MASTERARBEIT / MASTER'S THESIS

Titel der Masterarbeit / Title of the Master's Thesis

"The flip side of the traditional classroom:
Exploring the effects of the Flipped Classroom Model (FCM)
on Austrian EFL students' perceived
motivation during the COVID-19 pandemic:
A Self-Determination Theory (SDT) Approach"

verfasst von / submitted by

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Abstract

The COVID-19 pandemic has triggered an unavoidable online shift in the realm of education. Given the severe impact that the global crisis had on schooling, learning and teaching took place for the most part online via distance learning and the virtual classroom, which has drastically influenced the need for and creation of valuable e-learning approaches and tools. Despite schools reopening, many teachers continue to profit from the copious benefits of online technology to enhance the classroom and learning experience for their students.

Since the flipped classroom model (FCM) offers a student-centered approach to teaching and learning that takes place both online and in-class, it is an effective method that takes advantage of the digital resources found online. To be more specific, flipped learning inverts, or rather flips, the traditional classroom approach, in which students engage with (online) instructional resources before class that complements the following in-class instruction, so as to free up class time to apply the new concepts in an interactive manner.

Moreover, due to the learner-centered manner of the flipped classroom approach, the paper at hand aims at investigating whether this mode of instruction positively affects perceived student motivation for the learning process from the perspective of self-determination theory (SDT). This macro-theory of human motivation posits that people are more self-determined when their three basic psychological needs are fulfilled and supported, i.e. *autonomy, competence, and relatedness*. Flipped learning enables the learner to have more control over their learning environment and pace, promotes feelings of capability, and encourages interaction and collaboration among classmates. Thus, it is hypothesised that the inner needs of students during the learning process will be higher after a flipped than a non-flipped lesson.

The findings of the study show that, in the context of 11th grade Austrian upper secondary English foreign language (EFL) students, FCM can fulfill learners' internal motivational need for *autonomy, competence, and relatedness*. More specifically, regarding students' self-determination, the study's findings indicate that students who were exposed to the FCM experienced a higher satisfaction of their self-determination needs in comparison to the students who were taught in the traditional classroom.

German Abstract

Die COVID-19-Pandemie hat eine nahezu unvermeidliche Online-Verlagerung im Bildungsbereich erzwungen. Angesichts der gravierenden Auswirkungen, die die globale Krise auf die Schulbildung hatte, fanden Lehr- und Lernprozesse größtenteils online - über Fernunterricht und das virtuelle Klassenzimmer - statt, was die Schaffung wertvoller E-Learning-Ansätze und -Tools maßgeblich beeinflusst hat. Seit der Wiedereröffnung der Schulen profitieren viele LehrerInnen weiterhin von den zahlreichen Vorteilen der Online-Technologie und können so die Situation im Klassenzimmer und die Lernerfahrung für ihre SchülerInnen verbessern.

Das Flipped-Classroom-Modell (FCM) bietet einen SchülerInnen-zentrierten Ansatz für das Lehren und Lernen, das sowohl online als auch im Präsenzunterricht stattfindet. Somit handelt es sich um eine effektive Methode, welche die Vorteile der online verfügbaren digitalen Ressourcen nutzt. Genau genommen kehrt Flipped Learning den traditionellen Unterrichtsansatz insofern um, als sich die SchülerInnen bereits vor dem eigentlichen Unterricht mit (Online-) Unterrichts-Materialien auseinandersetzen, die den folgenden Unterricht in der Klasse ergänzen und somit Unterrichtszeit für weitere Inhalte freimachen können.

Neben einer Betrachtung der SchülerInnen-zentrierten Vorgehensweise des Flipped-Classroom-Ansatzes sollte die vorliegende Arbeit auch untersuchen, ob die genannte Unterrichtsform die Motivation der SchülerInnen positiv beeinflusst. Dabei wird der Lernprozess aus der Perspektive der Selbstbestimmungstheorie (SDT) betrachtet.

Die Makrotheorie der menschlichen Motivation postuliert, dass Menschen selbstbestimmter agieren, wenn drei psychologische Grundbedürfnisse erfüllt werden, nämlich jene nach Autonomie, Kompetenz und Verbundenheit. Flipped Learning ermöglicht es dem Lernenden einerseits, die Kontrolle über seine Lernumgebung und sein Lerntempo zu haben, stärkt aber auch das Gefühl der Fähigkeit und fördert die Interaktion und Zusammenarbeit mit Gleichaltrigen. Daher wurde die Hypothese aufgestellt, dass die innere Antriebskraft der SchülerInnen Im Zuge des Lernprozesses beim flipped Unterricht höher ist als bei einem non-flipped Unterricht.

Die Ergebnisse der Studie zeigen, dass der Einsatz von FCM im Kontext des österreichischen EFL -Unterrichts in der 11. Klasse (Sek. II) die internen Motivationsbedürfnisse

der Lernenden in den Bereichen Autonomie, Kompetenz und Verbundenheit erfüllen kann. Insbesondere im Hinblick auf die Selbstbestimmung der SchülerInnen zeigen die Ergebnisse der Studie, dass Jugendliche, die nach dem FCM betreut wurden, eine höhere Befriedigung erlebten als jene SchülerInnen, die traditionell unterrichtet wurden.

Chapter 1: Introduction
1.1 Rationale of the Study

The COVID-19 pandemic has forced an inevitable online shift in many social realms of society, one of them being education and schooling. Given the severe impact that the global crisis had on education, learning and teaching largely took place remotely via distance learning and the virtual classroom, which has significantly increased the use and demand for e-learning approaches and tools. In parallel with and anterior to the coronavirus pandemic, the perpetual development of digital technology and its pervasive function in education has enabled the conception of innovative learning approaches and environments that promote individualized and collaborative learning. Thus, it is a result of these two occurrences that educators are embracing the advantages technology has to offer in the classroom and adapting more student-centered approaches to teaching. In turn, the number of educators turning towards new ways of teaching and utilizing online resources to individualize and personalize learning and to support learners continues to increase. The online academic shift of the pandemic elicits the question of which aspects of remote and e-learning students have most profited from and which ones should, therefore, be carried over and implemented into future face-to-face classroom school settings. Independent of whether secondary schools choose to continue offering synchronous virtual classes post-pandemic, digital technology and rich online resources should continue to be taken advantage of and implemented by educators.

Technology-based models such as the flipped classroom (FCM), a form of blended learning in which education and instruction takes place both online and face-to-face, would be an effective strategy to achieve this. To be more specific, flipped learning inverts, or rather flips the traditional classroom approach, in which pupils are assigned (online) instructional resources that are to be engaged with before class and complement and enrich the subsequent in-class instruction, so as to free up time during the lesson to apply the new concepts in an interactive manner. In other words, what was traditionally taught and lectured by the teacher during class-time is grappled with and learned in advance and is the focus of the subsequent interactive, in-person lesson. In contrast with blended learning, flipped learning does not require the use of online learning

material; however, this research project will indeed utilize the rich educational e-resources available on the internet.

Moreover, due to the student-centered manner of the flipped classroom, the question as to whether this mode of instruction positively effects student motivation for the learning process was raised. The paper at hand, therefore, explores the effects of the flipped classroom on perceived student motivation from the perspective of self-determination theory (SDT), a macro-theory of human motivation, which posits that people are more self-determined, and, thus, autonomously motivated and self-regulated, when their three basic psychological needs are fulfilled and supported, i.e. *autonomy, competence, and relatedness*; the satisfaction of these three needs is associated with engagement, learning, performance, and well-being. Given the nature of flipped learning — having control of one's learning environment and pace, feeling capable and qualified, and interacting and collaborating more with peers during in-class lessons—it is postulated that the expression of all three components, i.e., the inner needs of students during the learning process, will be higher after a flipped than a non-flipped lesson.

Therefore, to sum up, the fulfillment of the three psychological factors that determine whether a person is inclined to being autonomously motivated: *competence, relatedness, and autonomy* — respectively, a learner's perception of being able to successfully complete the task, having choice and agency while completing in the task, and being psychologically connected to others while completing the task (Zainuddin & Perera 2019), constitute the SDT associated with FCM. Figure 1 depicts the conceptual framework of the study at hand, which outlines the three factors of the SDT in the context of the English foreign language (EFL) classroom using the FCM.
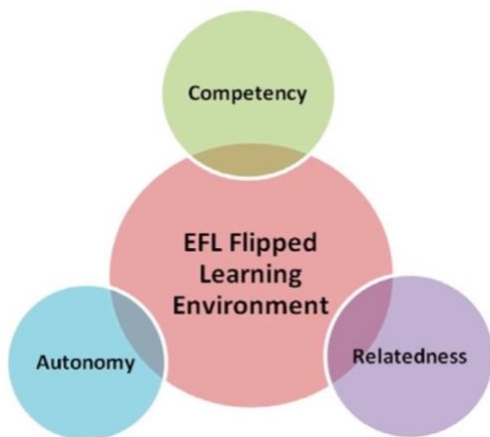
Figure 1: Conceptual framework of the study

1.2 Research Objective and Question

The aim of the present master's thesis is to analyze the effects that the FCM has on learners' perception of their levels of *competence, autonomy, and relatedness*. To achieve this aim, the main research question for this study was formulated as follows:

Does the exploitation of the flipped classroom model (FCM) contribute to enhancing students' perceived motivation, in terms of their sense of competence, autonomy, and relatedness, during the learning process?

Chapter 2: Flipped Classroom Model (FCM) for EFL Learning

The second chapter of the master's thesis provides the theoretical background of the flipped classroom model. Questions regarding the definition of the concept, comparisons to other models, misconceptions about the approach, the advantages and disadvantages of the FCM, and the flipped classroom in the context of the EFL classroom will be addressed and discussed.

2.1 Definition: What is the Flipped Classroom?

In a traditional classroom setting, a concept is typically introduced and taught by the teacher during the in-class lesson and later independently practiced and applied by the students at home in the form of homework. According to the Flipped Learning Network (2014), flipped learning is defined as "a pedagogical approach in which direct instruction moves from the group learning space [i.e., in the classroom] to the individual learning space [i.e., at home], and the resulting group space is transformed into a dynamic, interactive learning environment where the educator guides students as they apply concepts and engage creatively in the subject matter". In other words, like the name suggests, the traditional classroom learning structure is inverted or *flipped* on its head; thus, what was traditionally taught during the lesson is assigned in advance as homework, and what was traditionally assigned as homework is then applied and practiced in an collaborative classroom setting. Furthermore, the basic principle of the FCM is to reverse the learning space in which the two main elements of teaching — providing instructional input to learners and learners engaging with and applying the newly learned concept—take place by means of using digital media (Handke 2013). Therefore, teacher-lectured input in the classroom is replaced by online

complementary resources engaged with by the learners in advance outside of class time, which in turn increases the available in-class time for learners to interactively explore and apply the new concepts in the presence of a teacher. Moreover, as proposed by King (1993) almost 30 years ago in her article on education reform "From Sage on the Stage to Guide on the Side", the teacher no longer imparts or transfers subject knowledge to the student ('sage on the stage') but rather acts as a knowledge resource and guide ('guide on the side')(see figure 2). Therefore, the roles of the teacher and the students are also modified to adapt to the flexible learning environment of a flipped classroom. The FCM places students at the center of learning and promotes student engagement and responsibility, meaning students are expected to take responsibility for their own learning and come to class prepared for the lesson. In addition to planning quality and rich content and input, the teacher adopts the role of a facilitator who provides direct and individual feedback, creates an encouraging learning environment, manages the classroom, and monitors and assesses the students' progress.

Figure 2: The Traditional Classroom vs. The Flipped Classroom (Hartyányi 2018)

The input and course materials assigned by the teacher can take the form of demonstration videos, video lectures, presentations, quizzes, games, texts, blogs, podcasts, music, e-books, etc. and are to be engaged with independently before the subsequent lesson. As a result, teachers are able to provide learners with more scaffolding and feedback during the lesson and class time can be better utilized to apply the new concepts by means of interactive group-based activities, live problem solving, and peer collaboration; thus, creating a more student-centered learning

environment. Bishop and Verleger (2013) perceive the flipped classroom as "an educational technique that consists of two parts: interactive group learning activities inside the classroom, and direct computer-based individual instruction outside the classroom", which explicitly restricts its definition to "exclude designs that do not employ videos as an outside of the classroom activity" (2013: 5). However, the current study adopts a more comprehensive definition of the flipped classroom to encompass all learning resources not restricted to videos.

In the context of an Austrian upper secondary school, the flipped classroom could be applied in which a teacher creates an instructional video, by means of e-learning platform tools such as Teams or Moodle, or curates the material by assigning a premade video from online platforms such as YouTube or TED Talks. The students can then exert autonomy by managing their own learning, watching the video as many times as they need to, and deciding when and where they complete the assignment. The pre-class work may entail that students take notes on the subject matter, identify the essential aspects of the video, and write down any questions for the teacher. As a follow-up activity to ensure comprehension, promote interaction with their peers, and encourage completion, the students may have to complete a task on Moodle or post in the online forum. During the following in-class lesson, the students will then work together with their classmates to deepen their understanding of the subject matter dealt with in the pre-class video and/or materials by means of collaborative activities and exercises. As a result, the students are able to interact with their peers, use the teacher as a resource, ask any questions that arise during the process and receive immediate feedback. This would otherwise not be possible in the traditional classroom where learners are typically expected to work on their piece of writing independently outside of class without the support of their peers or teacher.

2.2 Misconceptions about the Flipped Classroom

As mentioned above, the flipped classroom differentiates itself from the traditional classroom by two main features: 1) direct instruction is now completed individually outside the classroom before class by means of online computer-based resources and 2) learners further interact with the material by means of group activities in the classroom (Bishop & Verleger 2013 :5). Thus, student-centered activities such as group work, discussions, and problem solving during class time, replace teacher-centered input.

The two aforementioned characteristics are essential aspects of the flipped classroom; thus, simply assigning optional, additional reading for ambitious students or having students prepare an introductory text for the upcoming lesson, and otherwise adopting a traditional teaching approach, is not considered flipping the classroom (Schäfer 2012: 6). The reason for this is that additional readings can be read after the class rather than in advance and the completion of assigned materials is not optional in a flipped lesson. The success of the flipped classroom approach relies on the fact that the materials are assigned and engaged with beforehand so that learners are able to effectively apply the material during active and collaborative activities; thus, students are required to take responsibility for their own learning. This approach also gives students the opportunity to learn about the topic at their own speed outside of regular classroom time, and effectively prepares students for material-dependent in-class discussions and activities that emphasize higher level thinking skills (Hartyányi 2018). Furthermore, introductory and additionally assigned readings do not qualify as direct instruction completed outside of the classroom, as they are typically not tailored to the needs and the abilities of the learners (Schäfer 2012: 6). Learners also tend not to grasp the content of such readings and given that one's participation in the lesson is not dependent on whether the text was read, many learners may choose not to read the texts at all; hence, the in-class lessons cannot be considered flipped. A truly flipped environment relies on the carefully crafted creation or selection of content-related materials that students must engage with before the subsequent class in order to be able to participate and successfully perform in the in-class student-centered activities. Thus, in a flipped classroom it is much harder for learners to conceal whether they have engaged with the assigned input, as it is a prerequisite for their active participation during the in-class phase of the FCM.

Moreover, it should also be noted that the flipped classroom is not synonymous with online videos or an online course (Bergmann et al. 2013: 2). While quality and intentional input that prepares learners for the lesson is vital to the flipped classroom, and while this input may take the form of self-made or pre-made instructional videos, digital media does not replace the teacher; quite the contrary, it is an extension of the teacher. Online courses that replace the need for a teacher are not considered flipped classrooms (Bergmann et al. 2013: 2); teacher-centered teaching is instead replaced with student-centered teaching and learning.

The effective execution of a flipped classroom relies heavily on the expertise of the teacher and the in-class phase, in which teachers create the appropriate student-centered learning environment, interact with students, provide individual and specific feedback, act as a resource, observe and assess their students' progress and understanding of the topic, and reflect on their own teaching (Hamdan et al. 2013). The flipped classroom is not merely a way to lessen the teacher's workload; in fact, a lot of time and energy goes into selecting and creating the instructional resources for the flipped lesson in order to prepare learners for the in-class activities, in which teachers are active participants. Furthermore, consuming relevant digital media in advance provides flexibility, in that class time is optimized for teachers to implement rich learning activities to extend their students' learning experiences and provide more support during the lesson.

Finally, another common misconception about the FCM is that learners spend the entire class staring at a computer screen and work in isolation (Bergmann et al. 2013: 3). Conversely, students engage with the material at home in their own time, which frees up the lesson to take part in a variety of interactive and collaborate activities with their peers and the teacher that deepen their understanding of the topic. The pre-class work takes advantage of rich digital resources as a form of direct-instruction and is completed individually as the assignments only require lower order thinking skills (remembering and understanding); in-class group activities, which promote higher order thinking skills, are, thus, completed in the presence of the teacher who can provide support and encouragement.

2.3 Comparison to other Models

In order to fully grasp the concept of the flipped classroom method, it is important to be able to differentiate it from other similar models such as blended learning and flipped learning. Both of these terms are commonly used in lieu of one another and of the flipped classroom. With that being said, the Master's thesis at hand focuses solely on the implementation and advantages of the flipped classroom and not that of blended or flipped learning.

2.3.1 Blended Learning

Most importantly, blended learning and the flipped classroom are not one and the same. While both methods involve both face-to-face and online interaction, unlike the FCM, online material does not replace in-person direct instruction (Pappas 2016). In a blended learning environment, the teacher still provides traditional in-class lectures and instruction, and, additionally, takes advantage of online resources as a way to enhance learning and the richness of information for students (Capone et al. 2017). For example, the teacher may have the students complete an online group research project on the subject matter currently being discussed in class as a way to supplement their overall understanding and comprehension of that topic. Therefore, the online materials do not replace traditional teacher instruction, instead the online and in-class learning environments are interdependent, or *blended* (Pappas 2016). In contrast, the online instructional aspect of a FCM lesson acts as a form of scaffolding and replaces the need for further lecture-based instruction by the teacher; in-class group activities then support students in practicing the new concepts learned in the online course materials. In summary, the main difference between the flipped classroom and blended learning is that blended learning works collaboratively with a traditional classroom, in other words, direct instruction is delivered by both the teacher and online eLearning technology, whereas the flipped classroom works to eliminate the traditional classroom.

2.3.2 Flipped Learning

The flipped classroom is also commonly interchanged with flipped learning; however, while both educational strategies transfer the traditional in-class instruction to the individual learning space, freeing up class-time for more valuable student-centered activities, according to flipped learning pioneers Bergmann and Sams, flipped learning takes the flipped class to the next level (2015). The two educators claim that "flipped learning is the second iteration of the flipped classroom, where teachers move beyond the basic flipped class 101 model to more content rich, inquiry-driven, and project-based classes" (Bergmann & Sams 2015: 7). Given that both methods flip the traditional classroom on its head, I would argue that flipped learning is a form of the flipped classroom, albeit, with deeper learning strategies and more experienced 'flippers', i.e., teachers who have ample experience flipping their classrooms. Flipped learning leaders distinguish between these terms and

claim that they are not interchangeable, as "flipping a class can, but does not necessarily, lead to flipped Learning" (FLN 2014). To be considered flipped learning, a flipped classroom must integrate the four pillars of F-L-I-P into their teaching: flexible environment, learning culture, intentional content, professional educator (FLN 2014) (see figure 3):

*Figure 3: The Four Pillars of F-L-I-P (*FLN 2014)

Pillar 1: Flexible environment: Teachers offer different learning modes to learn content depending on students' needs and lesson or unit. Furthermore, teachers monitor and observe students to make necessary adjustments where necessary. Teachers also create learning spaces that give students opportunities to reflect on their learning.

Pillar 2: Learning culture: Teachers establish a student-centered culture in which learners interact in meaningful activities and construct their own knowledge. To ensure success for all students, teachers provide scaffolding and make activities accessible to all via differentiation and feedback.

Pillar 3: Intentional content: Teachers create or curate relevant material (typically videos) for their learners to maximize classroom time. Furthermore, teachers differentiate the material, when necessary, to make it accessible to all students.

Pillar 4: Professional educator: Teachers provide learners with relevant, direct feedback during individual, group, and class work. Furthermore, teachers observe and monitor students to inform their future teaching as well as reflect with other educators to develop their teaching.

To reiterate, in order to be regarded as flipped learning, the aforementioned four pillars of F-L-I-P must be incorporated into the teaching and learning approach. If the lesson is merely flipped or inverted, i.e., students review a new grammar structure at home and then apply this knowledge by independently filling out a worksheet in class, the lesson does not fulfill the four essential elements of a flipped learning environment. Therefore, a flipped classroom does not qualify as flipped learning only on the basis of its flipped or inverted nature, instead a flipped classroom can be deemed a flipped learning environment only if it fulfills the four F-L-I-P pillars. Despite this critical difference, hereinafter the terms flipped classroom and flipped learning will nevertheless be used synonymously to avoid confusion and for simplicity reasons.

2.4 Advantages of the Flipped Classroom

The following section addresses and reiterates the potential advantages of the FCM and reasons as to why teachers should consider flipping their lessons. While the benefits presented below are relevant to most school subjects, EFL-specific examples are given when relevant and applicable.

