

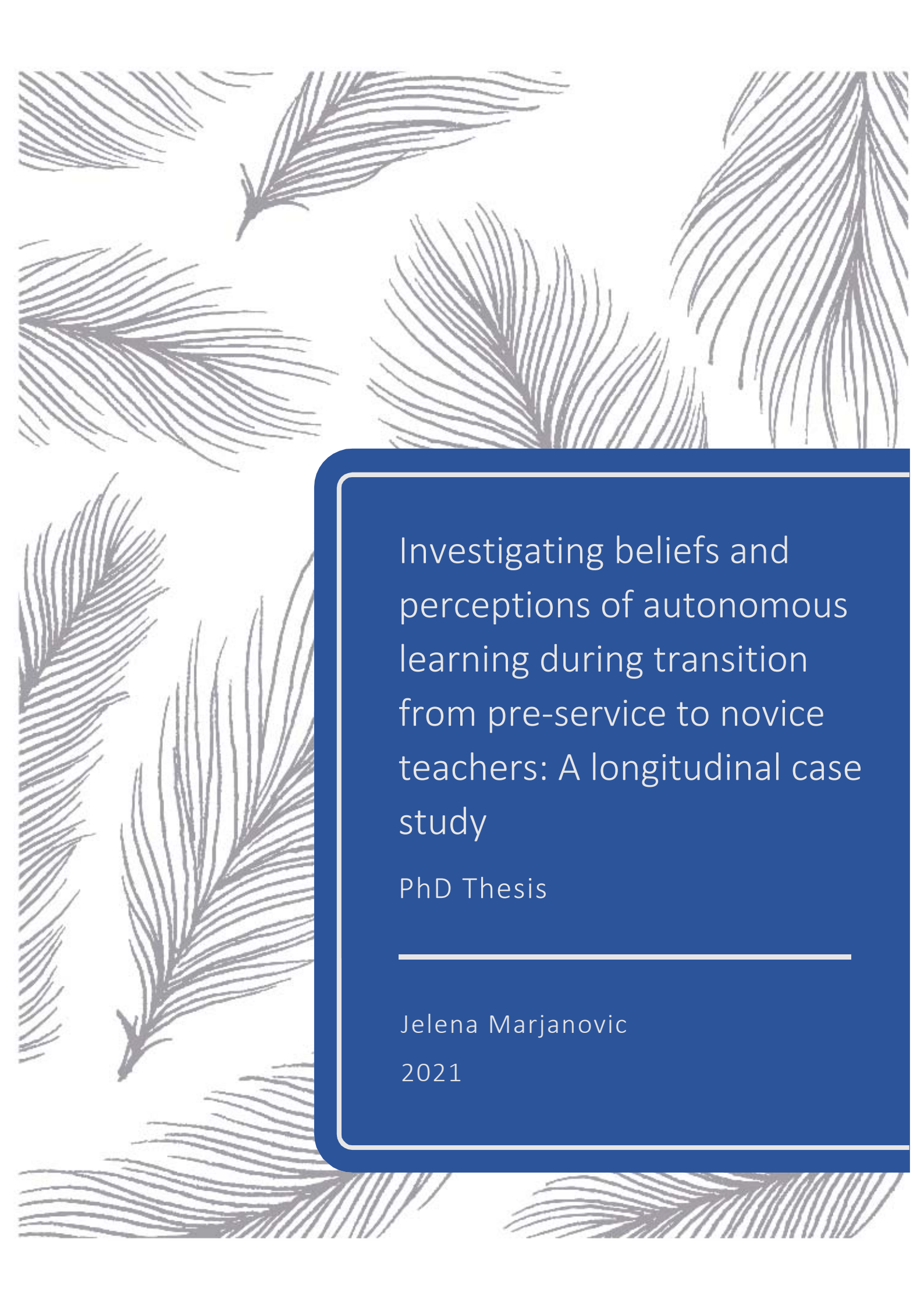


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Investigating beliefs and  
perceptions of autonomous  
learning during transition  
from pre-service to novice  
teachers: A longitudinal case  
study

PhD Thesis

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Jelena Marjanovic

2021



**Universitat Autònoma de Barcelona**

**Departament de Didactica de la Llengua i la Literatura, i de les Ciències Socials**

**Programa de doctorat en Didactica de la Llengua i de la Literatura**

**(RD 1393/2007)**

**Investigating beliefs and perceptions of  
autonomous learning during transition  
from pre-service to  
novice teachers: A longitudinal case study**

