacher to explain things to me individually when needed

☐ I need the teacher to regularly review my work

☐ I need the teacher to regularly provide me with feedback

☐ I like to regularly have individual interaction with my teacher

☐ I like to have the teacher monitor my progress and guide me

☐ I like to be given the choice to work independently or collectively in classroom tasks.

☐ I like to be given the choice of demonstrating my understanding of a topic (to present, to write an essay, etc.)

☐ I learn best when he teacher varies the teaching techniques and strategies to match my style

Other preferences?

12- **Based on the experiment, can the environment of the flipped classroom help respond to these needs and preferences?**

☐ Yes, to all of them

☐ Yes, to most of them

☐ Yes, to some of them

☐ I am not sure

☐ No, to none of them

13- **Which one do you prefer?**

☐ The traditional way of teaching and learning

☐ The flipped classroom

☐ Both

☐ Undecided

14- **Please specify your level of satisfaction with the flipped classroom in the table below:**

Very Satisfied	Satisfied	Neutral	Unsatisfied	Very Unsatisfied

Thank you for taking time to fill up this survey. Your contribution is immensely appreciated!