Promotes Student-centered learning

The main shift that is made when a teacher flips their traditional classroom is the decentralization of the teacher as the main source of information and knowledge (Thakare 2018). In contrast to conventional teacher-centered instruction, in which students are treated as "empty vessels that passively absorb information" (Betihavas et al. 2016: 16), flipped classrooms revolve around the needs and unique learning styles of students rather than the teacher's input. Thus, researchers agree that the flipped classroom is a more than suitable environment for student-centered theories and methods (Betihavas et al. 2016). In flipped classrooms, the teacher is no longer the 'sage on the stage', i.e., the expert who possesses the knowledge and transfers it to the passive learner, who simply memorizes it and reproduces it later, instead the teacher acts as a 'guide on the side', who facilitates learning and the student's interaction with the content and with each other (King 1993: 30). Furthermore, the student-centered pedagogical framework that guides the design of the in-class activities embodies learning theories such as active learning, peer-assisted learning, problem-based learning, and collaborative learning (Bishop & Verleger 2013).

Active learning, which is determined through constructionist theory, is defined as "any instructional method that engages students in the learning process" (Prince 2004: 223), meaning learners are no longer passive listeners that absorb and assimilate information but rather active participants (Davies 2013: 565). This definition is, however, too broad and would otherwise include traditional teacher-centered classroom learning activities such taking notes, asking follow-up questions, and reflection; thus, these methods are intentionally excluded from the definition (Bishop & Verleger 2013). Active learning can better be described as a dynamic process that requires learners to actively engage with material in order to develop and organize knowledge in an intelligible way (Mayer 2004). Active learning is nonetheless a broad category and includes other learning techniques and methods such as problem-based learning, peer-assisted, and collaborative learning. Many proponents of the FCM argue that the success of the model is due to it being grounded in active learning pedagogy (Jensen et al. 2015).

Peer-assisted learning is described as "the acquisition of knowledge and skills through active helping and supporting among status equals or matched companions" (Topping & Ehly 1998: 1). The flipped classroom constructs an environment that facilitates peer-assisted learning activities both during in-class activities (i.e., cooperating to complete group projects and assignments, collaboratively solving problems) and outside of class activities (i.e., discussion boards/forums on e-learning platforms or social networking groups) (Nederveld & Berge 2015). Teachers may also pair students of different abilities and understanding together to support each other and work together, called peer tutoring (Bishop & Verleger 2013).

Problem-based learning (PBL) is aimed at the following six goals: 1) learning places students at the center; 2) learning occurs in small student groups; 3) teachers act as facilitators or guides during the learning process; 4) problems form the organizing focus and stimulus for learning; 5) problems are the vehicle for the development of problem-solving skills; and 6) new information is acquired by means of self-directed learning (Barrows 1996). These goals align seamlessly with that of the flipped classroom in that in-class lessons are student-centered and revolve around interactive group-work with the support of the teacher, and out of class learning is self-directed and autonomy supportive. Moreover, in PBL, a problem is at the center of the activity, which offers students an incentive to learn and facilitate the development of problem-solving skills.

Collaborative and cooperative learning are, unlike independent learning, terms that describe forms of student-student interaction. As a result of many commonalities, these terms are often conflated; however, there are unique characteristics that distinguish these learning techniques from one another. According to McInnerney and Roberts (2009: 205), "collaborative is an adjective that implies working in a group of two or more to achieve a common goal, while respecting each individual's contribution to the whole; whereas, "cooperative is an adjective meaning to work or act together as one to achieve a common goal, while tending to de-emphasize the input of particular individuals". Therefore, while both methods may take place among students within groups in and outside of the classroom, collaborative learning differentiates itself from cooperative learning in that the group works together towards a common goal and each group member contributes to all important aspects of the group's work; in cooperative learning groups, the work tends to be divided up among group members, completed individually, but submitted together as a whole (Graham & Misanchuk 2009: 183-184). Dillenbourg suggests that "in collaboration, partners do the work 'together,'" while "in cooperation, partners split the work, solve sub-tasks individually and then assemble the partial results into the final output" (1999: 11). Peer interaction is considered cooperative if it follows two simple rules: the interaction must promote positive interdependence and individual accountability among group members (Millis and Cottel, 1998); thus, cooperative learning can simultaneously promote both independence and interaction. Positive interdependence refers to group members understanding that the success of the individual relies on the success of the group and individual accountability means that the contribution of each group member is evaluated as a way to prevent social loafing (Burke & Fedorek 2017) Social loafing refers to the observed psychological phenomenon that individual members of a group contribute less when working in a group environment (Martins 2021). However, given the nature of the collaborative learning approach, it may be more engaging and interactive and emphasize more student-student interaction in the learning process given that the work is not divided up among the individual group members.

In the context of the EFL classroom, the active learning methods mentioned above which promote a learner-centered environment can effortlessly be applied to the flipped classroom given how much available time is leftover as a result of the direct instruction taking place in the

individual learning space. For instance, a collaborative learning activity could entail a small group of learners writing a blog post together on a chosen topic. In advance, during the pre-class assignment, the students would be required to familiarize themselves with the genre of blog posts and completing a follow-up task to ensure comprehension. The lesson would take place in the computer lab and students would apply their knowledge on the genre by working together to write the text, determine the text's purpose and audience, come up with a catchy title, find appropriate pictures, and collaborate on the design and appearance.

Optimizes Class time

Traditional teacher-led instruction typically involves the frontal teaching of new concepts during synchronous in-class lessons. As mentioned before, the teacher acts as the keeper of knowledge and information ('sage on the stage') that is then transferred to the learners by means of lectures and course materials (McInnerney & Roberts 2009: 204). Contrary to the conventional classroom, the flipped teacher uses digital media, along with other materials, to teach students new concepts and complete tasks individually, at their own pace, and at locations convenient to them, thereby personalizing instruction and freeing up class time to be used more efficiently (Davies 2013). The available time during the lesson gives students the opportunity to "apply this new found knowledge through [interactive] problem-based learning exercises in order to facilitate their critical thinking and deep learning of the subject matter" (Moraros et al. 2015: 2). Thus, as a result of the available classroom time, the student-student and student-teacher interaction and engagement increases as learners can work together and engage in collaborative learning. By comparison, lecture-based, teacher-centered, lessons often do not provide students with enough opportunity to apply the new concepts in class, instead they are assigned as homework, resulting in students receiving less support and assistance from their teacher or peers while engaging in deeper learning (Moraros et al. 2015: 2). Furthermore, the format of the flipped classroom gives teachers "more flexibility to cover a wider range and depth of material, provide in-class applied learning opportunities based on problem-solving activities and offer timely feedback and guidance to students" (Moraros et al. 2015: 9).

With regards to the EFL classroom situation, EFL teachers can, for example, create their own videos or curate other pre-recorded digital media on the upcoming lesson's topic (i.e. global

warming, world hunger, reported speech etc.) to avoid losing time during the lesson. Students have to take notes on the video, answer comprehension questions or complete a follow-up task, and potentially interact with their classmates on a e-learning platform such as Moodle to exchange ideas and opinions on the topic.

Develops Higher-order skills

When materials are dealt with in advance before class, more face-to-face class-time is made available, which provides teachers with more time to conduct group activities focusing on active learning that promote student interaction and higher order thinking skills, such as creating, analyzing and, evaluating (Hartyányi 2018: 7). Higher order thinking skills are based on Bloom's taxonomy pyramid (Bloom et al. 1956) which serves as a way to classify cognitive tasks based on their level of difficulty or complexity. For a visual and breakdown of Bloom's taxonomy pyramid, see figure 4. In conventional lessons, learners are typically introduced to new concepts by means of lectures during class-time, which focuses on the bottom half of the pyramid, i.e. understanding and remembering information; students then get assigned homework and/or projects to complete outside of class that apply the new knowledge and, thus, focus on the upper half of Bloom's taxonomy, i.e., creation, evaluation, and analysis of the new concept (Talbert 2019a). When class time is exclusively spent on the bottom half of the pyramid, higher order thinking skills are left to be developed at home without teacher or peer support, which can be challenging and overwhelming for many learners, especially those students who do not receive support at home. Thus, another worthy advantage of the FCM is that the lower, and less demanding, order thinking skills (remembering and understanding) are now reserved for self-instruction outside of class with the support of digital media and materials. As a result, class time can be used to develop the higher order thinking skills, "the most complex tasks, which are best served by having a rich social environment in which to work (i.e. class time)" (Talbert 2019a). Teachers are, thus, advantageously available to guide and assist students during the more difficult skills at the top half of the taxonomy in the classroom.
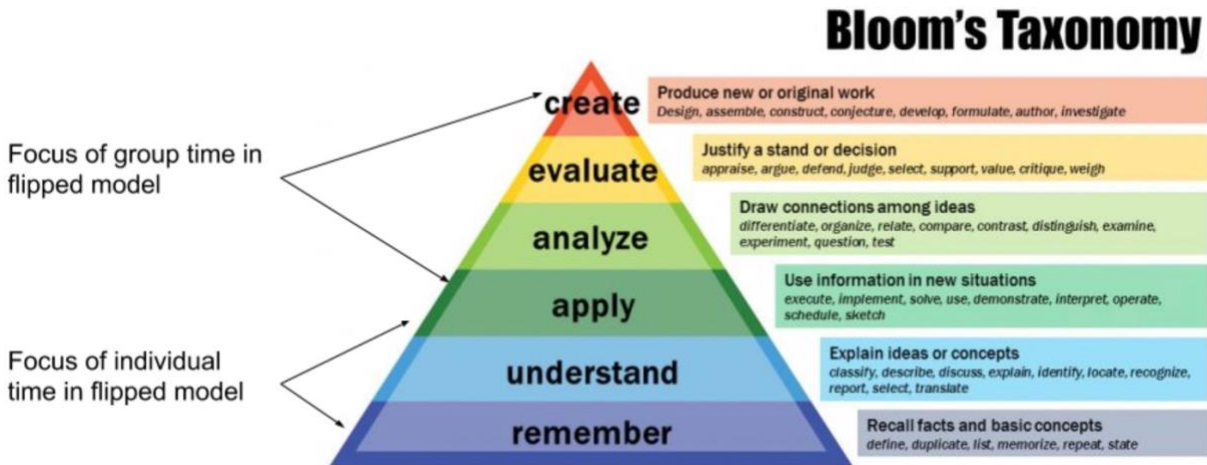
Figure 4: Bloom's Taxonomy (Talbert 2019a)

According to Talbert (2019a), when applying Bloom's taxonomy, it is best to break up the pyramid into three sections: pre-class work, in-class work, and post-class work. Pre-class work focuses on remembering and understanding new information, is learner-directed, and takes place directly before the following class. In-class active learning activities build on what was done in the pre-class work and focus mainly on the middle third of the pyramid, applying and analyzing the concepts. These tasks are the "simplest extensions of the basics and will be the place where students need the most immediate help" (Talbert 2019a). Finally, depending on the amount of classroom time available, the uppermost third of the pyramid that focus on the thinking skills 'evaluation' and 'creation' can then be performed post-class, as there may not be enough time during the lesson to target these skills. While this division of tasks may prevent teachers from packing too much into one lesson, this breakdown of the pyramid should be viewed as a guideline for teachers and applied flexibly. Some lessons, depending on the subject matter, may very well be able to develop all three higher order thinking skills; while others may require post-class work to be completed at home. However, in order to provide students with as much in-class guidance, support and scaffolding, teachers should aim, when appropriate, to focus on the development of the higher order thinking skills.

Furthermore, Talbert (2019b) advises teachers to create and divide up learning objectives for their flipped lessons according to Bloom's Taxonomy, i.e., 'basic' and 'advanced' objectives.

Pre-class activities should only focus on 'basic objectives' which develop the lower two levels of the pyramid——recalling simple facts and explaining or categorizing basic concepts; in the context of a flipped classroom environment, these basic objectives should be fulfilled before class and not during class. When the pre-class work is limited to the basics, it is ensured that the students will be capable of completing it and decreases the likelihood of the teacher having to reteach the basics during class time. In-class and after-class activities should, thus, focus on 'advanced objectives' to develop the middle and upper third of Bloom's taxonomy——applying the knowledge and drawing connections between the ideas and evaluating ideas and producing original work. To ensure the most effective use of class time, class time should not be used to reteach the basic concepts, just as pre-class time should not be used to practice higher order thinking skills.

To apply Talbert's suggested breakdown of Bloom's taxonomy to an EFL-specific example: during the pre-class work, EFL students are presented with the new text type 'reports'; learners have to watch a video on its structure, take notes, and then compare their notes with a report checklist from their student book. During the lesson, in small groups students compare their notes with their partner/ group, and then collaborate to apply this new information and create an outline of a report on a group-selected topic. Finally, after the lesson, students then use the outline to write a report individually as homework. Depending on how much time there is available during the lesson, students are able to begin working on their draft in the presence of their teacher so they can ask questions and receive feedback where necessary.

An EFL-specific example of how teachers can divide Bloom's taxonomy in half and focus independent learning tasks on the lower order thinking skills——remember, understand, and apply —— and in-class activities on the higher order thinking skills —— analyze, evaluate, create. As preparation for the lesson, students are assigned a video on how to form the past perfect tense. Learners are expected to write down the structure, memorize it, and then apply this structure by completing an online grammar quiz. During the main activity of the flipped lesson, students work in groups and play a game that requires them to state which tense the verb is in and to explain how they know this (i.e., explain the grammar structure rule). Next, students play a follow-up game in which they state a verb in its infinite form and the group members have to create their own

sentences in the past form. Finally, in groups learners have to create their own fictions stories using the past perfect tense.

Increases Student-Student and Teacher-Student Interaction

Another positive feature of the flipped classroom environment is the increase in student-student and student-teacher interaction made possible by the available class-time (Akçayır & Akçayır 2018). Bergmann and Sams (2012) attribute the increase in student-teacher interaction to the modified role of the instructor from "presenter of content to learning coach". In contrast with teacher-centered approaches, the educator takes on the role of a 'guide', observing, supporting students in the learning process, and providing feedback and scaffolding where necessary (Nederveld & Berge 2015: 163); thus, increasing and enhancing student-teacher interaction. Because flipped classrooms outsource direct instruction to the individual learning space, the group learning environment becomes dynamic and interactive and a space where learners can collaboratively explore, apply, create, and problem-solve (Nederveld & Berge 2015: 163). In the flipped classroom, learners spend significantly more time interacting with their peers on group activities, have more opportunities to lean on their teacher and ask for help when problems arise, and receive instant feedback on their work. In the traditional EFL classroom, learners are typically expected to complete (writing) assignments and projects at home and have far fewer opportunities to speak the target language with their peers; thus, as a result of the flip, students are put in more situations to practice communicating in the target language and can receive instant and individualized feedback on their written and spoken performances from both their teachers and peers. Furthermore, as a result of implementing active learning methods into the EFL classroom that constitute the student-centered pedagogical framework, more peer-to-peer interaction can be offered to increase the development of higher-order skills by means of analysis, evaluation, and creation (Bloom et al. 1956). Educators can then dedicate more time during the lesson to ensure knowledge acquisition and understanding (Hartyányi 2018: 13). Moreover, the increase in peer-peer interaction provides learners with a sense of community and increases social interaction. Learners receive additional support as they can lean on and learn from their group members.

Fosters Learner Autonomy

The flipped classroom establishes an environment that underscores self-paced autonomous and self-directed learning; *autonomy* in this context suggests that students take ownership of their learning by learning the content independently and coming to class prepared (Zainuddin 2018). According to Hedge, learner a*utonomy* is synonymous with self-directed learning and can be defined by the following characteristics. Self-directed learners (2000: 77):
- know their needs and work productively with the teacher towards the achievement of their objectives
- learn both inside and outside the classroom
- can take classroom-based material and can build on it
- know how to use resources independently
- learn with active thinking
- adjust their learning strategies when necessary to improve learning
- manage and divide the time in learning properly
- don't think the teacher is a god who can give them ability to master the language

In order for students to develop into autonomous, self-directed learners, they need to be given the opportunity to develop these skills and to be encouraged by their teachers to take responsibility for their own learning. Little claims that "learners develop their autonomy through 'individual-cognitive' and 'social-interactive' processes (1991: 4); due to the duality of the individual and group learning space, these two processes can be promoted by means of the flipped classroom. For example, individual-cognitive processes are trained during the independent preparatory activities, whereas the social-interactive processes are formed during the in-class group-based and peer collaboration activities. Thus, the student-centered, inverted nature of the FCM offers the necessary structure for self-directed learning and gives learners the opportunity to "develop their own critical, creative and problem-solving skills and autonomy in learning" (Gavranović 2017: 500).

Furthermore, given the inverted nature of instruction, i.e., direct instruction taking place outside of the classroom via digital media, students have more control over there learning, in that they are able to work through the material or view video content at their own pace and interact

with course materials as many times as necessary. Thus, the FCM individualizes the traditional learning classroom, in that learners are free to decide where, when, and at what pace they complete the pre-class phase, familiarizing them with the idea of working autonomously and taking responsibility for one's learning. Students can, in turn, choose how often they interact with the new input: some students may only need to watch a video or read a text once to grasp a concept, while others may need to review the information several times in order to successfully complete the corresponding pre-class self-study task.

Moreover, the FCM promotes and develops students' independent learning skills (Oogarah-Pratap & Gungadeen 2016), during both the independent and in-class learning phases of FCM. According to Biggs and Tang (2011), there are three main independent learning skills, namely generic study skills (time-management, taking notes, managing deadlines, prioritization), content-specific study skills (reading for meaning, active reading, creating mind maps), and metacognitive skills (problem-solving skills, self-monitoring, learning from self-assessment and peers). Generic and content-specific study skills are, thus, practiced and applied outside of class while preparing the necessary material, whereas metacognitive skills are developed during the in-class peer-based activities that promote knowledge construction, higher level thinking skills, and peer-learning.

In the context of an EFL lesson, learners may be asked to familiarize themselves with a new grammar structure by means of e-learning videos and an online interactive game. The online game acts as a method for learners to apply their new knowledge of the grammar structure. In order to correctly answer a predetermined number of questions, some EFL learners may only need to watch the informative video once, whereas other learners way need to review the video a few times and refer to their notes; thus, based on their learning needs and abilities, EFL learners can engage with the material accordingly.

Increases Student Engagement and Motivation

According to The Glossary of Education Reform, student engagement refers to "the degree of attention, curiosity, interest, optimism, and passion that students show when they are learning or being taught, which extends to the level of motivation they have to learn and progress in their education." (Student, 2016). According to Schlechty (2001), engaged students persevere when

faced with obstructions and challenges, are actively involved in their work, and take noticeable pride in completing a task. Student engagement is also denoted as a "student's willingness, need, desire and compulsion to participate in, and be successful in, the learning process promoting higher level thinking for enduring understanding" (Bomia et al. 1997: 9). With regards to student motivation, the term can be defined as "students' desire to participate in the learning process [and] concerns the reasons or goals that underlie their involvement or non-involvement in academic activities" (Lumsden 1994). Although students may be similarly motivated to engage in an activity, the source of their motivation may be different, i.e., whether a student is intrinsically or extrinsically motivated. Given that the second aspect of this master's thesis focuses on motivation, this topic will be further elaborated in Chapter 3: Self-Determination Theory (SDT) for Language Learning Motivation.

Furthermore, as expressed in previous sections, the FCM redefines the traditional teacher-learner dynamic and puts learning rather than teaching at the forefront. Thus, it is not surprising that the flipped classroom is founded in active learning pedagogy which actively engages the learner in the learning process (Jensen et al. 2015). As mentioned above, active learning encourages learners to interactively grapple with course material with the goal of promoting deep learning and understanding (Mayer 2004). Deep learning can be accomplished through cooperative and collaborative learning (Burke & Fedorek 2017: 12) — two methods of active learning that describe a form of peer-peer interaction. Due to the nature of the active learning environment, flipped classrooms are found to provide more student engagement and student satisfaction (Burke & Fedorek 2017: 12). Machemer and Crawford (2007) also associate active learning with higher student motivation, critical thinking skills, and confidence. Based on a study examining students' perceptions of flipped classroom education, the results revealed that the positive attitude experienced towards the flipped classroom was "strongly correlated to perceptions of increased motivation, engagement, increased learning, and effective learning" (Nouri 2016: 1). Furthermore, Tucker (2012) suggests that, in high school settings, the flipped model leads to better relationships between students and the instructor, greater student engagement, and higher motivation. Hedge identifies the following features of a learning environment that motivate learners: "variety of input (listening, reading), of pace and intensity, of

interaction, and of activity to allow learners to work in their own style and with their own strategies" (2002: 24). The aforementioned features of a motivating learning environment are all found in the flipped classroom, which may elucidate any positive correlations between the FCM and learner motivation.

2.5 Challenges of the Flipped Classroom

Despite the multiple advantages of the FCM, there is no teaching model that is flawless. The following section discusses the potential disadvantages of the flipped classroom approach in and outside of the EFL classroom and the available solutions and workarounds to counteract the challenges.

Unprepared Students

In order for any teaching/learning method to be successful, learners have to be on board and willing to cooperate. In the setting of an EFL lesson, if students are unwilling to participate in a roleplay activity, then the activity will not be successful. The cooperation of the learners is essential and necessary in any classroom. However, student cooperation is even more critical in the flipped classroom. In the traditional classroom, teachers address a new concept or topic by lecturing at the front of the class and then have learners apply the concept by completing in-class exercises. Thus, students do not need to come to class prepared for the lesson's topic as the content is discussed and taught at the beginning of the respective lesson. Contrastingly, the flipped classroom requires students to come to class prepared and ready to learn. "Because 'flipping' the classroom relies on the agency of the student to participate in active learning and application, the student must have attempted to learn the material prior to class time" (Burke & Fedorek 2017: 21), otherwise the dynamic, interactive group-space will not exist or will fail. Unfortunately, the reality of the situation is that students do not always come to class prepared. As Kim et al. found, unprepared students is one of the biggest challenges of flipped classrooms (2014).