**Presented for Defense December 2021**

**Supervisor:** Dr Melinda Dooly Owenby

**Doctoral Candidate:** Jelena Marjanovic



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## Abstract

In the 21<sup>st</sup> century, autonomous learning ability—often understood as the ability to take control over one’s learning—is crucial for one’s lifelong satisfaction and self-realisation. Hence, the development of learner autonomy is seen as an important educational goal that many education programmes implement into their curricula to instruct the pre-service teachers to foster learner autonomy with their future students. However, upon graduating and becoming novice teachers, teachers often struggle to implement what they learned regarding autonomy. Therefore, there is a need for longitudinal examinations of teacher beliefs and perceptions of autonomous learning in micro contexts, during and post-teacher education. The present study responds to this need by following two pre-service teachers—students of the Faculty of Education at a Catalan university—as they transitioned into in-service novice teachers. The research questions concerned the two study participants’ beliefs and perceptions of autonomous learning during their final university year *as pre-service teachers*, their beliefs and perceptions of autonomous learning *as novice in-service teachers*, and potential *change of these beliefs and perceptions* and their underlying factors.

A qualitative case study was employed with a multi-phase research design involving: a research synthesis pre-study to establish a conceptual framework, a pilot study, the main study entailing designing and implementation of a 9-month long Autonomous Learning Intervention (conducted fully online), and a follow-up study to elicit the in-service teaching data and validate researcher interpretation of the main study findings. The data was collected via online meetings and questionnaires, screencast video recordings, reflection sheets, and participant-produced artefacts and materials such as practicum lesson plans and self-reflection blog posts. This data was then analysed using an interpretivist paradigm, with content and thematic analysis used as the main tools for identifying the dynamic unfolding of

the two participants' beliefs and perceptions three-year period. The main findings are discussed under the most recurrent supratemes at both stages: *uncertainty*, *teacher guidance*, *teacher feedback*, and *control shift*. This case study provides an in-depth account of the two pre-service teachers' beliefs and perceptions of autonomous learning while shedding light on the reality of novice teaching in Catalonia and the complexity of investigating teacher beliefs where institutional constraints inevitably affect their enactment in practice. Some important implications for pedagogy and further research are provided, including a call to reinforce pre-service teachers' training on autonomous learning and provide means of support to novice teachers to enable their promotion of autonomy.

## **Abstracto**

En el siglo XXI, la capacidad de aprendizaje autónomo -entendida a menudo como la capacidad de tomar el control sobre el propio aprendizaje- es crucial para la satisfacción y la autorrealización de la persona a lo largo de su vida. De ahí que el desarrollo de la autonomía del alumno se considere un objetivo educativo importante que muchos programas educativos incorporan a sus planes de estudio para instruir a los profesores en el fomento de la autonomía del alumno con sus futuros estudiantes. Sin embargo, cuando se gradúan y se convierten en profesores noveles, a menudo tienen dificultades para poner en práctica lo que han aprendido en materia de autonomía. Por lo tanto, es necesario realizar exámenes longitudinales de las creencias y percepciones de los profesores sobre el aprendizaje autónomo en microcontextos, durante y después de la formación docente. El presente estudio responde a esta necesidad siguiendo a dos profesores en formación -estudiantes de la Facultad de Educación de una universidad catalana- en su transición a profesores noveles en activo. Las preguntas de investigación se centran en las creencias y percepciones de los dos participantes del estudio sobre el aprendizaje autónomo durante su último año universitario como profesores en formación, sus creencias y percepciones sobre el aprendizaje autónomo como profesores noveles en servicio, y el cambio potencial de estas creencias y percepciones y sus factores subyacentes.

Se empleó un estudio de caso cualitativo con un diseño de investigación de varias fases que incluía: un estudio previo de síntesis de la investigación para establecer un marco conceptual, un estudio piloto, el estudio principal que implicaba el diseño y la implementación de una intervención de aprendizaje autónomo de 9 meses de duración (realizada completamente en línea), y un estudio de seguimiento para obtener los datos de la enseñanza en servicio y validar la interpretación del investigador de los resultados del estudio