Unfortunately, there will always be students who do not do their 'homework' and will show up to class unprepared, no matter if the lesson is flipped or not. The impact of unprepared students in a flipped lesson is unfortunately more significant than in a traditional classroom given that the learners will not be able to contribute during the activities and will rely on their peers to

explain the background information. Should no one or the majority of students come to class unprepared, the in-class activities will not be fully realized as they are dependent on the understanding of the learning content assigned beforehand. For the sake of 'saving' the lesson, the teacher would have to 'unflip' the lesson and teach the learning content to the learners. If the majority of learners refuse to complete the pre-class homework, then a flipped classroom is more or less impossible, as it relies on the students' willingness to come to class prepared to work.

So how can teachers overcome this obstacle and motivate their students to come to class prepared? Firstly, in order to expect learners to come to class prepared and buy in to the new learning method, it is imperative that teachers explain how students will benefit from its inverted structure and the significance of the assigned pre-class work (Kuntz 2016). This means explaining to students the value of becoming active learners rather than passive listeners and how the flipped classroom enables students to work at their own pace while having unrestricted access to teacher and peer support during the lessons (Kuntz 2016). It is also critical for the teacher to make their expectations of what it means to come to class prepared unambiguous (Honeycutt 2016). If students are assigned a video to watch before class, does being prepared simply mean watching the video, or does it require them to take notes and write down key points while watching? Should they answer questions before, during, or after the video? Do students need to fill out a worksheet or create a mind map based on the video? All of these details are necessary and should be made clear to the students in advance; this will also make it easier for the teacher to check whether or not students have indeed completed the supplementary tasks.

Furthermore, reluctant and unenthused students can be motivated by holding them accountable for their learning. This can be carried into effect by connecting the pre-class assignment to the beginning of in-class time, what Honeycutt (2019) calls 'focusing activities', which simultaneously engage students in the first 5 minutes of class. For example, creating brief in-class quizzes at the start of class or pre-class tasks that cover the assigned readings or video as a way to focus the learner and assess whether the learners have done the work. Another strategy that fosters accountability, for example, would be to use the completed pre-class task as a 'ticket' to enter the classroom or to have students note down three questions they had from the assigned video or reading (with their respective time stamps or page numbers) and use this as their 'ticket'

(Honeycutt 2016). These questions can also be further used to review for a test, start a class/group discussion, or for a small group focus activity (Honeycutt 2016). If the pre-class assignment involved taking sides on two opposing views, then the initial in-class activity could involve answering a question or responding to a comment that they have to take a stance on. For instance, the teacher could write down the names of the two opposing researchers on the whiteboard and ask students to write on a sticky note which researcher had the best arguments and one reason why. Finally, an accountability technique called 'pass-the-problem cheat sheet' for a lesson that involves multiple problems, cases, or scenarios that have to be solved could be implemented, in which students are asked to come to class with a one-page 'cheat-sheet' on the pre-class assignment (Honeycutt 2016); this resource is the only thing they can use to solve the problem. The 'cheat-sheet' can simultaneously be used as a 'ticket to enter' and students can collaborate with their one-pagers to try and solve the problem. Two final 'focusing activities' described by Honeycutt (2019) that can be implemented at the start of class include an ordering and drawing exercise. In the former exercise, the learners have to put a list into the correct order based on any type of criteria such as weak to strong, light to heavy, old to new, high to low etc.; in the latter, the students are prompted to draw a process, create a diagram or illustrate a main point based on the pre-class work. In the EFL classroom, students could be asked to correctly order the features of a report or create a comic strip of the main character's journey in a short story.

Additionally, as shared in the Webinar held by Bergmann (2017) and the Flipped Learning Global Initiative on how to successfully get students to come to the flipped classroom prepared, students who prefer the interactive aspects of the lesson like roleplays, group discussions, and team-based activities will most likely be motivated to complete the pre-class tasks and feel left out when they are not able to participate during class. Thus, teachers should aim at creating engaging, relaxed, and interactive group space activities that relate to the individual space activities, otherwise the value of the pre-class work will not be appreciated and overlooked completely. The more the activities are structured to be authentic and facilitative of peer interaction, the more likely students will want to participate (Bergmann 2017). Similarly to traditional homework, teachers can assign a percentage of the students' grades to the completion of the pre-lesson assignments and/or entrance quiz over the material; assigning points can support extrinsically

motivated students and, consequently, hold students accountable (Rassmusen 2018). Talbert (2019b), however, warns teachers to tread lightly with this tactic, as grading too strictly can hinder intrinsic motivation and may backfire on students' willingness to participate and come to class prepared. Thus, while teacher's assessment may encourage student accountability, teachers should be aware of the possible detrimental effects.

In summary, regardless of which teaching approach is implemented, teachers cannot force their students to come to class prepared and there will always be students who choose not to do the work. However, there are strategies that teachers can implement to motivate their students and hold them accountable. A final recommendation would be to create a relaxed, respectful, and supportive environment that encourages students to want to be able to participate in the flipped classroom to their fullest ability; rather than penalizing or embarrassing students for not coming prepared, students will understand the value of doing the pre-class assignments when they instead have to work on their own to catch up on the preparation work during class time while their classmates are collaborating and engaging with their friends and peers (Bergmann 2017).

Time Consuming, Higher Workload

Whether teachers create instructional videos of themselves teaching, record and narrate their computer desktops using screencast to create how-to videos, tutorials, or e-learning videos, or meticulously curate video lessons using respectable and appropriate internet sites (Hamdan et al. 2013), developing a flipped classroom environment for the first time can be very time consuming as a lot of thought and energy goes into its preparation. Additionally, self-made videos can be made even more interactive by adding intermittent interactive elements and comprehension questions that have to be answered by the pupils before they can continue watching. Talbert similarly points out that the planning of flipped classroom lessons require "detailed enumeration of learning objectives, careful planning and sequencing of activities, and (especially) the creation of high-quality materials for students to learn with outside of class" (2019b). Therefore, the question arises as to how much more time consuming the realization of the FCM is compared to the traditional classroom approach?

Mehring (2018: 3) recognises that an increase in workload for both students and teachers as a result of the flip is a challenge that will be encountered. In a study conducted by Mehring

(2015), students revealed that the increase in workload was a shortcoming of the flipped classroom. Many learners were alarmed by the amount of preparation that needs to be completed before the subsequent lesson; thus, Mehring (2018: 3) proposes that lessons should be flipped progressively so as not to overwhelm students and to gradually ease them into the new classroom arrangement. One way to counteract this perception would be to assign less preparatory homework in the beginning and to slowly increase the amount (2018: 3). In addition, teachers should demonstrate how to access and view instructional videos, how to use discussion forums, and to clearly explain what is expected of the students in terms of the pre-class homework (2018: 4). Furthermore, teachers will also experience an increase in workload due to increased preparation, creating and curating quality pre-class materials, and redesigning the face-to-face learning space (Bennett 2013); therefore, the implementation of the FCM should be done step-by-step for the benefit of both learners and teachers.

With that being said, the flipped classroom is often falsely perceived as the teacher being replaced with students watching video lectures. This is, however, only the tip of the iceberg, as flipping the classroom requires more than just sending students instructional content to watch; the resulting available time during the lesson should be utilized for engaging group activities, active problem solving, and discussing concepts (Basal 2015: 29). Regarding preparation time, it should be mentioned that flipped learning does not require the use of video. Talbert proposes five alternatives to using video (or in addition to video) in the flipped classroom that can achieve the objectives of the pre-class activity (2017). The first alternative suggested by Talbert is using text resources, i.e., a 'text and structured activity' instead of video: learners are assigned a text either online or from their textbooks; however, in order for the pre-class work to be considered flipped, the text has to be accompanied by a structured interactive aspect with which students engage (2017). Simply assigning learners a text to read that will then be discussed in class is not considered flipped learning, as students' low order thinking skills (remember, understand, apply) are not tested. Secondly, using social annotation software, such as *hypothes.is* or *Perusall*, that allows the learners to actively read and engage with the online assigned texts by means of marking it up, leaving notes, and engaging in discussions with their peers in the social commentary sections is another alternative to videos in the flipped individual learning space. A third alternative to

instructional videos is audio, such as podcasts, music, or voice recorded lectures, accompanied by a structured activity. Depending on the subject matter, this may be a good option for EFL lessons given that it exposes the learner to more targeted input. Using educational games and a structured activity to check comprehension can also substitute videos during the pre-class phase. In the EFL class, teachers could assign an interactive game that tests learners' grammar knowledge and requires them to infer the grammar structure based on inductive reasoning. The final suggestion is not as relevant in the EFL classroom and requires the most technological involvement: simulation and a structured activity. Students have the opportunity to play with interactive models, for example interacting with a physical simulation of an auditory system.

There are many alternatives to the use of video when flipping the classroom; nevertheless, many teachers still prefer to take advantage of the educational digital media and recording technologies available on the internet when planning the pre-class work assignments. Regardless of whether the teacher is creating their own instructional videos or curating existing content, preparing and designing a flipped course can be very time-consuming; thus, it is imperative that teachers practice good time management to avoid overworking themselves (Talbert 2019b). When planning a flipped course, Talbert (2019b) advises teachers to start planning well in advance: as early as one calendar year before the start of the class you want to flip. The teacher can slowly begin by introducing active learning activities into their lessons and implementing regular low-stakes formative assessments to monitor student learning and inform teaching (2019b). It would also be beneficial to begin flipping some of the lessons to give the learners an idea of how the flipped classroom works, to monitor their progress, and collect student feedback. In the second half of the school year, the teacher can gradually teach more flipped lessons and transfer more responsibility to the students, so as to facilitate the transition (2019b). Then during the summer months, teachers can work on fully flipping their upcoming class and preparing the first months' worth of materials. Whether the instructor plans on flipping their entire course or just single lessons, planning ahead and practicing good time-management will lessen the workload. Moreover, similar to any form of lesson preparation, once the videos have been created or materials have been curated, they can be reused for subsequent years and lessons.

Inequality of Technology Accessibility

Technology offers an array of advantages, one being the accessibility of information to anyone with access to the internet. The key prerequisite in this situation being, however, that one has consistent and unlimited 'access to the internet' which, unfortunately, not every family has. Thus, flipping the classroom can lead to WIFI or technology obstacles that prevent learners from doing the pre-class work. Fortunately, there are solutions or workarounds to this barrier that can ensure students are able to complete the pre-class activities (Peterson 2016). Some students are simply not aware of their access which is why Peterson (2016) suggests first taking a survey of what type of technology and resources students have access to: YouTube, a computer, a laptop, a tablet, a smartphone, a DVD player, a library etc. If students still claim that they do not have any access, the teacher should determine whether this is a device, internet, or parental permission issue, so that they can offer appropriate solutions. For students who simply do not have consistent internet access, the following workarounds can rectify the situation (Peterson 2016): the teacher can set up alternative locations or devices for learners to complete the pre-class work that requires internet. For example, learners could use computers in the library or in the computer lab before school, during breaks, or after school. Furthermore, if internet access is the issue but the student has access to a device, many forms of digital media can be saved and viewed without internet access by means of a USB stick or downloadable applications on one's device.

With that being said, in order to execute a flipped lesson or implement a flipped course that utilizes technology, teachers must ensure that every student has the ability to complete the online homework before class. In the case of internet obstacles, teachers can utilize the above mentioned suggestions and tips. It is also important that teachers do not penalize students for something that is beyond their control (Bergmann 2017), which is why appropriate solutions and an open line of communication between teachers and students should be introduced immediately.

2.6 Flipped Learning and the EFL Classroom

In the context of an EFL classroom, interaction is an integral part of learning a foreign language. It provides learners with the opportunity to produce the target language (TL) (output) and communicate with their peers to develop their speaking skills. A well-known approach used in the foreign language classroom is known as communicative language teaching (CLT), which places communication and interaction at the forefront (Hedge 2000: 57). CLT aligns seamlessly with the

FCM as the central aim of both approaches is to increase (the quality of) interaction among learners. With regards to the implementation of CLT, it is imperative that students have ample time to interact in the TL, which is directly influenced by how much the teacher talks. As Harmer, a retired teacher, states, "If we talk all the time...the students are denied their own chance to practice production, or get exposure through other means" (2008: 66). Thus, the role of the teacher in a communicative classroom is not to dominate or dictate the lesson, but rather to facilitate and manage learning by "setting up activities, organizing material resources, guiding students in group works, engaging contributions, monitoring activities, and diagnosing the further needs of students" (Hedge 2000: 63). Class time during a flipped EFL lesson can, consequently, be optimized and dedicated to more learner-centered communicative and interactive activities. Doughty and Long (2003) provide a list of 8 principles that form the foundation of CLT. Among them are several which align seamlessly with the student-centered pedagogical framework that guides the design of the flipped in-class activities. These include using tasks as an organizing principle (i.e., interactive tasks and activities that focus on meaning); learning through doing (knowledge related to real-world activities); promotion of cooperative and collaborative learning (learners work collaboratively or cooperatively on activities to achieve goal); provision of error corrective feedback (i.e., providing learners with instant feedback on performance); and the consideration of affective factors of learning (i.e., encouraging and motivating students) (Doughty & Long 2003).

Another student-centered approach to language learning implemented in CLT, a branch of English language teaching (ELT), is known as task-based language learning (TBL). In TBL, learners work in groups on interactive speaking tasks that focus on meaningful and authentic communication (Richards 2005). This communicative approach to language learning and teaching embraces the learners' needs and encourages interactive communication in the TL. The TBL lesson framework can be very time-intensive as it requires sufficient time for scaffolding (the pre-task), the during-task, i.e., the TBL task itself: opinion-gaps, reasoning-gaps, information-gaps, problem-solving etc., and post-task follow-up (Ellis 2006). Hence, flipping the lesson by outsourcing (part of) the pre-task, i.e., watching a video on the subject matter and then creating a mind map that prepares the students for the main TBL task, would maximize in-class time for the interactive TBL

activity. Similarly, according to one of Thornbury's (2005) six speaking principles, interactivity —— speaking tasks that involve interaction between participants and promote authentic real-life language —— is a key feature in facilitating autonomous learning and promoting authentic language. Flipping the EFL classroom would, therefore, facilitate the realisation of more interactive and communicative activities during the lesson and increase the number of authentic, real-life situations that EFL students might be faced with in the future.

Chapter 3: Self-Determination Theory (SDT) for Language Learning Motivation

The third chapter of the current thesis reviews the literature on motivational theory, specifically literature on self-determination theory (SDT). The chapter at hand is divided into three sections, namely the definition of the concept, the three basic psychological needs according to SDT, i.e., *competence, autonomy, and relatedness*, and how these three needs can be satisfied generally, and in the EFL classroom.

3.1 Definition: What is Self-determination Theory?

Developed by Ryan and Deci (2000), self-determination theory (SDT) is a theory that further develops the complex concept of human motivation and personality and describes an individual's inner needs that impact their behavior (i.e., performance, well-being, learning process, engagement). Motivation is typically divided into two separate types based on the nature of the stimulus, i.e., extrinsic (triggered by external factors) and intrinsic motivation (triggered by internal factors); however, according to SDT, motivation exists on a spectrum ranging from amotivation (complete indifference and disinterest) on the left, to intrinsic motivation (driven by pure interest and enjoyment) on the right, and a wide spectrum called extrinsic motivation in between. For a visual impression of the self-determination continuum, see figure 5.
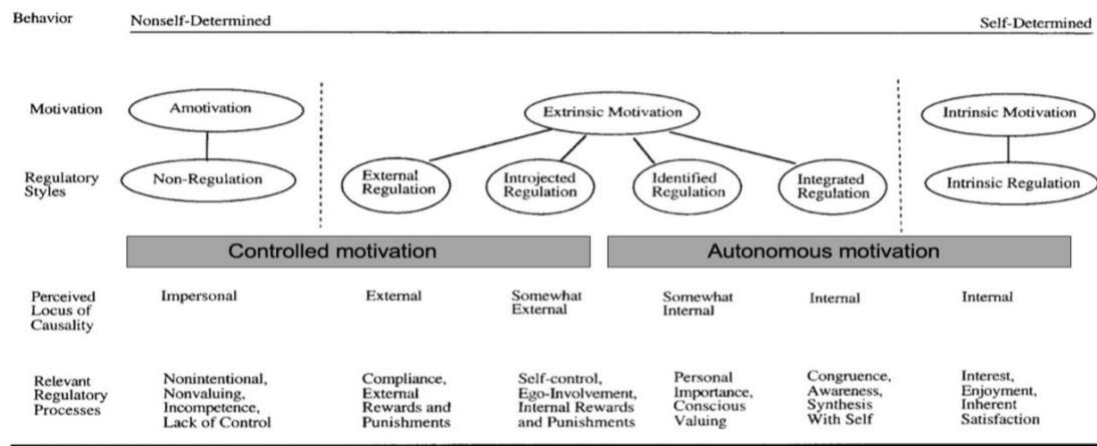
Figure 5: The Self-determination Continuum (Ryan & Deci 2000: 72)

Whereas intrinsic motivation is inherently self-determined and autonomous, there are 4 different types of extrinsic motivation increasing in the degree of *autonomy* as you move from left to right: external regulation, introjected regulation, identified regulation, and integrated regulation (Gillison et al. 2019: 111). In addition, SDT differentiates between controlled motivation (external and introjected regulation) and autonomous motivation (intrinsic, introjected and identified regulation). The former is triggered by externally regulated sources and acted out to evade being chastised or to obtain external rewards, whereas the latter is self-determined and comes from internally regulated sources and includes extrinsically motivated behaviours that align with one's sense of self or values (Ryan & Deci 2008). For example, external regulation behaviors — the least autonomous extrinsically motivated behaviors— are performed to avoid punishment or receive external awards. The second level of extrinsic motivation, introjected regulation, is somewhat external and driven by a sense of obligation, self-control, shame and guilt, protecting one's ego, and internal rewards or punishments. In identified regulation, the motivation is somewhat internal and the behavior has been identified as beneficial to one's development and is in accordance with one's personal values, goals, and intentions. Finally, the most autonomous and self-determined form of extrinsic motivation is integrated regulation, in which the behavior has been fully integrated into the individual and aligns with personal beliefs and values (Ryan & Deci 2008). Behaviors categorized as integrated regulation "share many qualities with intrinsic motivation, although they are still considered extrinsic because they are done to attain separable outcomes rather than for their inherent enjoyment" (Ryan & Deci, 2000: 73).

3.2 Three Basic Psychological needs

SDT postulates that an individual's innate psychological needs are the "basis for their self-motivation and personality integration, as well as for the conditions that foster those positive processes" (Ryan & Deci 2000: 68). These three basic psychological needs are *autonomy* (feeling that one is empowered and has choice), *competence* (feeling that one is effective and capable), and *relatedness* (feeling close to and valued by others) (Gillison et al. 2019: 111). Furthermore, autonomous motivation such as intrinsic, introjected, and identified regulation, i.e., motivation that is self-determined and self-motivated, is enabled through the fulfillment of these three psychological needs. In other words, the satisfaction and encouragement of these three basic needs yield enhanced motivation. More specific to the context of learning in the classroom, "*competence* is related to the need of students to feel capable to successfully engage in the learning process; *autonomy* is related to the need to be engaged with tasks in an autonomous manner within a context that is relevant to them, and *relatedness* is related to the need to be engaged in tasks that allow collaboration and communication with other students" (Sergis et al. 2018: 369-370). Ryan and Deci (2000) describe the three basic cognitive needs in the context of a classroom as follows: *competence* would improve their competencies in knowledge, skills, and attitude; *relatedness* is satisfied by means of socializing and social interaction with classmates and the teacher in or outside of the classroom; and *autonomy* is associated with learners' ability to learn at their own pace based on their individual needs as well as independent learning.

3.2.1 Promoting Autonomy, Competence, and Relatedness

In order to promote a person's autonomous motivation, a person's three psychological needs need to be satisfied. The question that arises is how best can one support the fulfillment of these needs. According to a meta-analysis study conducted by Gillison et al. (2019) that reviewed techniques to promote motivation for health behaviour change from a SDT perspective, several techniques can be implemented to emphasise and support *autonomy, competence, and relatedness*. It should be noted that the three cognitive needs are interrelated, and, thus, some techniques may support more than one need; however, the main need targeted by each strategy is underscored. The following strategies provided by Gillison et al. (2019), that foster need support

and, thus, simultaneously foster autonomous motivation, will subsequently be applied to the EFL classroom.

Concerning *autonomy*, the following strategies can be employed to fulfill a person's need to feel autonomous and self-determined: providing choice and options, listening to the participant's perspective, providing a rationale for performing an activity, using non-controlling language that emphasizes choice, identifying and setting intrinsic goals, providing structure, and emphasizing responsibility (Gillison et al. 2019: 118). While the aforementioned techniques were applied in the context of health and fitness, they are very much applicable and relevant to the flipped EFL classroom. For example, the pre-class work that is assigned to students in the flipped classroom can be completed at the learners preferred pace (they can interact with the medium as many times as necessary), at their location of choice (at home, in the library, at school etc.), and when they see fit (as long as it is completed before the subsequent lesson). Teachers may also differentiate the material, when necessary, to make it accessible to all students, providing more choice and options and, thus, a greater sense of autonomy. Communicating with learners in a non-controlling manner and informing students about the benefits of the flipped classroom and completing the pre-task work will also emphasize autonomous behavior and fulfill their sense of self-sufficiency. Regarding the setting of self-concordant goals, teachers can help students set intrinsic-related goals related to learning English and determine together with the learner how they can achieve these goals. Finally, teachers can promote autonomy by restructuring the social environment of the classroom to give learners more opportunities to take the lead, share their ideas and opinions, and participate in decision making.

As for one's need for feeling competent, this can be achieved by providing the participant with optimal challenge, informational feedback, information relevant to the person's needs and situation, identifying potential barriers and solutions, and providing social and emotional support (Gillison et al. 2019: 119). Aligned with Thornbury's (2005) speaking principles that facilitate autonomous learning and promote authentic language, EFL tasks should be challenging and slightly above learner's language level; this principle can be applied to the in-class materials and group activities. Gillison et al. (2019: 119) suggest tailoring the difficulty of the task to the level of the individual; this can be realized in the flipped EFL classroom by differentiating the materials that

accommodate multiple learning styles and levels. Secondly, providing learners with specific, direct, and timely feedback on their performance (rather than generic praise or criticism) also contributes to satisfying one's need to feel competent (Gillison et al. 2019: 119). Providing learners with materials and topics that are applicable to their interests, needs, situation, and lives will also contribute to their sense of *competence*, in that the learners will see the relevance and importance of learning the subject matter. Furthermore, teachers can strengthen their learners' motivation by identifying any potential challenges or barriers that learners may face as a result of the FCM. To help students navigate the new flipped classroom environment, teachers should make expectations clear regarding learning objectives and pre-class assignment outcomes as well as discuss time management strategies and provide organization techniques, such as task calendars that outline exactly what needs to be done and when. Finally, providing learners with (social and emotional) support and encouragement throughout the lesson will increase learner confidence in their capabilities directly affecting their perception of *competence* (Gillison et al. 2019: 119).

With regards to affecting one's sense of *relatedness*, the following techniques can be applied: providing support and encouragement, encouraging individuals to seek social support, encouraging cooperative and collaborative peer-to-peer activities, and expressing a personal interest and building a rapport with the individual (Gillison et al. 2019: 120). As mentioned above, the three basic psychological needs are interrelated and, thus, some strategies can fulfill more than one need: for instance the strategy of providing learners with support and encouragement can support both ones sense of *competence* and *relatedness*. One's sense of *relatedness* is fulfilled by this strategy as the learner, in turn, feels close and valued by others. This former strategy is similar and related to the second and third strategies, namely encouraging the learner to seek social support from their peers and encouraging cooperative peer-to-peer activities. The more students are able to work cooperatively and collaboratively with their classmates, support and learn from one another, and face and overcome challenges together, the higher their sense of *relatedness* will feel. Finally, instructors can further satisfy this third need in the flipped EFL classroom by taking a personal interest in and building a relationship with each student by listening to their needs, interests, goals, and struggles.

The aforementioned strategies and techniques implemented to promote the satisfaction of a person's basic psychological needs according to SDT facilitated the formulation of the questionnaire survey questions of the current master's thesis, which will be further elaborated on in the subsequent section.

Chapter 4: Research Methodology

The Master's thesis at hand explores the effects of the FCM on Austrian EFL students' perceived motivation during the COVID-19 pandemic and, more specifically, attempts to answer the following research question: "Does the exploitation of the FCM contribute to enhancing students' perceived motivation, namely their sense of *competence, autonomy, and relatedness*, during the learning process?". In order to extrapolate the benefits of the flipped classroom from the general literature provided above to an Austrian context using SDT as a theoretical framework, data was quantitatively collected in two Austrian EFL classes using questionnaire surveys. The current chapter is divided into the following sections: a description of the study's participants and learning context, the lesson design of all eight flipped and non-flipped lessons, and full details of the data collection method employed.

4.1 Participants and Learning Context

The data was collected during the summer semester of 2021 in a BHS higher-level vocational school in Baden, Austria. Higher-level vocational schools offer both comprehensive general education and higher-level vocational training; this double qualification grants school-leavers immediate access to relevant professions and entitles them to enrol in all university courses (City of Vienna, n.d.). This specific type of BHS vocational school — Bundesinstitut für Sozialpädagogik (BISOP 2022) — trains students to become social pedagogues, i.e., educators who provides care, support, and education to people of all ages with different backgrounds, needs, and abilities.

Furthermore, the participants of the study comprised 26 EFL upper secondary students selected from two parallel 11th grade upper secondary EFL classes (classes 3AF and 3BF), hereinafter referred to as class A and class B. The learners' ages spanned between 17 and 18 years old and the two classes consisted of 14 and 12 students respectively: class A included 11 female and 3 male students and class B 11 female and 1 male student Both classrooms were equipped

with computers, internet, and WIFI to ensure that the teacher and learners were able to access the internet by means of their electronic devices such as laptops, computers, and smartphones. According to the students' English teacher who conducted the research, the learners were at a B1-B2 CEFR level of English proficiency during the study and data collection and each learner had access to a learning device (laptop, computer, smart phone, tablet etc.) outside of class to complete the pre-class activities. Instruction was conducted by an English teacher with 5 years of teaching experience, who had taught the two classes for the first time that school year. The researcher, myself, and English teacher created the lesson plans together for the current research study based on the school's curriculum and current learning needs and abilities of the students.

At the beginning of the study, the classroom teacher informed the students about the purpose and background information of the study. Information about who was conducting the study, why the study was being completed, what would be done with the information and data, and who the students could contact if they had any more questions or concerns were also provided. Before the learners filled out the questionnaire at the end of each class, the teacher first clarified and explained each individual questionnaire item to ensure comprehension and avoid any confusion. The students were asked before filling out the questionnaire to write down whether or not they had completed the pre-class work. To improve reliability, the surveys of those students who had not completed the flipped class pre-work were removed from the final collection of surveys; the results of six flipped lesson questionnaires were not included in this study, as many of the questionnaire items refer to the participant's feelings while completing the pre-class work. Thus, they were made obsolete.

The lessons took place during the COVID-19 pandemic in the second half of the 2020/2021 school year. Given that the study was conducted during the summer months, where corona cases tend to fall due to the warmer weather, corona measures were, fortunately, not as strict during this time and permitted a rather standard learning environment. The teacher and students were not expected to wear masks during the lesson, the teacher was able to move freely around the classroom to provide individual feedback and interact with the students and learning groups. While group, partner, and class activities were semi-restricted, they were still able to take place

with neighbouring classmates or in a seated circle with the appropriate space between each chair. However, learners were unfortunately not allowed to create their own learning groups.

4.2 Intervention Design

Both the flipped (4 in total) and non-flipped lessons (4 in total) were conducted over a 2-week period with the same English instructor. The flipped lessons were categorized as the experimental group, while the non-flipped lessons were the control group. Two flipped classroom lessons took place in class A and class B respectively, in which students were assigned a pre-class activity to engage with before the subsequent lesson. For comparison purposes, two traditional non-flipped classroom lessons also took place in class A and B respectively, in which the teacher introduced the same topics/concepts in a more traditional manner, i.e., during class-time. Thus, four concepts were taught using the flipped and non-flipped classroom approach respectively, resulting in a total of eight lessons over a period of roughly two weeks. For a visual breakdown of the intervention design, refer to figure 6 below.

Subject Matter	Class A	Class B
Topic 1	*Flipped lesson*	Non-flipped lesson
Topic 2	*Flipped lesson*	Non-flipped lesson
Topic 3	Non-flipped lesson	*Flipped lesson*
Topic 4	Non-flipped lesson	*Flipped lesson*

Figure 6: Visual breakdown of the intervention design

As is expected in FCM pedagogy, flipped class learners were expected to watch educational videos before class and to later reconvene with their classmates in the classroom to engage in face-to-face interactive and collaborative activities that applied the new concept. The non-flipped class was taught more traditionally, in that the teacher presented the new information at the beginning of class; students were expected to take notes, discuss questions as a class, and then work individually on tasks, and complete the main assignment as homework in order to maximize differences between the two teaching models. Furthermore, the classroom teacher was instructed

to provide flipped learners with encouragement, direct and individual feedback, and praise while they were performing group or partner work; whereas, during the traditional lessons, the teacher was told to act as the 'sage on the stage' and lecture from the front of the class. The exact details of all eight flipped and non-flipped lesson plans will be elaborated on in the following section.

4.3 Flipped and Non-Flipped Intervention

The following section provides a detailed outline of the intervention process, namely all eight flipped and non-flipped EFL lessons conducted in the study. This will afford the reader a more in-depth understanding of the distinctions between the two implemented instructional methods as well as more insight into the curated digital resources used for the pre-class work and the interactive activities implemented during the flipped EFL lessons. Furthermore, all of the online materials used during the lessons will be listed at the end of the bibliography (see Flipped and Non-Flipped Lesson Plan Materials). It should also be noted that after consulting with the teacher, the students typically had the last 10 minutes of the lesson to start working on their non-flipped homework assignment.

Flipped lesson 1.1

Before class: The first flipped lesson was taught in class A and focused on the topic 'what is cultural identity?'. A TED Talk titled 'Don't ask where I'm from, ask where I'm a local' (Selasi 2015) and various online blog posts on 'What it means to be Austrian' (Metropole 2018) were assigned during the previous lesson as pre-class work assignments. The complementary task connected to the video and blog posts was to create a personal identity portfolio on what the learner believes it means to be Austrian. The personal identity portfolio had to follow the outline of the online blog posts. The learners were instructed to post their personal identity portfolio on the eLearning platform Moodle and comment on one of their classmate's posts expressing something that surprised them or that they didn't know, something they found interesting, and something that they agreed or disagreed with.

During class: During the face-to-face lesson the teacher immediately put the students into groups of 3 or 4 (groups were formed with learner's neighboring classmates). Each group had to come up with the 'ultimate' Austrian identity. The learners were asked to keep their portfolios in mind, but

they were not restricted to their personal identity portfolios. Subsequently, the entire class performed an interactive group activity called a fishbowl discussion —— an engaging and learner-centered technique for organizing discussions —— to try and come up with the ultimate Austrian identity together as a class. The characteristics and features that were discussed during the activity were recorded on a poster. Based on the discussion, learners were then asked to try and come up with a definition for cultural identity.

Non-flipped Lesson 1.2

During Class: The first non-flipped lesson was taught in the parallel class, class B, and also focused on the topic 'what is cultural identity?'. In contrast to the flipped lesson, the teacher showed the class brief clips from the Ted Talk on 'Don't ask where I'm from, ask where I'm a local' (Selasi 2015) at the beginning of the lesson. The instructor then presented a PowerPoint presentation summarizing the main points of the video. Afterwards, the teacher distributed a handout of 2 portfolio entries from the online blog and asked learners to read them and take notes on the blog's outline. The structure of the blogs were then written down on the whiteboard, reviewed, and discussed as a class. Conclusively, the homework assignment was then explained to the students: create a blog post on the ultimate Austrian identity following the blog's outline and come up with your own definition for 'cultural identity'. At the end of class, students were allowed to individually start working on their portfolios and definitions.

Flipped lesson 2.1

Before class: The second flipped lesson was also taught in class A and continued the topic of 'identities'. Before the lesson, students were instructed to watch three short videos on identity and to either read or listen to a poem on 'being British' (Rodger 2012). The YouTube videos discussed what it means to be American (WNYC 2016), what it means to be British (Dunphy 2021), and what it means to be African (Aggrey 2016). After watching the videos and listening to or reading the identity poem, students had to create a forum post on Moodle answering the following questions: What is your main take away from the videos/poem?, What did you learn?, Can you relate to any of the speakers?, why or why not?, What does being Austrian mean to you?, Do you identify as an Austrian? If not, then as what?. Subsequently, learners had to comment on one of

their peer's forum posts by highlighting something they originally didn't know about their classmate or asking a follow-up question to the post.

During class: During the face-to-face lesson, the teacher put the learners into groups of 2 or 3, depending on how many students were present that lesson. The groups were instructed to use the class time to collaborate and create an identity poem on what it means to be Austrian. Students were allowed to choose which style of poem they wanted to use. A group member was then asked to present the poem to the class at the end of the lesson.

Non-flipped Lesson 2.2

During Class: The second non-flipped lesson was taught in the parallel class, class B, and also continued the topic of 'identity'. Together as a class, the students watched all three videos at the beginning of the lesson and then read the poem 'being British' on their own. In plenum, the students discussed the videos and poem with the following guiding questions: What are the main take away points from the videos/poem? What did you learn? Can you relate to any of the speakers? Why or why not? Subsequently, the teacher asked the students to reflect on the following questions: What does being Austrian mean to you? Do you identify as being Austrian? If not, then as what? The students were asked to journal their answers in their student books; the teacher then asked some students to share their responses with the class. The homework assignment required students to create an identity poem on what it means to be Austrian. Students were allowed to start individually working on their poems at the end of class.

Flipped Lesson 3.1

Before class: The third flipped lesson was taught in class B and focused on the lexical topic 'false friends'——a word or expression that shares the same spelling or a similar form to one in a person's mother tongue, but has a different meaning. As a pre-class activity, students were expected to watch a longer YouTube video on false friend words in German and English (Feli from Germany 2020). They were then allowed to choose between two shorter videos (DW Euromaxx 2019ab) or one longer video (Connor Sullivan 2018), roughly the same length of the two shorter videos combined, on words that German speakers typically use incorrectly. As a follow-up task to ensure retention and comprehension, students were required to write down each false friend pair from the videos into their workbooks with their respective definitions and translations, as well as come

up with correct and false example sentences. On Moodle, students were asked to fulfill one of the following tasks: 1) share a story about a time when you or your conversational partner used a pair of false friends incorrectly and it caused a miscommunication; 2) post the sets of false friends that you now know how to use correctly thanks to the videos; or 3) share a set of false friends that wasn't mentioned in the videos. Each student was then required to respond to one forum post.

During class: During the in-class flipped EFL lesson, learners got into groups of 2 and were asked to collaborate and create a dialogue using a minimum of 5 false friends. One speaker pretended to be a native German speaker speaking English as a foreign language, whereas the second speaker was a native English speaker. The German speaker deliberately used the false friend words incorrectly and the native English speaker used them correctly. At the end of the lesson, the groups had to present their skits to the rest of the class and the audience had to guess which speaker was which.

Non-flipped Lesson 3.2

During Class: The third non-flipped lesson was taught in the parallel class, class A, and also revolved around the lexical topic of 'false friends'. At the beginning of the lesson, the teacher explained the concept of false friends and showed the students the three shorter YouTube videos on the false friend words in German and English. While watching the video the students were instructed to take notes and write down the false friend pairs. After watching the videos, the teacher then reviewed the false friends mentioned in the videos and wrote them down on the whiteboard with their definitions and translations. The teacher then called on students to create example sentences for the first few false friend words. Students were expected to copy the information into their notebooks. For homework students had to individually create example sentences for the false friend words.

Flipped Lesson 4.1

Before class: The fourth and final flipped lesson was taught in class B and concentrated on the writing topic 'reports'. Before the lesson, students were assigned a YouTube video on academic reports (PolyU ELC 2014) and were asked to watch it and take notes on the structure of this text type. Learners were then instructed to compare and contrast their notes from the video with the report structure presented in their student workbooks and to record any differences in their notebooks. Students were also given two writing exercises to choose from (an exercise from their student books and a second one from an external source). Students were asked to read through both prompts, to post on Moodle which task they would prefer to work on and why (requires a bit

of research), and to find a partner to work on it with before the subsequent lesson (to be done on Moodle).

During class: During the flipped lesson, learners were asked to compare their notes with their pre-chosen partner. The learners then worked on creating an outline and writing a draft of a report for the writing exercise they preselected on Moodle. The lesson took place in the computer lab so that students were able to research their topic and begin drafting their report. The students were able to continue working on their individual reports the following class, so as to get feedback and support from their partner and teacher.

Non-flipped Lesson 4.2

During class: The third non-flipped lesson was taught in the parallel class, class A, and also revolved around the text type 'reports'. The teacher taught the report structure presented in their student books. The class then analysed 2 example reports and reviewed their structure in plenum. During the lesson, students started individually working on their report outlines according to the exercise in their workbooks. For homework students had to write a first draft of their report.

4.4 Data Collection Method

In pursuance of an answer to the thesis' research question, data was quantitatively collected by means of a questionnaire survey that measured students' self-reported data on the topic of perceived motivation directly after each flipped and non-flipped lessons. The questionnaire survey was administered a total of eight times: 4 times directly after each flipped-classroom lesson and 4 times directly after each non-flipped lesson. Concerning the thesis' research question, the *competence, autonomy, and relatedness* dimensions were measured using twelve 5-point Likert scale items ranging from strongly disagree to strongly agree. Questions items 1-4 measured perceived *competence (I felt confident in my abilities to complete the assigned tasks (in-class or homework); I felt fully capable applying the new topic to the in-class tasks or homework assignment; I felt challenged during the lesson; I received direct feedback from my teacher during the lesson)*, items 5-8 measured perceived *autonomy (While engaging with the topic of the lesson, I was able to control my learning environment by working where it was convenient for me; While engaging with the topic of the lesson, I had the freedom to do the work when I had time; While*

engaging with the topic of the lesson, I was able to control my own learning speed; While engaging with the topic of the lesson, I was able to manage my own learning), and items 9-12 measured perceived r*elatedness (During class, I was able to interact with my classmates on the topic of the lesson; I felt supported and encouraged by my teacher during the lesson; I had the opportunity to participate in class or group discussions; Outside of class, I was able to interact with my classmates on the topic of the lesson)*. The 12 Likert items used in the questionnaire were closed-ended questions and were carried over and adapted (according to the contextual needs of the current study) from a previous study that aimed at investigating students' learning performance and perceived motivation between a gamified flipped classroom and a non-gamified flipped classroom instructional model, based on the Self-Determination Theory (Zainuddin 2018). It should also be mentioned that the questionnaire Likert items were (re)phrased to apply to both flipped and non-flipped classroom lessons and some of the items were removed, either to avoid redundancy or due to being inapplicable to the current study. Nevertheless, to avoid any misunderstandings, before the students filled out the questionnaire after each lesson, the teacher specified what each question was specifically referring to and reiterated that a flipped lesson encompasses the pre-class work and in-class session, whereas a non-flipped lesson comprises only what has occurred during the lesson. With regards to the reliability and validity of the model questionnaire, Zainuddin affirms that "the Cronbach's Alpha of internal consistency coefficient was applied and the result shows an acceptable level of reliability; the […] questionnaire domains were considered highly reliable (> .90)" (2018: 79).

Chapter 5: Findings

The thesis at hand investigates EFL students' perceived motivation after flipped and non-flipped classroom lessons. Chapter 5 presents the findings of the questionnaire survey administered after both modes of instruction. The quantitative results are presented in this chapter under 3

subheadings, namely *competence, autonomy, and relatedness*. The following results will focus on two bundled sets of data: dataset 1 — the first two lesson topics 'What is a Cultural identity' and 'Cultural identities continued' — and dataset 2 — the two lesson topics 'False friends' and 'Text type Reports'. For a visual overview of the two bundled datasets, see figure 7 below. The initial two flipped lessons of the study took place in class A, whereas the first two non-flipped lessons were taught in class B. For comparison and data richness purposes, the final two flipped lessons were taught in class B, while the final two non-flipped lessons were taught in class A. To summarize, dataset 1 investigates and compares the initial two flipped lessons (topic 1 & 2) taught in class A with the non-flipped lessons taught in class B. Dataset 2, thus, compares the concluding two flipped lessons (topics 3 & 4) in class B with the non-flipped lessons taught in class A.

Dataset	Subject Matter	Class A	Class B
1	Topic 1: Cultural identity	*Flipped lesson*	Non-flipped lesson
	Topic 2: Cultural identity cont.	*Flipped lesson*	Non-flipped lesson
2	Topic 3: False friends	Non-flipped lesson	*Flipped lesson*
	Topic 4: Text type Reports	Non-flipped lesson	*Flipped lesson*

Figure 7: Overview of Bundled Datasets

5.1 Questionnaire Item: Competence

This section will present the results of the first 4 items of the questionnaire which addressed the psychological need *competence.*

Competence Likert Item 1: Dataset 1

Regarding item 1, which stated *I felt confident in my abilities to complete the assigned tasks (in-class or homework),* the results were overwhelmingly positive. Fifty-four percent of the students surveyed after the two flipped lessons in class A responded with strongly agree and thirty-one percent of the students with agree (see figure 8a). Only fifteen percent responded that they neither agree nor disagree. The results, thus, depict that the large majority of class A, i.e., 85%, felt confident in their abilities during the flipped-lesson.

In contrast, after taking part in two non-flipped classroom lessons, a combined forty-one percent of the participants agreed with the first Likert item that focused on perceived confidence during the lesson. Forty-two percent neither agreed nor disagreed; whereas, a collective seventeen percent of the class disagreed with the statement.