principal. Los datos se recogieron a través de reuniones y cuestionarios en línea, grabaciones de vídeo de screencast, hojas de reflexión y materiales producidos por los participantes, como planes de clases de prácticas y entradas de blog de autorreflexión. Estos datos se analizaron mediante un paradigma interpretativo, utilizando el análisis de contenido y el análisis temático como herramientas principales para identificar el desarrollo dinámico de las creencias y percepciones de los dos participantes durante un período de tres años. Los principales hallazgos se discuten bajo los supratemas más recurrentes en ambas etapas: incertidumbre, orientación del profesor, retroalimentación del profesor y cambio de control. Este estudio de caso proporciona un relato en profundidad de las creencias y percepciones de los dos profesores en formación sobre el aprendizaje autónomo, a la vez que arroja luz sobre la realidad de la docencia novel en Cataluña y la complejidad de investigar las creencias de los profesores cuando las restricciones institucionales afectan inevitablemente a su puesta en práctica. Se ofrecen algunas implicaciones importantes para la pedagogía y la investigación futura, incluyendo un llamamiento para reforzar la formación de los profesores en formación sobre el aprendizaje autónomo y proporcionar medios de apoyo a los profesores noveles para permitir su promoción de la autonomía.

## **Abstracte**

En el segle XXI, la capacitat d'aprenentatge autònom -entesa sovint com la capacitat de prendre el control sobre el propi aprenentatge- és crucial per a la satisfacció i l'autorealització de la persona al llarg de la seva vida. D'aquí ve que el desenvolupament de l'autonomia de l'alumne es consideri un objectiu educatiu important que molts programes educatius incorporen als seus plans d'estudi per a instruir als professors en el foment de l'autonomia de l'alumne amb els seus futurs estudiants. No obstant això, quan es graduen i es converteixen en professors novells, sovint tenen dificultats per a posar en pràctica el que han après en matèria d'autonomia. Per tant, és necessari realitzar exàmens longitudinals de les creences i percepcions dels professors sobre l'aprenentatge autònom en microcontextos, durant i després de la formació docent. El present estudi respon a aquesta necessitat seguint a dos professors en formació -estudiants de la Facultat d'Educació d'una universitat catalana- en la seva transició a professors novells en actiu. Les preguntes de recerca se centren en les creences i percepcions dels dos participants de l'estudi sobre l'aprenentatge autònom durant el seu últim any universitari com a professors en formació, les seves creences i percepcions sobre l'aprenentatge autònom com a professors novells en servei, i el canvi potencial d'aquestes creences i percepcions i els seus factors subjacents.

Es va emprar un estudi de cas qualitatiu amb un disseny de recerca de diverses fases que incloïa: un estudi previ de síntesi de la recerca per a establir un marc conceptual, un estudi pilot, l'estudi principal que implicava el disseny i la implementació d'una intervenció d'aprenentatge autònom de 9 mesos de durada (realitzada completament en línia), i un estudi de seguiment per a obtenir les dades de l'ensenyament en servei i validar la interpretació de l'investigador dels resultats de l'estudi principal. Les dades es van recollir a través de reunions i qüestionaris en línia, enregistraments de vídeo de screencast, fulles de reflexió i materials

produïts pels participants, com a plans de classes de pràctiques i entrades de blog d'autoreflexió. Aquestes dades es van analitzar mitjançant un paradigma interpretatiu, utilitzant l'anàlisi de contingut i l'anàlisi temàtica com a eines principals per a identificar el desenvolupament dinàmic de les creences i percepcions dels dos participants durant un període de tres anys. Les principals troballes es discuteixen sota els supratemes més recurrents en totes dues etapes: incertesa, orientació del professor, retroalimentació del professor i canvi de control. Aquest estudi de cas proporciona un relat en profunditat de les creences i percepcions dels dos professors en formació sobre l'aprenentatge autònom, alhora que llança llum sobre la realitat de la docència novella a Catalunya i la complexitat d'investigar les creences dels professors quan les restriccions institucionals afecten inevitablement la seva posada en pràctica. S'ofereixen algunes implicacions importants per a la pedagogia i la recerca futura, incloent una crida per a reforçar la formació dels professors en formació sobre l'aprenentatge autònom i proporcionar mitjans de suport als professors novells per a permetre la seva promoció de l'autonomia.

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## Chapter 1: Introduction

### 1. 1. Motivation for the Study

*The illiterate of the 21st century will not be those who cannot read and write, but those who cannot learn, unlearn, and relearn.*

*- Alvin Toffler, writer and futurist*

The quote by Alvin Toffler aptly summarises the initial motivation for this study.

Undeniably, one of the greatest assets one can have in today's world is the ability to learn autonomously and continuously develop oneself by learning new things and unlearning what does not serve them for their progress. Ideally, this autonomous learning ability should be fostered from a child's first school days to prepare them to successfully pursue their interests and attain their life goals in the 21<sup>st</sup> century.

However, in reality, this is not always so. While autonomy has entered formal education curricula in many countries, it is still not properly taught to students in many educational contexts due to various reasons. These include reasons such as teachers not knowing what autonomous learning is, having misconceptions about it, not being autonomous learners themselves or not knowing how to foster autonomy in their learners (Little, 2000). This is hardly surprising given that even the specialist literature does not provide clear answers to many of the key questions around autonomy. For example, does fostering learners' autonomy imply developing individualism and independence? Or is it about teaching them to make conscious choices on whom to rely on in their learning? These are the types of unresolved questions that dominate the field of autonomous learning. In addition, autonomy in one sociocultural context may be repression in another. Hence, autonomous learning may assume various meanings, some even diametrically opposed to each other, depending on the context where autonomy is practised or discussed (Benson, 2011; Sinclair, 2000). Considering

all of these factors, educating future teachers on fostering autonomous learning can be seen not only as an urgent need but also a considerable challenge.

Inconsistent theories of autonomy and improper training on autonomous learning can result in the formation of beliefs and perceptions that are incorrect or inconducive to promoting autonomy. Likewise, lack of training is also an issue, as future teachers tend to have an inherent understanding of autonomous learning (often based on past experiences as learners), which may be misaligned with evidence-based reality (Borg, 2004). Therefore, a research-based conceptualisation of autonomous learning should be incorporated in teacher education programmes to teach pre-service teachers not only to be autonomous learners but also to promote autonomy in their future students.

However, there is little insight into the extent to which pre-service teachers' understanding of autonomous learning (mis)aligns with the understanding their educators believe they have or intend them to develop when they instruct them on autonomy. Furthermore, there is little information about how pre-service teachers perceive autonomous learning and what beliefs they may hold about it, as well as how they are shaped by the way they understand the concept of autonomy. Even less is known about pre-service teachers' beliefs and perceptions of autonomous learning once they become teachers. This is problematic as past literature strongly suggests that there is a link between teacher beliefs and perceptions and their teaching practice (Cornett et al., 1990; Pajares, 1992). This means the presence of beliefs and perceptions that are not conducive to autonomy promotion, which remains unchanged during the pre-service teaching period, may decrease teachers' readiness and ability to support autonomous learning with their students.

Specific to this study, in Catalonia, many teacher education programmes incorporate projects and courses whose aim, among others, is to promote autonomous learning and equip

pre-service teachers to implement what they learn in their teaching practices.<sup>1</sup> However, anecdotal reports indicate that novice teachers struggle to replicate what they learned as pre-service teachers following graduation, particularly when it comes to autonomy (Allison & Huang, 2005; Dymoke & Harrison, 2006; Gabryś-Barker, 2017). Thus, despite being in the national curriculum, autonomy promotion received during teacher training does not always have the desired effect on teaching, and consequently, teachers foster autonomy less than they subjectively perceive to be doing as regards their learners or as might be expected after the training they have received (Aguado-Gómez et al., 2016; Angel-Alvarado et al., 2020). Therefore, it is important to understand why this happens and what roles teacher beliefs and perceptions of autonomous learning may play in this phenomenon.

This is the framework from which this study originated. In summary, three parameters need to be understood in order to comprehend the motivation for the study. These are (1) the importance of autonomy, (2) the importance of promoting autonomous learning in pre-service teachers, and (3) the effect of (pre-service) teacher beliefs and perceptions on their teaching practice. The following paragraphs explain these three factors in more detail.

## **1. 2. The Importance of Autonomy**

One century ago, when scholars and educators started advocating a shift from didactic to more open, experiential learning (e.g., Kilpatrick, 1921), the notion of students taking control over authentic real-life task completion was still a controversial one. In contrast, nowadays in the 21<sup>st</sup> century, learner autonomy has the status of “an assumed goal of [...]

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<sup>1</sup> See for instance the webinars, funded by Armif programme:  
<https://view.genial.ly/607d2bb736d70c0d373a85c1/interactive-content-webinars-eaa>

education in many parts of the world” (Reinders & White, 2016, p. 143) and “an end towards which all learners and teachers ought to work” (Nunan, 1996, p. 14).

The development of learner autonomy as an educational goal is often associated with the personal autonomy and freedom that represents modern society’s values and is considered desirable assets and indicators of success in contemporary Western political philosophy. Being autonomous seems to be cherished by modern society as a form of empowerment and manifestation of individual moral responsibility (Benson, 2014). It is beyond the scope of this study to debate the (inter)cultural factors regarding the definition of autonomy. While acknowledging that a sense of autonomy and its role in individual and collective education may be very different outside of a Eurocentric view, this study is based in a European country, hence will be limited to understandings more directly relevant to the participants in the research.