Competence Likert Item 1: I felt confident in my abilities to complete the assigned tasks (in-class or homework)

Flipped Lessons 1&2 (Class A)   **Non-Flipped Lessons 1&2 (Class B)**
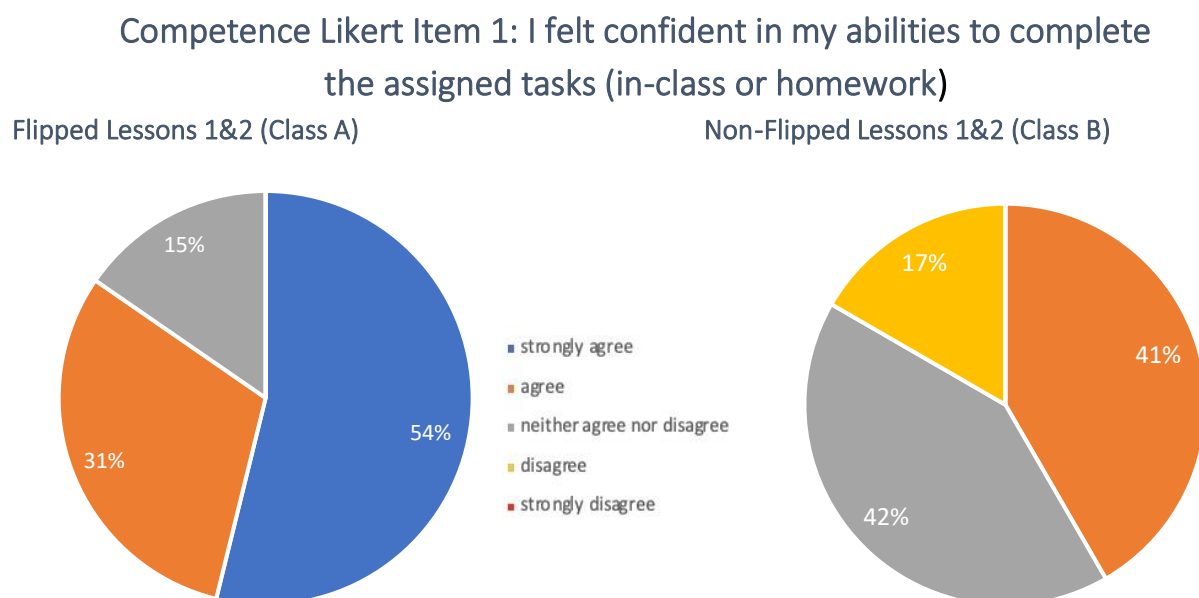

Figure 8a: Competence Likert item 1 (Dataset 1)

Competence Likert Item 1: Dataset 2

Regarding item 1, half of the class B strongly agreed to the statement of feeling confident in their abilities to complete the assigned tasks in the two flipped classroom lessons and a little over a third of the learners (36%) agreed (see figure 8b). The rest of the class either felt neutral (7%) or

disagreed (7%) with the statement, the latter meaning they did not feel confident completing the in-class tasks.

In comparison, the results for the non-flipped classroom were distributed across all five Likert scale points. The most frequently selected response was neither agreed nor disagreed (42%). A combined thirty-three percent of class B either strongly agreed or agreed (8% and 25% respectively). However, seventeen percent disagreed and eight percent strongly disagreed to feeling confident in their abilities to complete the homework assignments.

Competence Likert Item 1: I felt confident in my abilities to complete the assigned tasks (in-class or homework)
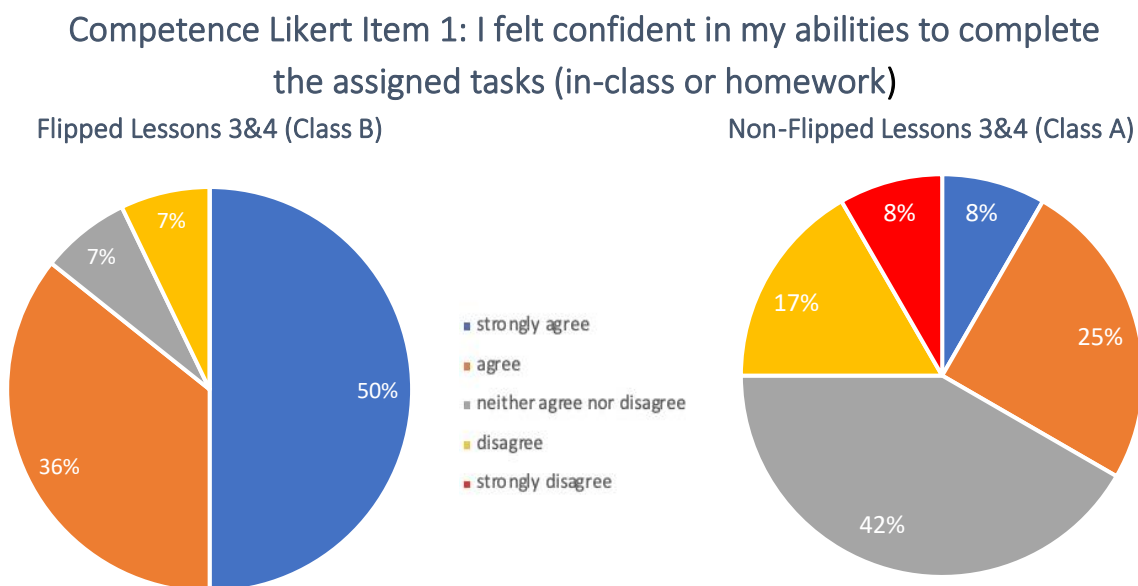

Figure 8b: Competence Likert item 1 (Dataset 2)

Competence Likert Item 2: Dataset 1

Item 2 stated: *I felt fully capable applying the new topic to the in-class tasks or homework assignments.* Again, the results were rather one-sided, with only seventeen percent of students from class A neither agreeing nor disagreeing to the statement and no students disagreeing or

strongly disagreeing. After the first two flipped lessons, half of class A strongly agreed and thirty-six percent of the group agreed to feeling fully capable applying the new topic (see figure 9a). Only fourteen percent of the class felt neutral towards the statement, neither agreeing nor disagreeing.

In contrast to the flipped lessons, students in class B were rather ambivalent regarding the perceptions of their capability to apply the new topic to in-class tasks and homework assignments. While half of class B reported strongly agree or agree (8% and 42% respectively), thirty-three percent neither agreed nor disagreed and seventeen percent disagreed with the statement.

Competence Likert Item 2: I felt fully capable applying the new topic to the in-class tasks or homework assignments

Flipped Lessons 1&2 (Class A)   **Non-Flipped Lessons 1&2 (Class B)**
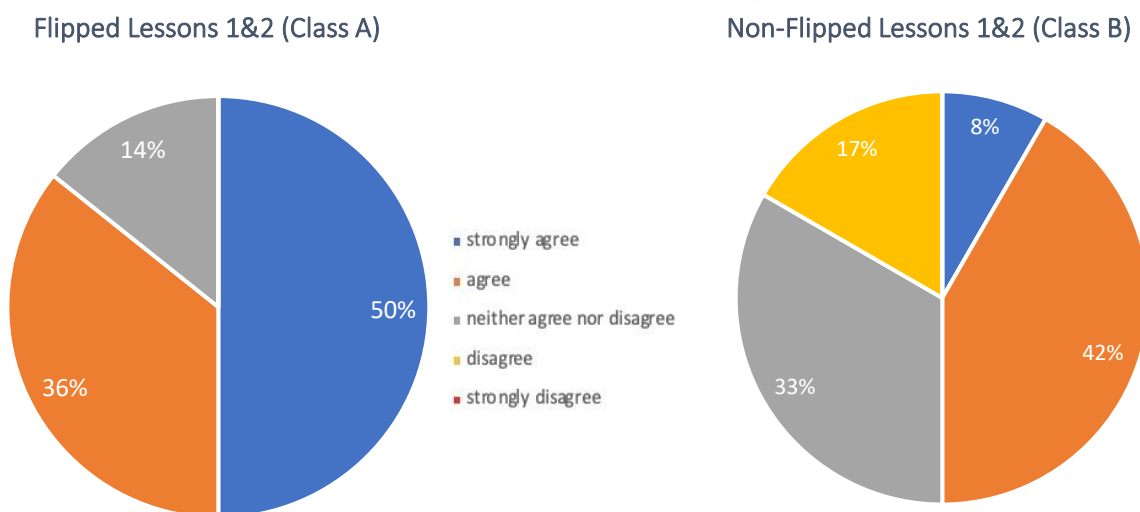

Figure 9a: Competence Likert Item 2 (Dataset 1)

Competence Likert Item 2: Dataset 2

Concerning item 2 responded to by class B after the two final flipped lessons, over three quarters of the students (79%) either strongly agreed or agreed with the statement examining whether

students felt capable applying the new topic to the in-class work (43% and 36% respectively) (see figure 9b). Twenty-one percent of participants felt neutral towards the statement.

As for the non-flipped lesson, there was less agreement among the surveyors of group A: forty-two percent of group A either strongly agreed or agreed with the statement (8% and 34% respectively), thirty-three percent neither agreed nor disagreed, and twenty-five percent either strongly disagreed or disagreed (8% and 17% respectively).

Competence Likert Item 2: I felt fully capable applying the new topic to the in-class tasks or homework assignments

Flipped Lessons 3&4 (Class B)   Non-Flipped Lessons 3&4 (Class A)

Legend:
- strongly agree
- agree
- neither agree nor disagree
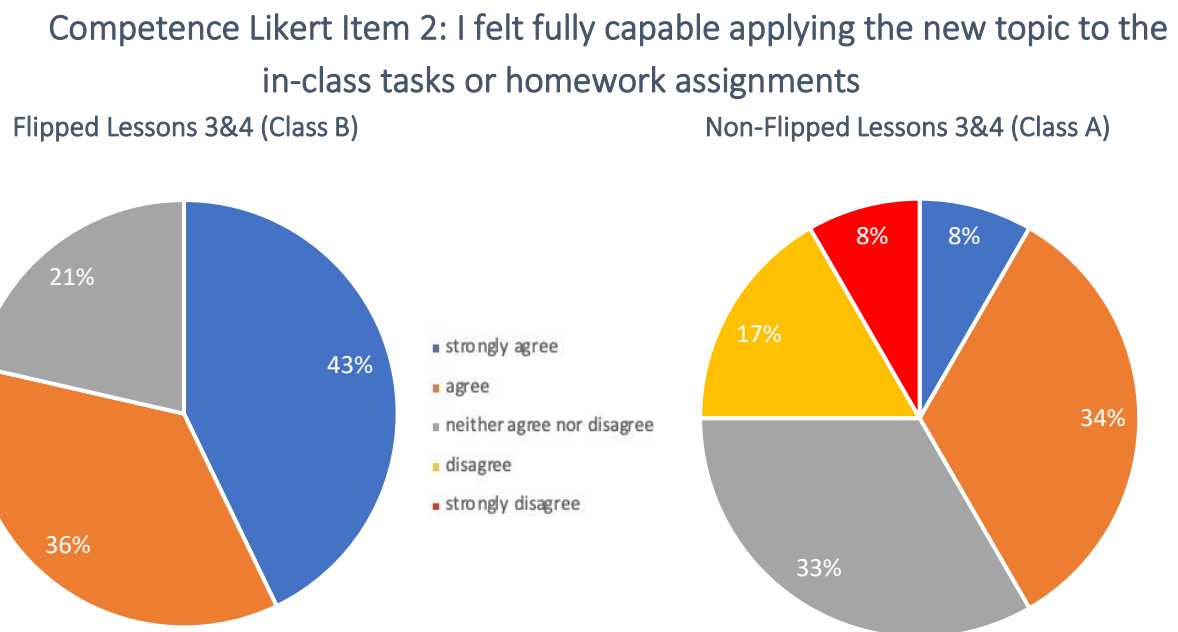- disagree
- strongly disagree

Figure 9b: Competence Likert Item 2 (Dataset 2)

Competence Likert Item 3: Dataset 1

Competence Likert item 3 asked whether the students felt challenged during the lesson. The results were quite positive in that fifty-three percent of the responses strongly agreed with

the statement and forty percent agreed (see figure 10a). Only seven percent of participants felt neutral towards the question. Therefore, the results display that an overwhelming majority of the students felt challenged during the first two flipped lessons (93%).

According to the results of Likert item 3 after the two non-flipped lessons, the majority of class B perceived the first two non-flipped lessons as not challenging. To be more specific, three quarters of the learners either strongly disagreed or disagreed with the statement (33% and 42% respectively), i.e., they did not feel challenged during the two non-flipped lessons. One quarter of the students were neutral and neither agreed or disagreed.

Competence Likert Item 3: I felt challenged during the lesson

Flipped Lessons 1&2 (Class A)   Non-Flipped Lessons 1&2 (Class B)

■ strongly agree
■ agree
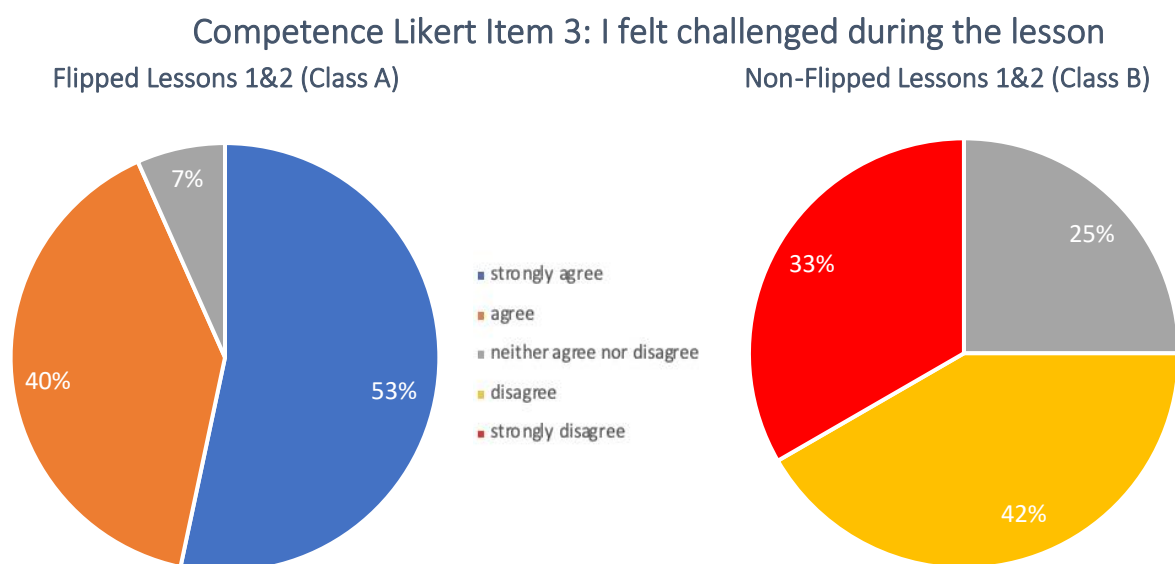▦ neither agree nor disagree
■ disagree
■ strongly disagree

Figure 10a: Competence Likert Item 3 (Dataset 1)

Competence Likert Item 3: Dataset 2

Seventy-two percent of the flipped lesson survey participants responded with strongly agree and agree (36% and 36% respectively) to the statement *I felt challenged during the lesson* (see figure

10b). Twenty-one percent selected neither agree nor disagree and seven percent of class B disagreed to feeling challenged during the lesson.

Item 3 evoked similar results to class B after the two non-flipped lessons: three quarters of respondents either strongly disagreed or disagreed with feeling challenged during the lesson (42% and 33% respectively); a quarter of the learners neither agreed nor disagreed.

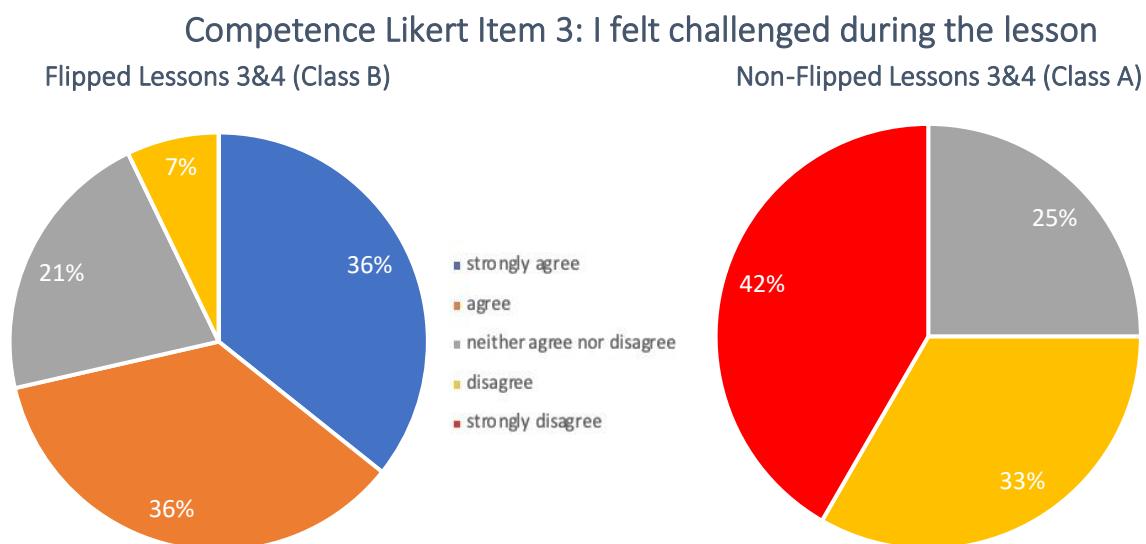## Competence Likert Item 3: I felt challenged during the lesson

Figure 10b: Competence Likert Item 3 (Dataset 2)

Competence Likert Item 4: Dataset 1

Item 4 is the last item of the questionnaire addressing the psychological need *competence*. It asked the students whether they received direct feedback from their teacher during the lesson. Ninety-

three percent of class A either strongly agreed or agreed with the fifth statement (36% and 57% respectively) and only seven percent responded neutrally (see figure 11a); thus, the results reveal that the vast majority of students received direct feedback from their teacher during the flipped lesson.

Questionnaire item 4 (in the context of a non-flipped lesson) was also responded to with strongly disagree, namely 33% of the respondents. Forty-two percent of the learners disagreed with the statement and a quarter of the responses neither agreed nor disagreed. Therefore, it can be said with certainty that the majority of learners (75%) did not receive direct feedback from their teacher during the first two non-flipped lessons.

Competence Likert Item 4: I received direct feedback from my teacher during the lesson

Flipped Lessons 1&2 (Class A)   Non-Flipped Lessons 1&2 (Class B)
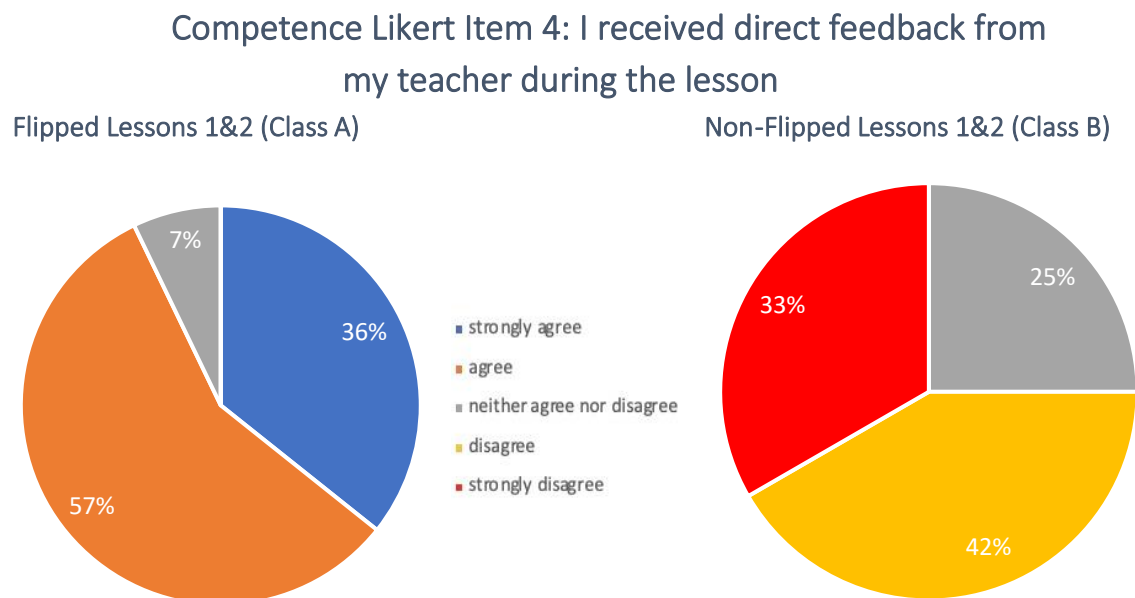

Figure 11a: Competence Likert Item 4 (Dataset 1)

Competence Likert Item 4: Dataset 2

Item 4 examined whether students received feedback from their teacher. Class B responded positively with over three quarters of students either strongly agreeing or agreeing to the

statement (36% and 43% respectively) (see figure 12b). Fourteen percent neither agreed nor disagreed and seven percent disagreed.

In the context of the non-flipped classroom, class A responded rather negatively to *competence* item 4: thirty-three percent strongly disagreed and forty-two percent disagreed with the statement. Thus, three quarters of the class felt that they did not receive feedback during the final two non-flipped lessons. Seventeen percent neither agreed nor disagreed and eight percent agreed to the statement.