In addition to the sociopolitical significance of autonomy, from a psychological standpoint, the development of personal autonomy and autonomous learning can be seen as a way to reach self-determination, which can be considered a basic human need (Deci & Ryan, 1985). In order to attain self-determination, one needs to feel capable of being in charge of their behaviours and goals. According to Deci and Ryan’s (1985) theory, autonomy helps to develop intrinsic motivation and inherent satisfaction in doing things, such as learning. When one engages in behaviour motivated purely by external rewards, one’s autonomy is compromised, which in turn decreases one’s sense of control. That means that striving for autonomy should be a part of one’s personal and professional progress as it can positively impact a sense of fulfilment in what one does.

Autonomy is listed as one of the “Key Competences for Lifelong Learning” and an asset “each European citizen needs for personal fulfilment and development, employment,



social inclusion and active citizenship” (European Commission, 2018, p. 3). Indeed, as jobs cease to exist and new ones are created at an unprecedented rate, individuals are expected to be able to continuously learn and adapt to the new developments in their workplace and industry throughout their entire life in an autonomous way. This connection between autonomy, lifelong learning, and personal fulfilment has been empirically proven. For example, it has been reported that autonomy contributes to job satisfaction, both in educational and non-educational organisations (Guarino et al., 2006; Richer et al., 2002). In another more recent study, it was found that Turkish secondary students with stronger autonomy skills were also more inclined towards adopting a lifelong learning attitude, which ultimately leads to favourable life prospects (Yurdakul, 2017). Therefore, it is perhaps unsurprising that the European Parliament and Council call for the incorporation of the development of autonomous learning competence as an educational and training goal in its countries (European Commission, 2018). Thus, promoting autonomy—which entails fostering related skills such as self-management, self-awareness, and responsibility—is also included in the European Council’s principle of quality and inclusive education (European Council, 2018).

Finally, autonomy skills can be an invaluable asset in navigating unexpected circumstances that are seemingly inevitable occurrences in the 21<sup>st</sup> century. One such circumstance was the COVID-19 crisis in 2020 and 2021 (and potentially in subsequent years) that closed many universities and forced students to continue their schooling from home, which entailed the need to know how to self-direct and self-regulate their learning (Azhiimah et al., 2021; Hidayati & Husna, 2020; Xie & Yang, 2020). At the same time, their teachers needed to rapidly learn how to conduct online classes, and even parents needed to adopt some new skills to manage the situation (González-Lloret et al., 2021). Beyond the formal

education sector, anecdotal evidence also indicates that many people turned to informal self-study to adopt new skills and pass the time during the various lockdowns around the globe (Impey & Formanek, 2021; Yu et al., 2021). However, even before the pandemic, researchers were remarking on the need for teacher autonomy in e-learning and configurations of teacher-learner geographically-distanced interaction facilitated through the Internet (Fuchs et al., 2021; Novillo & Pujolà, 2019).

In sum, fostering autonomous learning skills appears crucial for living in sync with modern values, achieving self-realisation, job security, career advancement, and being prepared to move along with the 21<sup>st</sup> century advances and unexpected turns of events.

### **1. 3. Promoting Autonomous Learning in Pre-service Teachers and the Link with Teacher Beliefs**

Alongside the growing importance of autonomy as a key competence in the 21<sup>st</sup> century, autonomous learning has also been receiving increasing attention in educational research (Benson, 2007; Holec, 1981; Little, 1991, 2000; Marjanovic et al., 2021; Reinders & White, 2016). As such, there is a growing consensus in research that autonomous learning should be consciously fostered in students (Alsina et al., 2011; Dam, 1995; Little, 2000; Littlewood, 1996; Reinders, 2010).

As future teachers, pre-service teachers need to experience autonomous learning in their teacher education coursework in order to foster it better (White & Chant, 2014). Through their apprenticeship, they should not only acquire theoretical knowledge about autonomy but also engage with students in the classroom and practice promoting autonomy in real-life teaching (Dooly & Sadler, 2019). An outcome of their teacher education should be an attitude that their students will benefit from including autonomy in their teaching practice, i.e., pre-

service teachers should be willing to foster autonomy in their future students (Littlewood, 1996; Marjanovic et al., 2021).