Competence Likert Item 4: I received direct feedback from my teacher during the lesson

Flipped Lessons 3&4 (Class B)   Non-Flipped Lessons 3&4 (Class A)
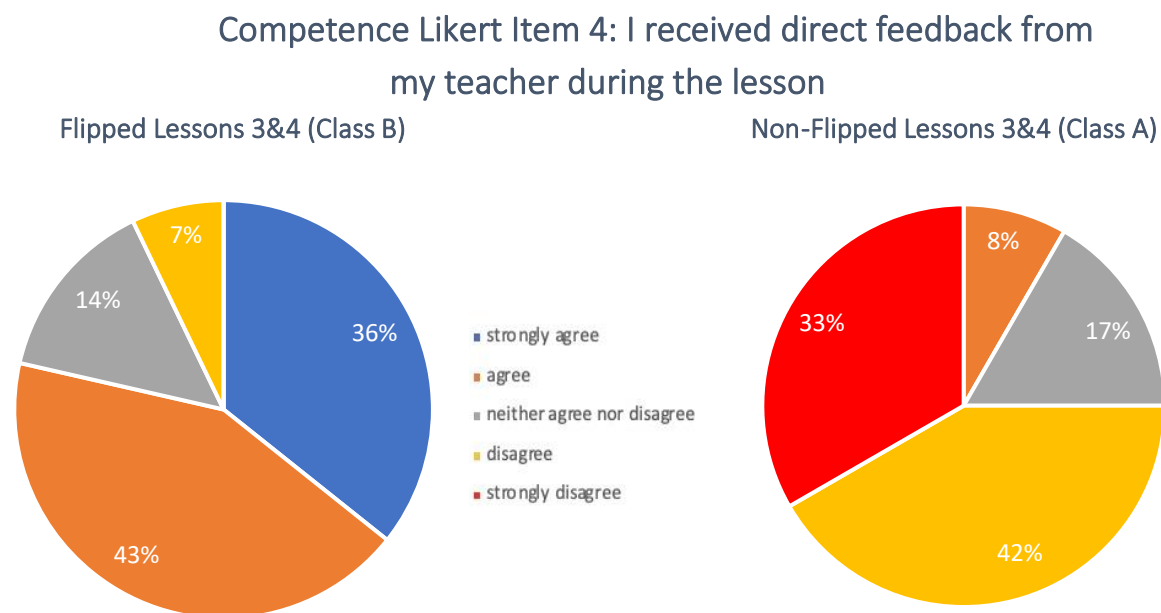

Figure 11b: Competence Likert Item 4 (Dataset 2)

5.2 Questionnaire Item: Autonomy

The following section will present the results of items 5 through 8 of the questionnaire which addressed the innate psychological need *autonomy*.

Autonomy Likert Item 5: Dataset 1

In the matter of Likert item 5, which states: *While engaging with the topic of the lesson, I was able to control my learning environment by working where it was convenient for me,* the responses were unambiguously positive. Seventy-one percent of class A reported that they strongly agreed and twenty-nine percent agreed with the statement after the first two flipped lessons (see figure 12a).

Half of class B strongly disagreed and thirty-three percent disagreed with the feeling that they were able to control the location of their learning environment during the non-flipped lessons. Seventeen percent of the responses felt neutral towards the statement.

Autonomy Likert Item 5: While engaging with the topic of the lesson, I was able to control my learning environment by working where it was convenient for me

Flipped Lessons 1&2 (Class A)   Non-Flipped Lessons 1&2 (Class B)

Figure 12a: Autonomy Likert item 5 (Dataset 1)

Autonomy Likert Item 5: Dataset 2

The concluding flipped lesson that took place in class B also evoked positive results with regards to Likert item 5. Fifty-seven percent of surveyors strongly agreed, thirty-six agreed, and seven percent responded neutrally to the statement (see figure 12b).

In comparison, there was much more disagreement with Likert item 5 from the participants of the final non-flipped classroom lessons. Fifty-eight percent strongly disagreed and forty-two percent disagreed with the statement. Thus, it can be said that learners of group B did not feel that they were able to control their learning environment by working where it was convenient for them.

Autonomy Likert Item 5: While engaging with the topic of the lesson, I was able to control my learning environment by working where it was convenient for me
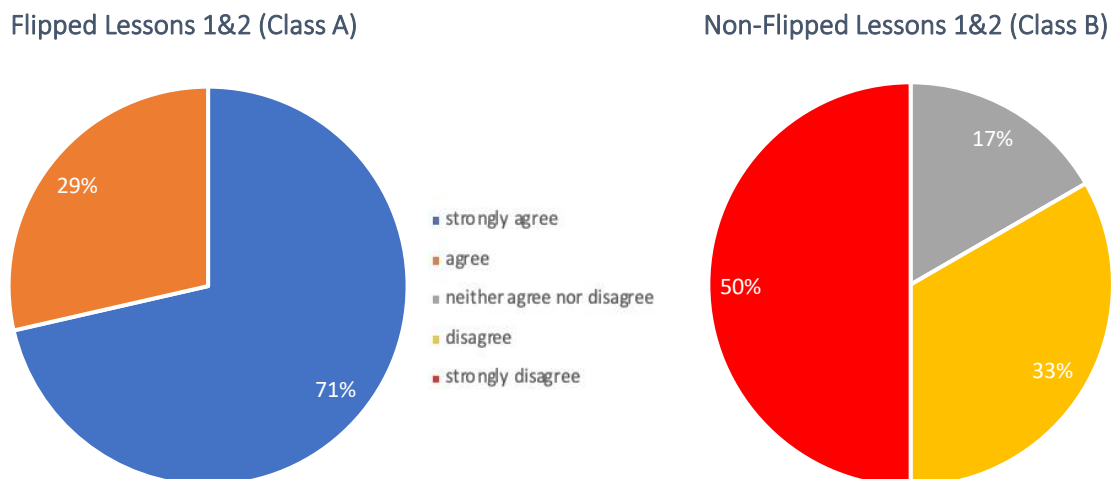
Flipped Lessons 3&4 (Class B)   Non-Flipped Lessons 3&4 (Class A)
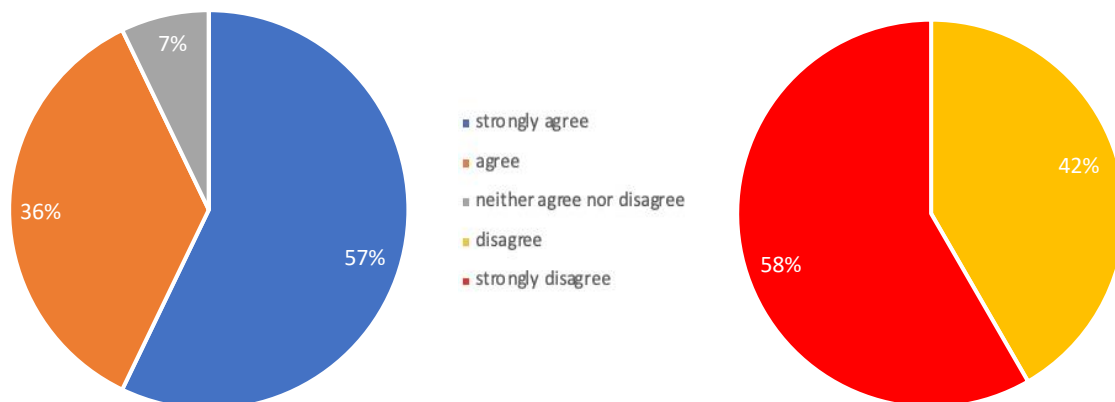

Figure 12b: Autonomy Likert item 5 (Dataset 2)

Autonomy Likert Item 6: Dataset 1

Likert item 6 stated: *While engaging with the topic of the lesson, I had the freedom to do the work when I had time*. Ninety-three percent of flipped learners either strongly agreed or agreed with this statement (50% and 43% respectively); the remaining seven percent neither agreed nor disagreed (see figure 13a).

Eighty-three percent of non-flipped learners in class B did not feel that they were able to enjoy the freedom of doing the work when they had time (42% strongly disagreed and 41% disagreed). Seventeen percent of the respondents felt neutral towards the statement.

Autonomy Likert Item 6: While engaging with the topic of the lesson, I had the freedom to do the work when I had time
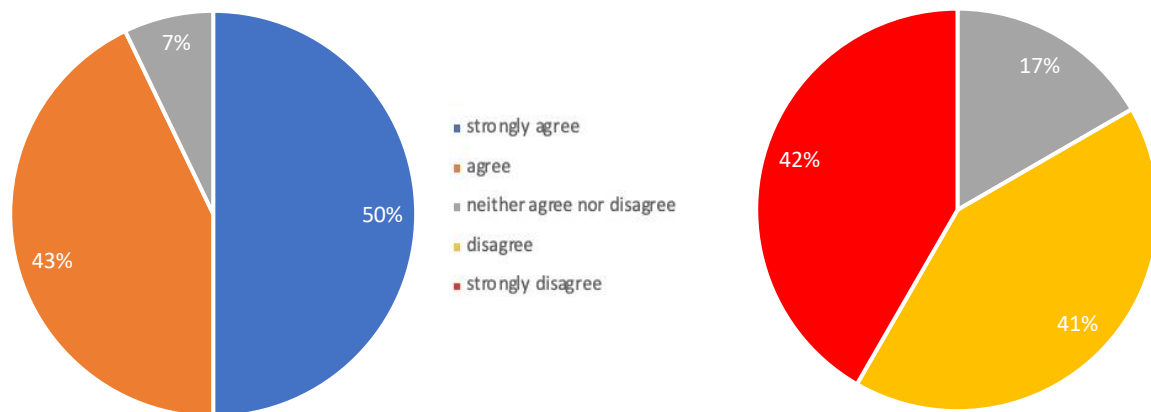

Figure 13a: Autonomy Likert item 6 (Dataset 1)

Autonomy Likert Item 6: Dataset 2

Similar results were evoked by group B after the final two flipped lessons, in that the entire group either strongly agreed or agreed (57% and 43% respectively) with autonomy Likert item 6 (see figure 13b). Thus, it can be stated that learners of group B felt that they had the freedom to do the work when they had time.

Conversely, half of the non-flipped group strongly disagreed and forty-two percent disagreed with the statement. The remaining eight percent neither agreed nor disagreed.

Autonomy Likert Item 6: While engaging with the topic of the lesson,
I had the freedom to do the work when I had time

Flipped Lessons 3&4 (Class B)   Non-Flipped Lessons 3&4 (Class A)
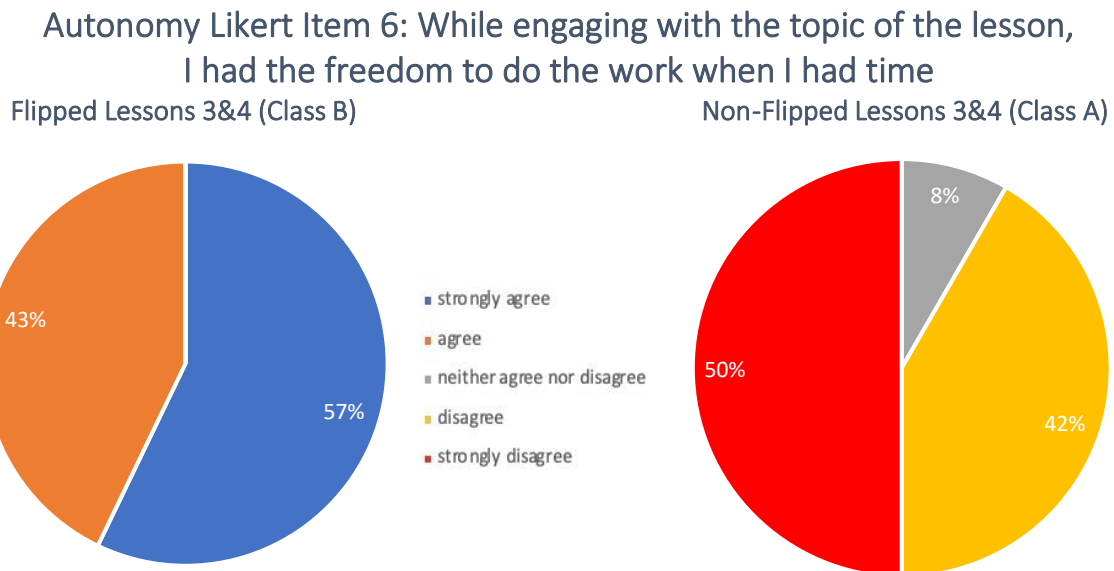

Figure 13b: Autonomy Likert Item 6 (Dataset 2)

Autonomy Likert Item 7: Dataset 1

The 7th Likert item enquired about learners' feelings regarding whether they were able to control their own learning speed while engaging with the topic of the lesson. Concerning the first and second flipped lessons, the results were unequivocally positive: fifty-seven percent of the learners strongly agreed and forty-three percent agreed with the statement (see figure 14a).

Strikingly different results were produced by autonomy item 7 distributed after the two initial non-flipped lessons. Half of the students strongly disagreed and a third of the students disagreed with the statement; the remaining respondents selected neither agree nor disagree.

Autonomy Likert Item 7: While engaging with the topic of the lesson, I was able to control my own learning speed

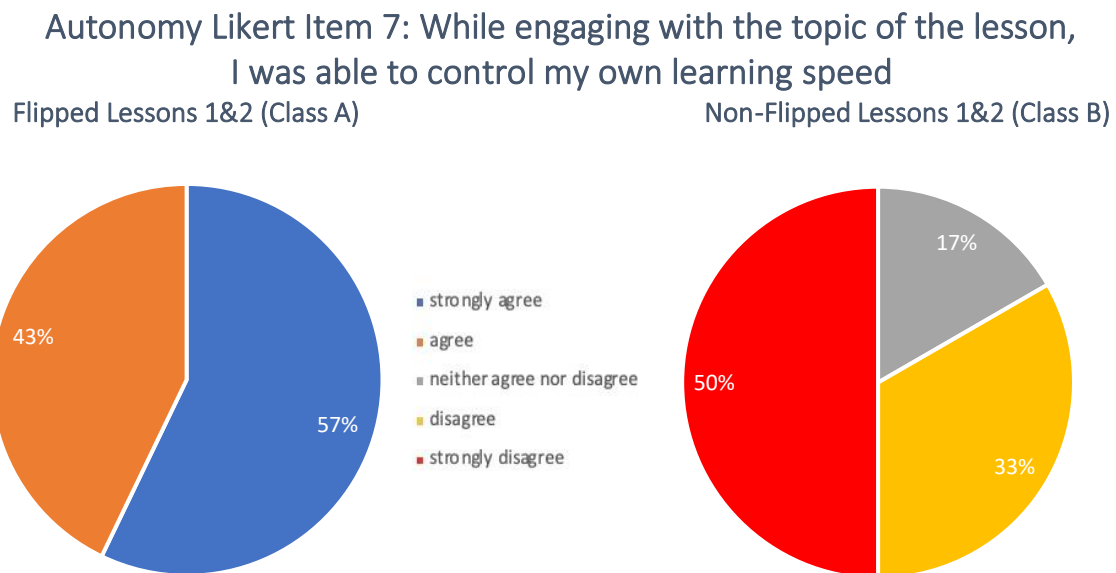Flipped Lessons 1&2 (Class A)　　　　　　　Non-Flipped Lessons 1&2 (Class B)

Figure 14a: Autonomy Likert item 7 (Dataset 1)

Autonomy Likert Item 7: Dataset 2

Flipped Learners from class B responded comparably after taking part in the third and fourth lessons of the study. Ninety-three percent of the respondents either strongly agreed or agreed to the statement addressing their perceptions on whether they were able to control their learning speed during the flipped lessons (50% and 43% respectively). Seven percent responded neutrally (see figure 14b).

The non-flipped classroom learners' responses were somewhat ambivalent about whether they were able to control their learning speed: forty-two percent strongly disagreed, thirty-three percent disagreed, and eight percent neither agreed nor disagreed with the statement. However, seventeen percent of the learners felt that they were able to control their learning speed (agreed).
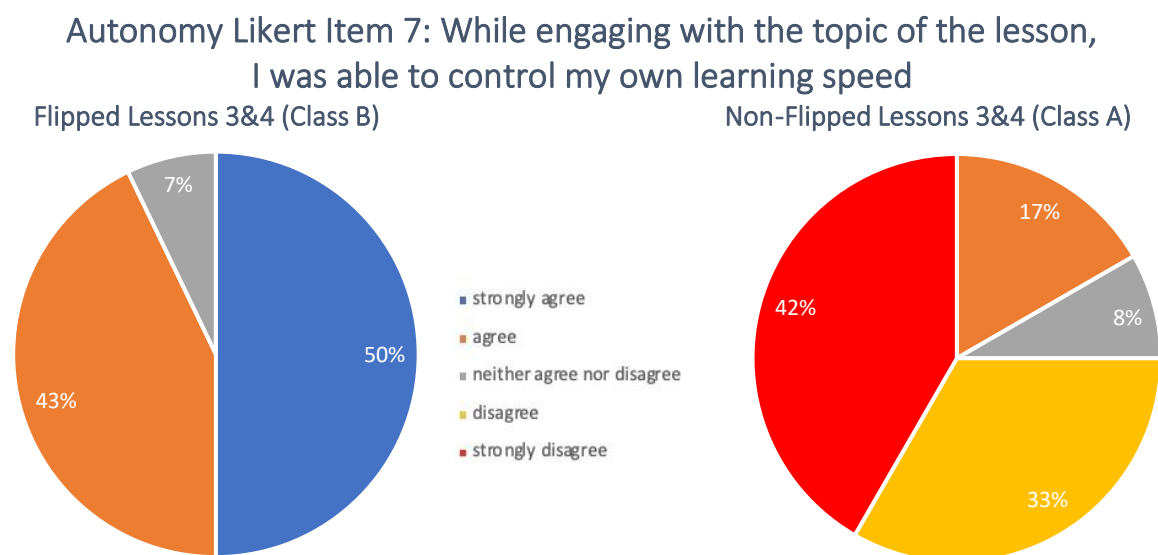
Autonomy Likert Item 7: While engaging with the topic of the lesson, I was able to control my own learning speed

Figure 14b: Autonomy Likert Item 7 (Dataset 2)

Autonomy Likert Item 8: Dataset 1

Autonomy Likert item 8 stated: *while engaging with the topic of the lesson, I was able to manage my own learning.* Over half of the students surveyed (57%) strongly agreed and thirty-six percent agreed with the statement after participating in the first two flipped lessons (see figure 15a). The remaining students neither agreed nor disagreed.

After the initial parallel non-flipped lessons, forty-two percent of the learners strongly disagreed and exactly half disagreed with the statement regarding their ability to manage their own learning. Eight percent responded neutrally.
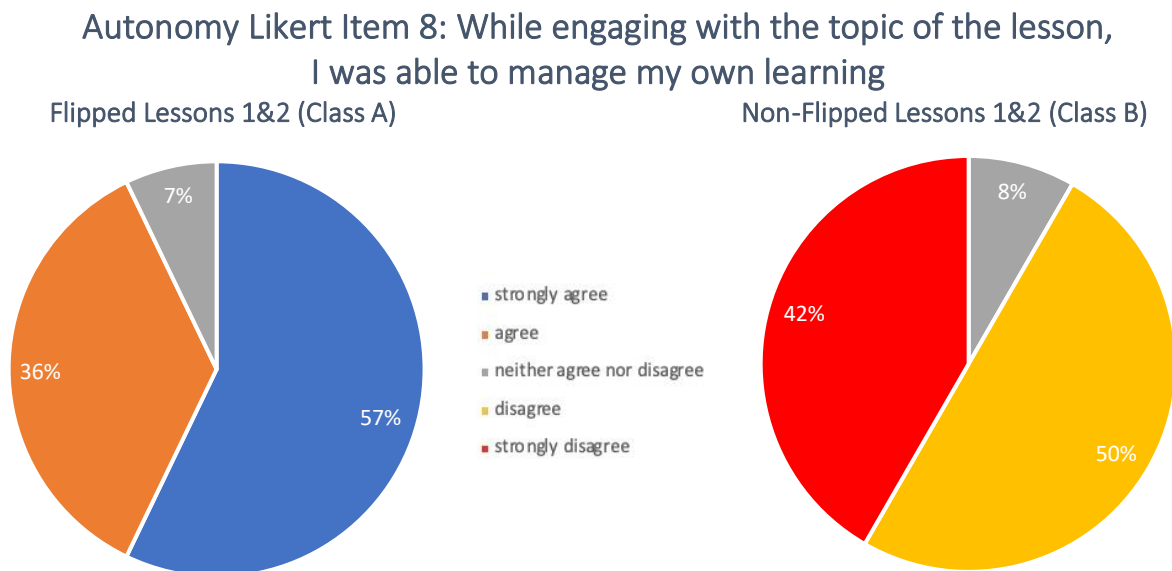
Autonomy Likert Item 8: While engaging with the topic of the lesson, I was able to manage my own learning

Figure 15a: Autonomy Likert Item 8 (Dataset 1)

Autonomy Likert Item 8: Dataset 2

Class B unanimously agreed with *autonomy* Likert item 10 enquiring whether learners were able to manage their own learning while engaging with the flipped lesson's topic (57% strongly agreed and 43% agreed) (see figure 15b).