At the same time, research indicates that teacher beliefs shape their teaching practices (Ashton, 2014; Borg, 2001; Chant, 2009; Cornett, 1987; Pajares, 1992; Peacock, 2001; Whitley et al., 2019; Yook, 2010). It has also been proposed that educational change and implementing innovative methods depend not only on what pre-service teachers believe about the innovative method but also on how well they understand the concepts and mechanism behind it (Wedell, 2009). In line with that, if pre-service teachers do not understand autonomous learning, they will be less likely to know how to properly implement it in their teaching practices.

Thus, it has been argued that change in teacher beliefs and understanding of important concepts should be one of the goals of teacher education (Aelterman et al., 2016; Richardson, 1996). Specifically, some studies have shown that teacher training can and should prevent the transfer of pre-service teachers' misconceptions and incorrect beliefs into in-service teaching (Arzi & White, 2008; Castellanos Jaimes, 2013). However, there has been little longitudinal research that could shed light on this transition process from pre-service to novice teacher regarding teacher beliefs about autonomy and their manifestation in practice. Most studies either consider the pre-service stage (covering classes and internship) or autonomous teaching of in-service teachers. There have been few case studies that gather data from both the pre-service and in-service teaching stages. By doing so, this study provides a more comprehensive observation of teacher beliefs regarding autonomous learning. To this researcher's knowledge, few to no studies have specifically endeavoured to identify what changes (if any) occur in teacher beliefs and perceptions of autonomous learning during the progression from their

teacher training into novice teaching. This study aims to identify these transformations as well as some of the key factors that contribute to these changes.

Thus, the present study intends to cover these detected gaps in the body of research into teacher autonomy by providing an in-depth description of the (changing) beliefs and perceptions of autonomous learning in the trajectory of two Catalan pre-service teachers transitioning into novice teachers. Given the complexity of autonomy and teacher beliefs, as well as their dependence on the context where they are espoused, the present study adopted a case study approach in order to be able to provide an in-depth description of these two specific teachers' (changing) beliefs as embedded into their broader sociocultural context and their micro-contexts of transition.

#### **1. 4. Setting of the Study**

The setting of the study is based on three main axes. These are 1) the TILT course, 2) the Autonomous Learning Intervention, and 3) the novice teachers' experience. They are described in the following sections.

##### **1. 4. 1. The TILT Course**

One of these axes is the Faculty of Education at the Autonomous University of Barcelona (Universitat Autònoma de Barcelona, hereinafter UAB) and, more specifically, a course entitled Technology-Infused Language Teaching (TILT) taught there. The two pre-service teachers who are the participants of this study transitioning into novice teachers attended the TILT course at the final university year in October 2017, when the study started.

The TILT course has a central place in the setting of this study. TILT is a one-semester course offered during the final year of a teacher education programme at the UAB for teachers specialising in the Teaching of English as a Foreign Language (TEFL). It is based on the FIT

model, which integrates the use of three interdependent components: Flipped classroom instruction, In-Class activities, and Telecollaboration (Dooly & Sadler, 2019; Sadler & Dooly, 2016).

Flipped classroom approach entails “flipping” the activities that are normally in-class (e.g., reading articles or viewing video lessons) by having the students complete them outside the classroom (e.g., at home) while using the in-class time for discussions and other activities that serve to solidify the knowledge they gained in their self-study. Thus, the flipped classroom approach is based on learner-centred methodologies that require active student involvement “both inside and outside the class” and the use of autonomous learning skills (Dooly & Sadler, 2019, p. 2).

Telecollaboration—the other integral component of the FIT method and hence the TILT course—is a pedagogic model in which geographically distant students engage in structured online exchanges while carrying out collaborative projects, typically set up by their teachers (Dooly, 2017; Sadler & Dooly, 2022). The telecollaboration in the TILT course is set up annually between MATESL (Master in Teaching English as a Second Language) students at the University of Illinois at Urbana-Champaign (UofI) attending a course called Network-Based Language Teaching, and the BA students studying to become primary school teachers at the UAB. The telecollaboration between these two partner universities, organised and managed by two teachers (the UAB side teacher was Diana—a pseudonym), has been continuously implemented since 2004 in various evolving technological and pedagogical configurations.

The FIT approach has at its core the purpose of fostering the pre-service teachers’ autonomous skills by shifting some of the teacher’s control and decision-making onto them and allowing them to self-direct the learning process through flipped instruction. The

programme requires a considerable amount of engagement in self-study, and the telecollaborative component entails self-management and the establishment of group autonomy outside of the classroom. The course designers/teachers consider that both flipped classroom (more precisely, its in-class component wherein the materials are discussed and empirically examined) and telecollaboration are conducive to co-construction of knowledge as they entail group discussion, peer collaboration, and provision of peer feedback.