Almost contrastingly identical results were elicited after the third and fourth non-flipped lessons, in that all students from class A either disagreed or strongly disagreed (42% and 58% respectively) with the statement concerning their ability to manage their own learning.

Autonomy Likert Item 8: While engaging with the topic of the lesson, I was able to manage my own learning
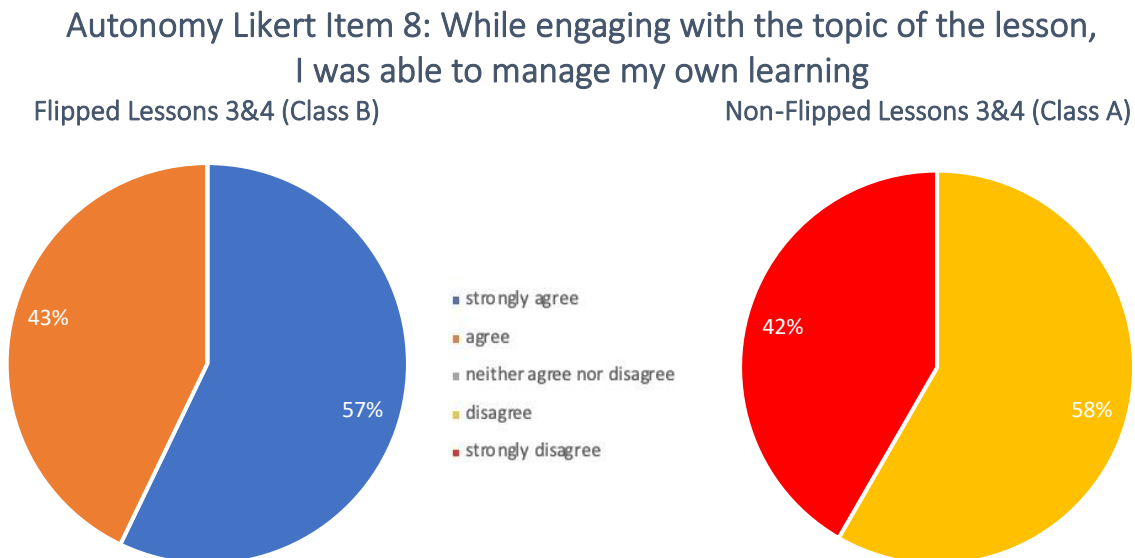

Figure 15b: Autonomy Likert Item 8 (Dataset 2)

5.3 Questionnaire Item: Relatedness

This section will present the results of the final 4 items of the questionnaire, namely Likert items 9-12, which addressed the psychological need *relatedness.*
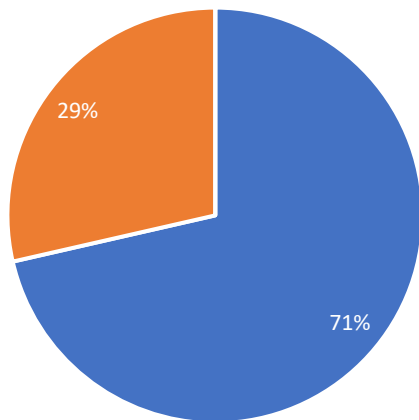
Relatedness Likert Item 9: Dataset 1

Relatedness Likert item 9 stated: *During class, I was able to interact with my classmates on the topic of the lesson*. This question elicited overwhelmingly positive results, as each member of class A responded with either strongly agree or agree (71% and 29% respectively) (see figure 16a).

After the same two lesson topics were taught from the approach of a traditional classroom in class B, the results were much more adverse, namely fifty-eight percent strongly disagreed and thirty-four percent disagreed with the statement questioning whether they were able to interact with their classmates. Eight percent neither agreed nor disagreed.

Relatedness Item 9: During class, I was able to interact with my classmates on the topic of the lesson

Flipped Lessons 1&2 (Class A)　　　　　　　　　Non-Flipped Lessons 1&2 (Class B)

Figure 16a: Relatedness Likert item 9 (Dataset 1)

Relatedness Likert Item 9: Dataset 2

The results concerning *relatedness* Likert item 9 were universally positive after the third and fourth flipped lessons: fifty-seven percent of learners strongly agreed and forty-three percent agreed (see figure 16b).

The third and fourth lesson topics taught in the context of traditional classroom approach evoked opposing results. None of the students felt that they were able to interact with their classmates during the lesson. More specifically, fifty-eight percent of respondents strongly disagreed and forty-two percent disagreed with this 9th Likert statement.

Relatedness Item 9: During class, I was able to interact with my classmates on the topic of the lesson

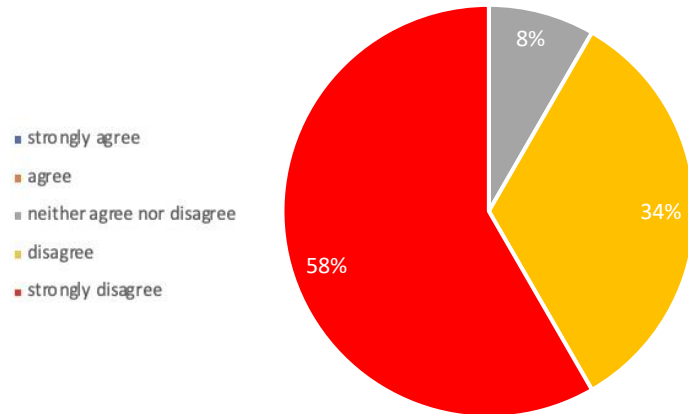| Flipped Lessons 3&4 (Class B) | Non-Flipped Lessons 3&4 (Class A) |
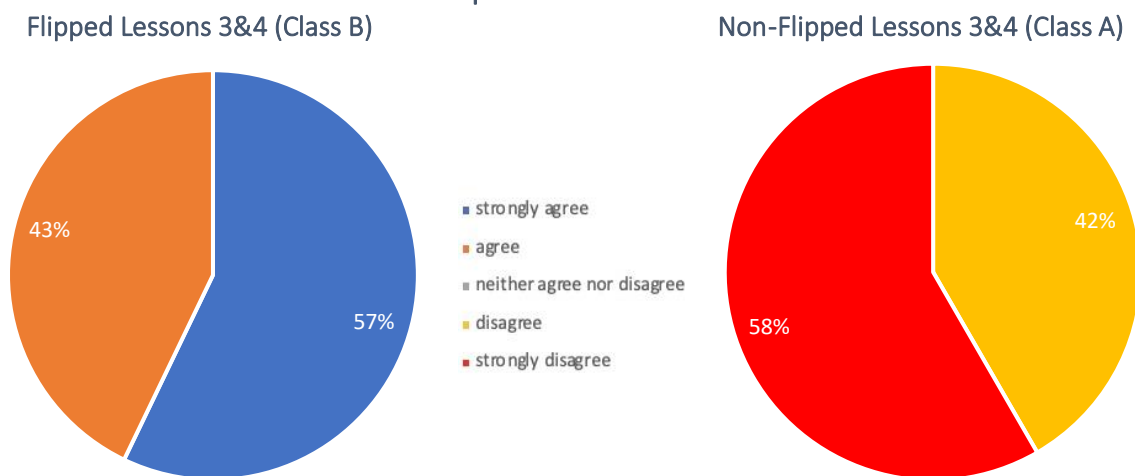
Figure 16b: Relatedness Likert item 9 (Dataset 2)

Relatedness Likert Item 10: Dataset 1

Relatedness Likert item 10 stated: *I felt supported and encouraged by my teacher during the lesson*. This item demonstrated positive results with seventy-seven percent choosing to strongly agree or agree (54% and 23% respectively) (see figure 17a). The remaining class A learners neither agreed nor disagreed (23%).

Aside from the seventeen percent of class B that felt neutral towards Likert statement 10, forty-two percent strongly disagreed and forty-one percent disagreed with feeling support from their teacher during first and second non-flipped lessons.

Relatedness Likert Item 10: I felt supported and encouraged by my teacher during the lesson

Flipped Lessons 1&2 (Class A)   Non-Flipped Lessons 1&2 (Class B)
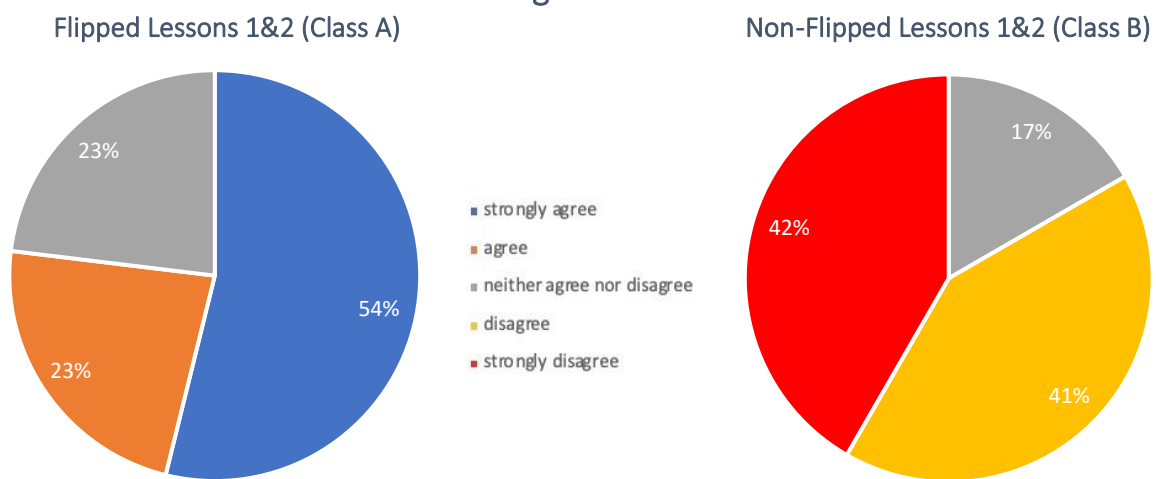
Figure 17a: Relatedness Likert item 10 (Dataset 1)

Relatedness Likert Item 10: Dataset 2

Concerning Likert item 10, responded to by class B after the third and fourth flipped lessons, 79% of all learners felt that they were supported and encouraged by their teacher during the lesson, namely forty-three percent agreed and thirty-six percent strongly agreed (see figure 17b).

On the other hand, class A learners, who were taught the same two topics, did not feel that they received support from their teacher: forty-two percent strongly disagreed and fifty-eight percent disagreed with Likert item 10.

Relatedness Likert Item 10: I felt supported and encouraged by my teacher during the lesson
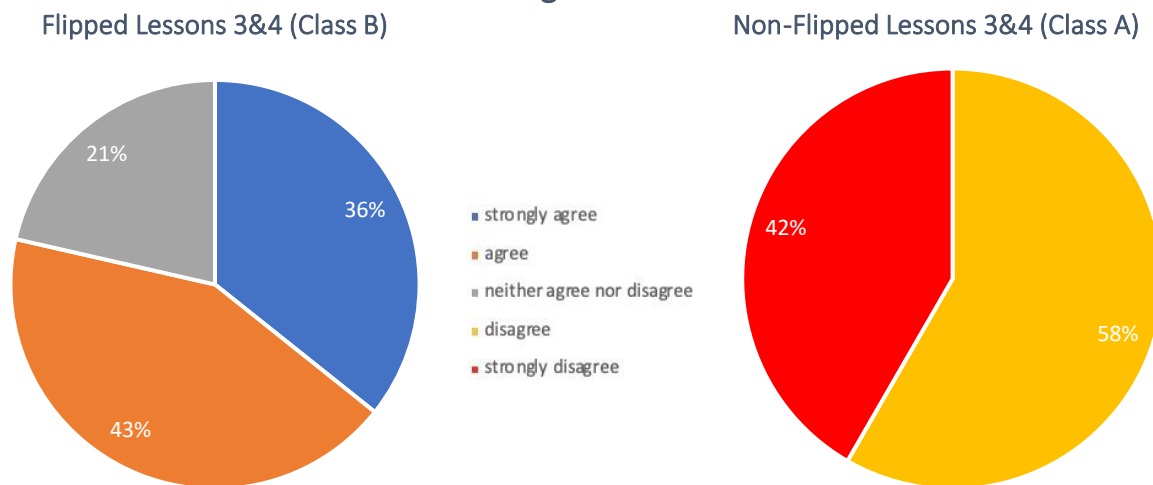
Figure 17b: Relatedness Likert Item 10 (Dataset 2)

Relatedness Likert Item 11: Dataset 1

Likert item 11 stated: I had the opportunity to participate in class or group discussions during the lesson. This *relatedness* item in the context of the first two flipped lessons also followed suit and produced very positive results: eighty-six percent of class A strongly agreed and fourteen percent agreed with the statement (see figure 18a).

These feelings were not shared by class B and were rather mixed in comparison. Forty-two percent of non-flipped classroom participants disagreed, a third neither agreed nor disagreed, and a quarter agreed with the statement.

Relatedness Likert Item 11: I had the opportunity to participate in class or group discussions

Flipped Lessons 1&2 (Class A)   Non-Flipped Lessons 1&2 (Class B)

- strongly agree
- agree
- neither agree nor disagree
- disagree
- strongly disagree
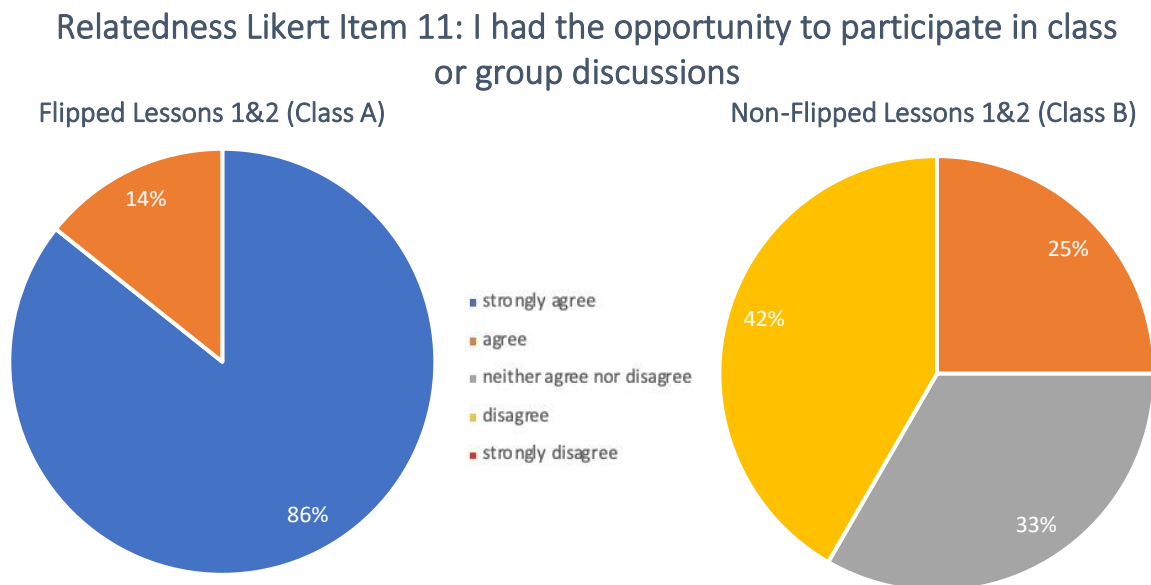
Figure 18a: Relatedness Likert Item 11 (Dataset 1)

Relatedness Likert Item 11: Dataset 2

With regards to Likert item 11, class B's answers were again very one-sided. The entire class either strongly agreed or agreed with the statement asking whether they had the opportunity to participate in class or group discussions (71% and 29% respectively) (see figure 18b).

While class A's feelings were also one-sided, they were unequivocally negative in comparison. Just over two-thirds of the class strongly disagreed (67%) and one-third of the class disagreed with the statement addressing whether learners had the opportunity to participate in class or group discussions.

Relatedness Likert Item 11: I had the opportunity to participate in class or group discussions
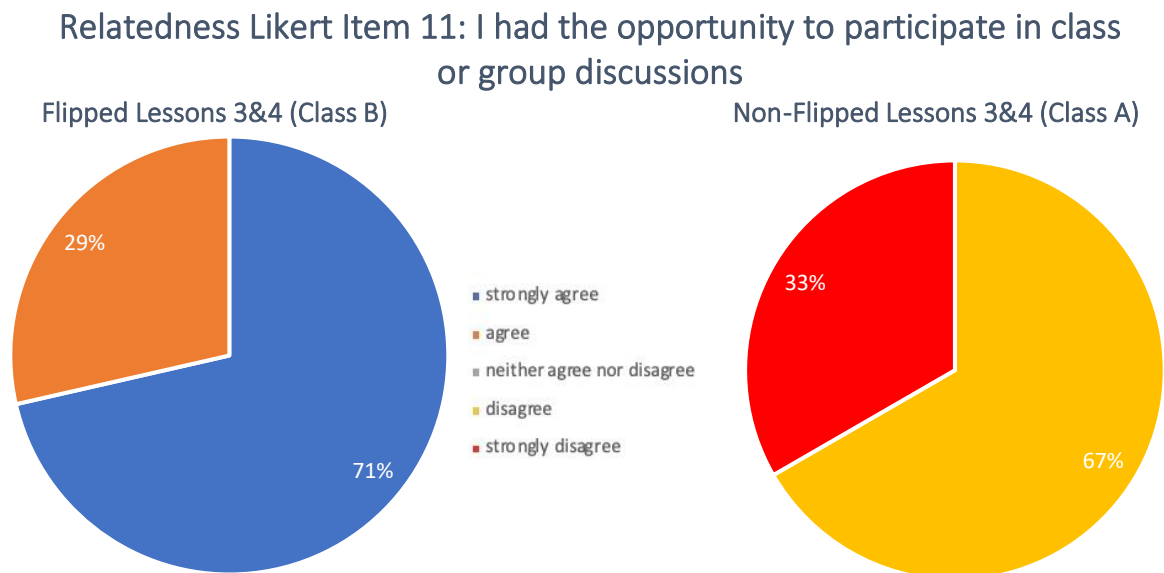
Figure 18b: Relatedness Likert item 11 (Dataset 2)

Relatedness Likert Item 12: Dataset 1

The final *relatedness* Likert item addressed the topic of interacting with peers outside of class (by means of the online e-Learning platform, Moodle). Over half of class A strongly agreed (57%) and over one-third agreed (36%) with the statement (see figure 19a). The remaining seven percent felt neutral towards the statement.

However, non-flipped learners did not feel that they had the opportunity to interact with their classmates outside of class; this was made clear given that all respondents either strongly disagreed or disagreed with the statement (67% and 33%).

Relatedness Item 12: Outside of class, I was able to interact with my classmates on the topic of the lesson
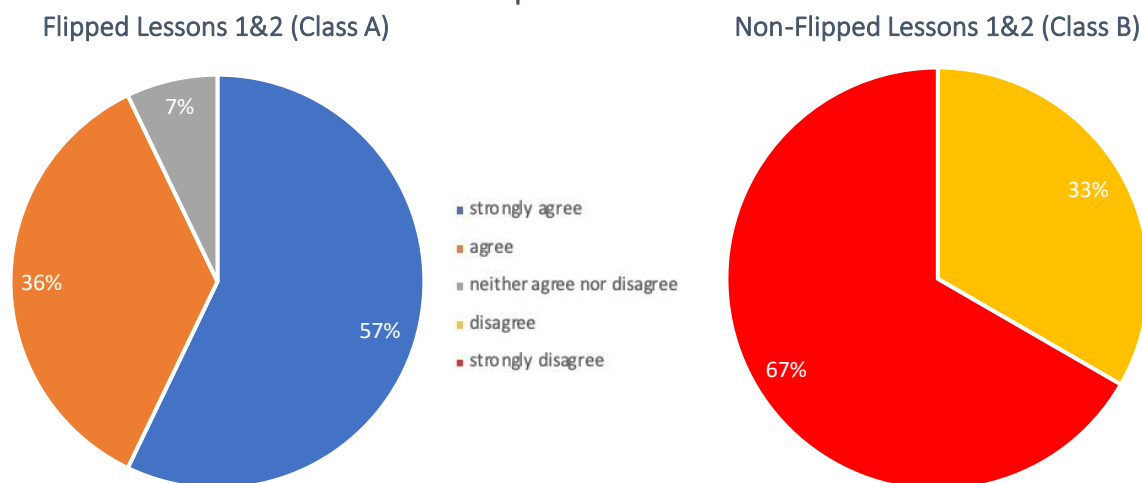
Figure 19a: Relatedness Likert Item 12 (Dataset 1)

Relatedness Likert Item 12: Dataset 2

Regarding the final *relatedness* questionnaire item, over three quarters of the flipped learners felt that they were able to interact with their classmates on the topic of the lesson (50% strongly agreed and 29% agreed) (see figure 19b). Twenty-one percent neither agreed nor disagreed with the statement.

Contrary to class A, class B non-flipped learners' response to Likert item 12 was unambiguously negative: eighty-three percent strongly disagreed and seventeen percent disagreed. Thus, it can be said that the non-flipped learners felt that they were not able to interact with their classmates outside of the lesson.