Another essential learning objective and success criterion of this programme is the encouragement of pre-service teachers to replicate the autonomy they experienced as students through the implementation of telecollaboration, flipped instruction and/or similar innovative approaches during their internship (and presumably once they have graduated). This approach can be referred to as “experiential modelling” or “learning by doing” (Hoven, 2006), and it entails a connection between pre-service teachers’ hands-on involvement in autonomous learning and their future autonomy-related teaching behaviour. For example, one of the goals of this approach is that the pre-service might use the telecollaborative projects they co-design as pre-service teachers in their in-service teaching.

#### **1. 4. 2. Autonomous Learning Intervention**

The other main axe of the study setting is the Autonomous Learning Intervention that the two participants undertook in their final university year as pre-service teachers. This intervention—which is described in detail in the section Autonomous Learning Intervention—was designed specifically for the present study, and it lasted the entire academic year, from October 2017 to June 2018. The two study participants voluntarily participated in the intervention—whose pedagogic aims were to support the participants in the self-study they needed to engage in their school subjects, such as the TILT course—by improving their awareness of autonomous learning and fostering their autonomous learning skills. In the

intervention, the researcher 1) explicitly coached the two pre-service teachers on autonomous learning skills, 2) provided support in their autonomous learning, and 3) provided modelling of digital tool use in autonomous learning. Drawing on heutagogy principles (Blaschke, 2012) and intervention designs used in similar studies (Kim, 2014; Smith & Craig, 2013), the intervention entailed that the participants take control of their learner experience. This process included learning and discovering by selecting what they wanted to work on, autonomously devising study plans, organising task execution, and selecting resources (more details about the intervention can be found in the Autonomous Learning Intervention section under [Chapter 3: Methodology](#)).

#### **1. 4. 3. Novice Teacher Context**

The third axis of the study setting is in the context of novice teaching that the study participants landed on after they graduated and obtained their first teaching jobs. In the 2020/2021 academic year, both study participants were employed as primary public-school teachers in Catalonia. Being in their second year of teaching, they were considered novice teachers in this study. As novice teachers, both participants had changed a few teaching positions during the study phase conducted in 2020/2021. This is a standard practice in beginning teachers in Catalonia—who are usually placed in temporary teaching positions before they can move to a more stable, full-time teaching position, sometimes after years of substituting other teachers and/or working in temporary positions. Specific to this study, the novice teaching context of the two study participants included part-time teaching jobs in public schools in the Barcelona district, complemented by giving other privately organised teaching activities such as giving private classes. The COVID-19 crisis that took place at the time of the study affected the teaching job market whereby many teachers in Barcelona temporarily or permanently lost their jobs; however, the crisis did not seem to affect the study

participants as they maintained their respective teaching positions in the public schools during the study phase that followed them as in-service teachers.

### **1. 5. Purpose of the Study and Research Questions**

The purpose of this PhD research was to investigate the two study participants' beliefs and perceptions of autonomous learning in the period of their transition from pre-service teachers (final-year teacher education university students) to novices (in their first two years of in-service teaching).

The autonomous learning investigated in this study is a highly contextual phenomenon that mainly refers to the autonomous learning the two study participants were required to undertake in the university courses (see TILT course), and the autonomous learning potentially fostered with their students as novice teachers. Thus, the study was aimed at investigating a specific case of autonomous learning in the studied context holistically, i.e., by addressing the participants' beliefs, perceptions, and practices of autonomous learning both at pre-service teaching and novice in-service teaching stages, their potential promotion of autonomous learning as novice in-service teachers, as well as the potential interplay between their beliefs, perceptions, and practices of autonomous learning with the promotion of autonomous learning. Lastly, the study aimed to detect any change of beliefs in the transition from pre-service to novice teachers and identify any potential underlying causes.

To this end, a multi-phase research design was laid out. It involved a research synthesis to establish a conceptual framework, a pilot study, the main study to elicit the data for pre-service teachers, and the follow-up study to elicit the data for in-service teachers. At the pre-service teaching stage, data was collected from online meetings (n=9), online questionnaires (n=2), screencast video recordings (n=15), self-reflection sheets (n=2), participant-produced artefacts and materials such as their practicum lesson plans, self-



reflection blog posts. At the in-service stage, data was collected from online meetings (n=2) and self-reflection sheets (n=2). These were then analysed through an interpretivist lens (O'Reilly, 2009; Willis, 2007), with content and thematic analysis as the primary tools for identifying the dynamic unfolding of the two participants' beliefs, perceptions, and practices of autonomous learning over the 3-year period of time that covered both pre-service and in-service teaching experiences.