Relatedness Likert Item 12: Outside of class, I was able to interact with my classmates on the topic of the lesson

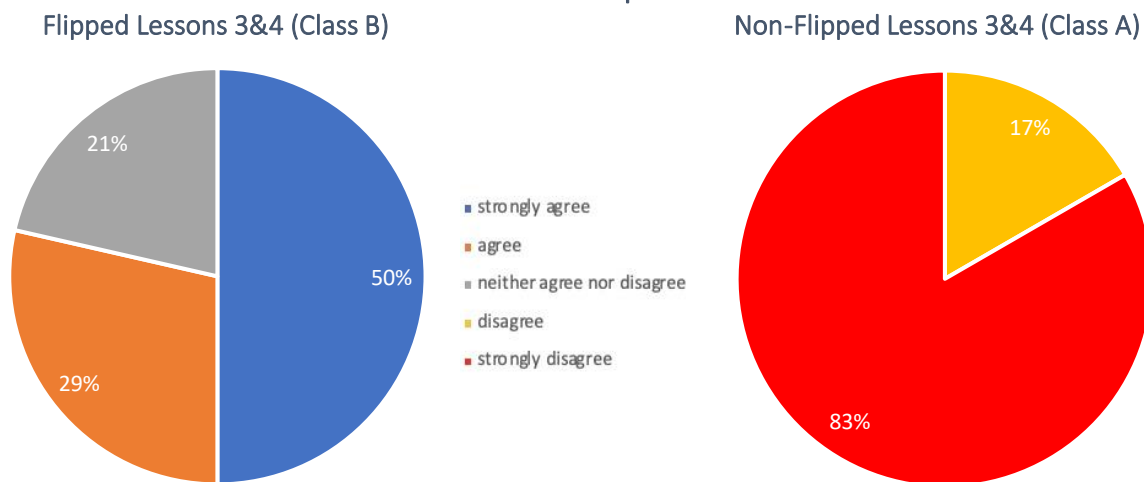*Figure 19b: Relatedness Likert item 12 (Dataset 2)*

Chapter 6: Discussion

The findings reported in Chapter Five were derived from quantitative data collected by means of a regularly administered questionnaire. The following chapter, thus, serves the purpose of comparing and analysing these findings in relation to the research question and literature review. The study's implications and limitations will also be discussed.

6.1 Learners' Perceptions of the 3 Basic Psychological Needs

Self-determination theory posits that in order to behave in a self-determined or autonomous manner a person's three psychological needs, namely *competence, autonomy, and relatedness* need to be satisfied. Each of these needs can be fulfilled if one's environment offers sufficient support. Techniques in which the learning environment and teacher can support these three basic psychological needs, previously described in section 3.2.1, were used to formulate the questions of the administered questionnaire. The following section considers the thesis' research question: "*Does the exploitation of the FCM contribute to enhancing students' perceived motivation, namely their sense of competence, autonomy, and relatedness, during the learning process?".* Hence, a comparison of the two teaching methods —— the flipped and non-flipped classroom method —— from the perspective of each psychological need will be presented below.

Perceived Competence in the flipped versus non-flipped classroom

The first four Likert items of the administered questionnaire focused on the psychological need *competence,* which refers to an individual's perceived self-efficacy and desire to be effective and capable in his/her environment (Deci & Ryan 1985). Furthermore, there is a higher probability that learners will adopt and internalize a goal if it makes sense to them and they possess the necessary skills to accomplish it (Deci & Ryan 1985). Thus, Deci and Ryan (1985) theorize that when the need for *competence* is supported in the classroom, by means such as providing learners with optimal challenges and relevant feedback, their sense of *competence* will be fulfilled and the objective will more likely be internalized, i.e. they will behave in a more self-determined manner. Concerning the study at hand, a learner's perceived sense of *competence* during a flipped and non-flipped lesson was assessed based on the following four conditions: 1) feeling confident in one's abilities; 2) feeling capable; 3) feeling challenged; and 4) receiving feedback from the instructor.

When comparing the flipped and non-flipped classroom results of the first and second Likert items, which assessed the learners' 1) sense of confidence in their abilities to complete the

assigned tasks and their 2) perceived capability applying the new topic, there was considerably more certainty in their responses after taking part in a flipped lesson. On average, over 80% of flipped learners either strongly agreed or agreed with feeling a sense of confidence while completing the in-class assigned work and feeling capable when applying the topic. It can be postulated that these positive responses are due to the pre-class work that equipped and prepared students for the activities in the subsequent lesson. Furthermore, the positive and constructive feedback and encouragement received from their teacher during the lesson may have also positively influenced the flipped learners' sense of confidence and capability.

The responses to the first and second Likert items in the context of the non-flipped classroom were more ambivalent in comparison. An average of 42% and 33% of non-flipped students responded neutrally to item 1 and item 2 respectively, i.e., they neither agreed nor disagreed. This neutral response is most likely a result of the non-flipped lessons being very teacher-centered and lecture-based. The main assignment that required students to practice or apply what they had learned during the lesson was always assigned as homework; thus, unless there was time left over, learners were unable to begin the assignment during class time. As a result, assessing their sense of confidence and capability was either based on completing small individual tasks during class or beginning the homework assignment at the end of class (when time permitted). Furthermore, given that the teacher predominantly lectured during the lesson, students did not receive any individualized feedback or encouragement, which may have also affected their sense of self-efficacy. With that being said, the majority of the remaining survey respondents agreed with the items 1 and 2. These responses are most likely the result of non-flipped learners prematurely assessing their ability to do the homework (before having completed it). Nevertheless, based on the overwhelmingly positive responses to the flipped lesson, it can be argued that the preparatory pre-class work and the increased student-teacher interaction time enhanced the learners' sense of self-efficacy, i.e., confidence and perceived capability with regards to completing tasks and applying new concepts.

As mentioned above, a learner's sense of *competence* can also be supported by providing them with challenging tasks and relevant feedback (Deci & Ryan 1985). Thus, *competence* Likert items 3 and 4 assessed whether or not the learners felt challenged and received direct feedback

from their teacher during the lessons. With regards to feeling challenged, an average of 83% of flipped learners either strongly agreed or agreed. However, non-flipped learners did not share the same experience. The responses were considerably more negative than that of the flipped learners: on average, three quarters (75%) of the respondents either strongly disagreed or disagreed with feeling challenged during the lesson. It can be argued that this discrepancy is due to the teaching approach implemented in the respective classes. Given that the flipped learners were expected to apply the newly learned concept by means of interactive and collaborative activities with their peers (i.e., creating poems, a group fishbowl activity, role-plays, and researching a chosen topic), it is assumed that the lessons were perceived as challenging and stimulating. In the non-flipped lessons, learners took on a more passive role and were expected to observe, listen, take notes, work individually and, at times, answer questions in plenum, which can be perceived as under-stimulating and, thus, not challenging. Concerning the matter of feedback received, the results were similar to item 3, in that they were also overwhelmingly positive in the context of the flipped classroom. On average, eighty-six percent of all flipped learners responded that they received direct feedback from their teacher during the lesson. Conversely, the majority of non-flipped learners, namely an average of 75%, either strongly disagreed or disagreed with the statement. Given that the flipped teacher acts as a facilitator or guide during the learning process and places the learner at the center of learning, more time is made available to incorporate interactive and challenging group activities and there is sufficient time to provide students with individualized and relevant feedback.

Perceived Autonomy in the flipped versus non-flipped classroom

Likert items 5-8 of the questionnaire addressed the psychological need *autonomy*, which refers to learners' self-determination of when and how to perform a certain task (Deci & Ryan 1985). Learners need to feel that they are in control of their learning and maintain a sense of independence when performing tasks (Chen & Jang 2010). Ryan and Deci support the previous claim by describing learner *autonomy* as the learners' ability to control and manage their learning based on their personal needs and required learning pace (2000). In the setting of the flipped classroom, learner *autonomy* can be fostered by means of its inverted nature, i.e., the pre-class work that can be completed and managed according to on one's preferred learning style and

schedule. With regards to the study at hand, a learner's perceived sense of *autonomy* during a flipped and non-flipped lesson was assessed based on the degree to which they were able to: 1) choose where they worked; 2) determine when they worked; 3) decide the speed at which they learned; 4) manage their own learning.

The responses to the *autonomy* items of the questionnaire demonstrate a striking divide between flipped and non-flipped learner respondents. Regarding Likert items 5 and 6, the results implied that the learners of the flipped classroom perceived a sense of autonomy regarding their ability to decide when and where they worked (on average, over 90% strongly agreed or agreed). However, the responses of the non-flipped classroom indicated that the vast majority of students did not share the same sense of autonomy while engaging with the material (on average, 89% strongly disagreed or disagreed). The essential qualities of the FCM enables students to have control over when and where they complete the pre-class work: students have the freedom to choose to complete it after school, directly before class, during the break, in the library, or at home. Whereas in the traditional classroom, one's ability to control these factors is much more restricted or nonexistent. Furthermore, items 7 and 8 report about students' ability to manage their own learning and control their learning speed. The questionnaire results of the flipped classroom also depict markedly diverging experiences regarding these two statements: on average, 97% of flipped learners either strongly agreed or agreed, whereas an average of 87% of non-flipped learners either strongly disagreed or disagreed. The flexibility offered by the FCM in terms of the pace at which students learn a new concept and choose to manage their learning, according to their learning needs, plays an important role in feeling self-determined and in control of one's learning. Thus, it can be argued that the FCM learning environment, which requires students to engage with topic-related educational material before class, provides students with more freedom and choice in terms of autonomous learning.

Perceived Relatedness in the flipped versus non-flipped classroom

Likert items 9-12 of the questionnaire addressed the psychological need *relatedness,* which refers to learners' feeling of association and relationship with their classmates (Deci & Ryan 1985). While

engaging in a task, learners have the need to perform activities in the classroom that enable collaboration and communication with their peers (Sergis et al. 2018). *Relatedness* is also associated with social networking, which allows students to socialize and interact with their classmates and teachers during and outside of class (Ryan & Deci 2000). In order to compare students' perception of *relatedness* during flipped and non-flipped lessons, the following four criteria were assessed: 1) interacting with classmates during class; 2) feeling supported and encouraged by the teacher; 3) participating in class or group discussions; and 4) interacting with classmates outside of class.

The findings that assessed the learners' perceived sense of *relatedness*, which increases the opportunity for interaction and socializing in the classroom context, support the flipped classroom approach. The results of items 9 and 12 indicated a significant difference with regards to the fulfillment of this need based on the two instructional approaches. An average of ninety-three percent of flipped learners felt that they were able to interact with their peers on the lesson's topic both during and outside of class, whereas nearly every non-flipped learner (on average, 98%) disagreed. This level of interaction in the flipped classroom was made possible due to collaborative in-class group activities and pre-class tasks that required students to use the e-Learning platform Moodle forum to interact with their peers. Concerning item 10, the results imply that the FCM provides an unparalleled number of opportunities for teachers to provide students with support and encouragement during the lesson. On average, seventy-eight percent of flipped learners either strongly agreed or agreed to feeling supported and encouraged by their teacher, whereas an average of nearly 92% of learners in the traditional classroom did not feel this way. As mentioned before, the student-centered format of the FCM allows the teacher to act as a facilitator of learning and affords him/her more time to interact with the students. Teachers can take advantage of this extra classroom time by providing students with feedback on their performance, support with the tasks, as well as encouragement and positive reinforcement. Finally, the results of the last *relatedness* item, item 11, also demonstrated a strong divide between the FCM and traditional classroom. All flipped classroom learners felt that they had the opportunity to participate in class or group discussions (strongly agreed or agreed), whereas an average of 88% of non-flipped participants did not feel this way (strongly disagreed or disagreed).

In consideration of the fact that the FCM lessons revolved around collaborative group and partner activities, the need to discuss and converse with ones classmates was inevitable. On the contrary, based on its teacher-centered approach, the non-flipped classroom lessons offered substantially fewer opportunities for learners to discuss or share their opinions.

6.2 Implications for the Teacher in Practice

The findings of the current study demonstrate that students' autonomous and self-directed learning are likely to enhance as a result of the FCM, as the nature of the learner-centered instructional approach supports the three universally applicable basic cognitive needs, namely *autonomy, competence,* and *relatedness*. To reiterate, a*utonomy* refers to the students' ability to be in control of and regulate their learning based on their pace and needs; *competence* is associated with a sense of self-efficacy and confidence in one's abilities; and *relatedness* concerns feeling a sense of belonging and being able to socially interact with peers and the teacher in or after class (Ryan & Deci 2000).

The flipped classroom can be an attractive approach for those educators who want to provide their students with a more learner-centered environment that transforms the teacher and learner role entirely. The teacher is no longer the 'sage on the stage' who lectures the passive learner with expert knowledge, but rather the 'guide on the side' who facilitates learning and encourages high-quality student-student interaction during the lesson. By curating interactive digital media or creating self-recorded instructional videos as a form of scaffolding, that the students have to watch or engage with before class, valuable time is made available during the lesson so that learners can work together in collaborative groups. As a result, the teacher is able to step away from the role as 'lecturer' and adopt the role as a facilitator of learning, who provides individual, face-to-face feedback, guides learners through the learning process, encourages and provides positive reinforcement, and manages and assesses learners' progress. These teacher role and learning environment transformations can have far-reaching effects on learners' autonomous motivation by means of enhancing their sense of *autonomy, competence, and relatedness* (according to the SDT). Therefore, the FCM is for teachers who want to enhance the student learning experience by turning their classroom into an interactive learning environment, by enabling learners to take responsibility for and being in control of their learning, and by enriching

the educational materials that learners engage with. By enhancing students' three basic cognitive needs, their behavior and approach to learning will become more autonomous and self-determined.

6.3 Limitations of the Research

While the study was created and conducted with the utmost diligence, this research is subject to several limitations and shortcomings. The primary limitation is the lack of generalizability of the results, due to the fact that the number of participants who took part in the study was quite small. Class A and class B combined comprised of 26 11th grade students; however, given that a number of students were either sick on the day of class or did not complete the pre-class work before the flipped classroom lessons, the results were only based on a total of 20 students filled-out questionnaires. Therefore, due to the smaller sample size, it may not be representative of a larger group of students or of every other school grade. In order to generalize the results to a larger population, the study would have to include a larger sample size of EFL students across multiple grades and potentially multiple teachers executing the lessons.

The second limitation concerns the data collection method: the study did not utilize qualitative data, which in hindsight would have offered valuable, additional insight into the learners' specific attitudes, feelings, and perceptions regarding each cognitive need. This could have taken the form of one-on-one or group interviews, or open-ended questions at the end of the questionnaire. These personal and individual insights from the students would have helped me gain a more accurate and deeper understanding of their feelings and further complemented and enhanced the results collected in the quantitative research. Thus, future research should include both quantitative and qualitative data collection methods to strengthen the validity of the results.

Another limitation experienced was a result of the COVID-19 pandemic, which did not allow for students to move freely in the classroom or choose their own partners. During each lesson, students were only allowed to work with their neighboring classmates and were not given the opportunity to exert autonomy by creating their own learning groups or determining where they worked. As a result, I eliminated one of the original *relatedness* items asking whether students liked the people they worked with, as they were never given the option to choose their own

partners or groups. Fortunately, the COVID-19 measures during this time period did not have any other noticeably negative effects on the learning environment of the flipped and non-flipped classroom.

The final limitation to be considered in the current study is the duration of the data collection period. The data was collected over a period of 2 weeks in order to ensure that the lessons were able to take place in person before an unexpected lockdown took place. Thus, such a short time period may be insufficient for revealing generalizable effects of the FCM on one's autonomous motivation. In addition, while it did not appear to negatively impact the findings, it might have been beneficial to introduce the students to the FCM before the first official flipped lesson and data collection. This preliminary lesson would serve the purpose of thoroughly explaining the concept of the FCM, the benefits of the flipped classroom for both the students and teacher, the importance and advantages of completing the pre-class work, and providing a brief explanation of the SDT and the potential impact of the FCM on one's motivation. Additionally, lessons prior to the first data collection could have been flipped progressively so as not to overwhelm the participants and to gradually ease them into the new classroom arrangement. The approach might have increased the number of students who completed the pre-class homework during the study. Another possible variable that may have influenced the results of the study was the mature age of the participants. Given that all students were between 17 and 18 years of age, autonomy and independence with regards to learning might be perceived as more important than for those of younger students. Hence, conducting the study over a longer period of time and with a larger, broader sample source would be a suggestion for future research.

Although the study aimed at exploring the compatibility of the flipped learning approach in an Austrian EFL upper secondary classroom, the findings may offer valuable insights to other foreign language teachers, who want to implement the FCM and enhance their students' self-determined motivation to learn a foreign language. With that being said, due to the smaller sample size and the other above mentioned shortcomings, the initial findings should not be interpreted as indubitable.

Chapter 7: Conclusion

The paper at hand presented a comparative analysis of four FCM implementations in the context of two parallel 11th grade Austrian upper secondary EFL classes with the aim of revealing how the FCM can fulfill learners' internal motivational needs. The overall insights from the study are promising and uncover arguments that support the employment of the FCM as a means to improve the teaching and learning process. More specifically, regarding students' self-determination, the study's findings indicate that students who were exposed to the flipped classroom environment experienced a higher satisfaction of their self-determination needs, i.e., an enhanced sense of *autonomy, competence,* and *relatedness*, in comparison to their controlled counterparts (the traditional classroom).

The findings suggest that the learners' need for *competence*, namely the need to feel effective and capable in one's learning environment and confident fully engaging in one's learning, was accomplished by means of the supportive environment that the FCM creates. It can be argued that this outcome is a result of the underlying principles of the FCM: teachers providing students with direct feedback and scaffolding; pre-class activities that adequately prepared learners for the subsequent lesson; and a better use of classroom time which led to more teacher-student and student-student interaction time and increased interactive and collaborative activities.

Regarding the psychological need *autonomy*, the results indicate that the FCM successfully fulfilled the learners' need to be in control of their learning environment with regards to managing their learning, controlling their learning pace, and determining when and where they engage with assigned tasks. It can be argued that these needs were met as a result of the FCM, as students were able to autonomously complete the pre-class tasks according to their own schedule and at their own pace, and classroom-based time was significantly more learner-centered than lecture-based, which would restrict one's autonomy.

Lastly, the findings concerning learners' need for *relatedness* also demonstrate that the nature of the flipped classroom, which frees up classroom time for learners to engage in more interactive and collaborative group activities and offers students the opportunity to interact on the lesson's materials outside of class, increases the support and encouragement received by the teacher. Furthermore, the FCM increases social interaction, which meaningfully effects one's

sense of belonging and association with peers. Thus, the flipped classroom is conducive to one's need for community and working close with his/her peers in an supportive environment.

With regards to future research, it should be aimed at addressing and considering the limitations mentioned in Chapter 6 as well as expanding the described findings as a way to improve the efficacy of the research design. It would be beneficial to conduct a study with a larger sample size (across different grades) to determine whether the findings are indeed similar and in order to increase the study's generalizability across other learning groups and its implementability as a viable mode of instruction across all levels of education. This shortcoming could be rectified by conducting a longitudinal study, involving a larger and broader sample size and longer periods of research, in order to ensure that learners' basic psychological needs, and in turn autonomous motivation, are satisfied over time. Also, longitudinal studies could help validate and explain the promising effects of the FCM on one's autonomous motivation.

Furthermore, the data collection method utilized in the study at hand – closed ended questionnaire items – could be enriched and expanded upon to include teacher journal observations, in-depth student and teacher interviews, and open-ended questionnaire items. Having access to and including the personal perceptions and explanations of the learners and instructor would help with the interpretation of the findings and complement the quantitative data. Ergo, qualitative data in combination with quantitative data collection methods should be considered by further researchers as a means to corroborate and substantiate the initial findings of this thesis.

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Appendix

Questionnaire

Dear English language student,

I am a Masters of Education student at the University of Vienna studying English and Physical Education. This questionnaire is designed to help gain a better understanding of the feelings and perceptions of English learners in relation to a lesson they have just completed. Read each question carefully and respond accordingly. Please keep in mind that this is not a test and there are no 'right' or 'wrong' answers. If you are confused about any questions please ask your teacher for clarification. Also, there will be no impact on your actual grades and your participation is completely voluntary. Finally, your responses will be kept confidential and will only be used for the purposes of this research. Thank you for your cooperation.

Yours sincerely,
Alynn Dockner

If you have any questions, please feel free to contact me at alynn.dockner@outlook.com

Name:..........................

The following sections include items related to your feelings about the English lesson you just participated in. Your responses will be kept confidential. Please read the items carefully and choose the one that is closest to your current feeling:

1. Strongly disagree (I am absolutely against this statement)
2. Disagree (I do not fully agree with this statement)
3. Neither agree nor disagree (I neither agree nor disagree with this statement)
4. Agree (to a certain extent, I agree with this statement)
5. Strongly agree (I absolutely agree with this statement).

Statements	Strongly disagree	disagree	Neither agree nor disagree	Agree	Strongly agree
1. I felt confident in my abilities to complete the assigned tasks (in-class or homework)					
2. I felt fully capable applying the new topic to the in-class tasks or homework assignments					
3. I felt challenged during the lesson					
4. I received direct feedback from my teacher during the lesson					

5. While engaging with the topic of the lesson, I was able to control my learning environment by working where it was convenient for me					
6. While engaging with the topic of the lesson, I had the freedom to do the work when I had time					
7. While engaging with the topic of the lesson, I was able to control my own learning speed					
8. While engaging with the topic of the lesson, I was able to manage my own learning					
9. During class, I was able to interact with my classmates on the topic of the lesson					
10. I felt supported and encouraged by my teacher during the lesson					
11. I had the opportunity to participate in class or group discussions					
12. Outside of class, I was able to interact with my classmates on the topic of the lesson					