The main research questions that guided this study were as follows:

1. What are the two study participants' beliefs and perceptions of autonomous learning as pre-service teachers during their final university year?
2. What are the two study participants' beliefs and perceptions of autonomous learning as novice in-service teachers?
3. Do these beliefs and perceptions change, and if so, can any underlying factors for change be identified?
4. The following sub-questions were used to help guide answering these questions:
  - a. How do the two study participants promote autonomous learning as novice in-service teachers?
  - b. How do the two study participants' beliefs and perceptions of autonomous learning affect their promotion of autonomous learning as novice in-service teachers?

As seen above, all the research questions were designed to elicit answers that were true for both participants; thus, no comparison was made between the two.

## 1. 6. Significance of the Study

This research is significant in several ways. First, on a macro level, despite it being a case study focusing on a micro context (contained to two participant environs), this research makes an important contribution to the field of autonomous learning because it provides findings from a setting that has not been sufficiently investigated in relation to autonomous learning (see [Introduction](#)). Although popular, autonomous learning is a topic that is still unexplored as we lack insights from many educational contexts worldwide. At the same time, learner autonomy is still a buzzword whose meaning varies in different contexts. In that sense, this study represents one piece of the puzzle that may help build a more complete image of autonomous learning.

On a micro-level, the study enhances the existing understanding of autonomy and highlights the gaps in the pre-service teachers' education at the Faculty of Education of the participants, providing keen insight for improving that particular programme. Furthermore, the in-depth exploration of the participants' beliefs and perceptions, as well as related practices of autonomous learning—which entailed analysis of multiple data sources and considering their experiences from various angles—depicts a holistic picture of how these pre-service teachers viewed autonomy not only in relation to the self-study they undertook as students but also in general as an education that they may pursue as teachers.

This study aimed to give voice and protagonism to the pre-service teachers about the topic of autonomous learning and to encourage them to critically reflect on their teacher education programme and their development within it. Thus, it provided an insight into their beliefs about their own responsibilities and expectations they had assimilated from the education system and their university regarding autonomous learning. This information can

help educators better prepare for supporting students in overcoming problems related to autonomous learning.

This research also contributes to understanding the reality of stepping into in-service teaching. A lot of effort is poured into designing innovative teacher training and preparing these pre-service teachers to become autonomous and innovative teachers (see: Marjanovic et al., 2021; Dooly & Sadler, 2015, 2020). However, once they graduate and become novice teachers, the contact with them is lost in most cases, and so is the opportunity to investigate the effects of their pre-service training. This study helps bridge this gap by uncovering these two novice teachers' beliefs and perceptions of autonomous learning and how they are reflected in their autonomy promotion practices, as well as comparing them to their pre-service beliefs and perceptions of autonomy, thus identifying any changes and their underlying causes. The study also yields access to the reality of working in the public primary school sector as a novice teacher when it comes to the promotion of autonomous learning.

Finally, this research provides a basis for further exploration and replication of methods to study beliefs and perceptions of autonomous learning in the same or other contexts.

### **1.7. Definitions of Key Terms**

- *Autonomous Learning*: This study does not limit itself to one specific definition of autonomous learning since one of the purposes was to elicit the participants' own unique understanding and definition of autonomy. However, a discussion of the many ways it has been defined and its operationalisation for this study can be found in the autonomous learning section of the literature review chapter and the pre-study section of Chapter 4: Research design and data collection.

- *Pre-service Teachers*: Student teachers, i.e., students studying to become teachers. In this study, the pre-service teachers were studying to become primary teachers. Pre-service teaching is often seen as the education period that provides a bridge between theory and practice.
- *In-service Teachers*: Teachers who teach in a classroom, having completed and been certified from the pre-service teaching training.
- *Novice Teachers*: In this study, novice teachers are those who are in the first three years of their teaching career. As such, novice teachers are a group of students in an ‘artificial’ but important intermediary stage between pre-service teachers and experienced in-service teachers.
- *Practicum*: Internship (also known as secondment) undertaken during pre-service teaching training and involving supervised application of concurrently studied theory during real classroom (co)teaching. The UAB programme includes activities such as pre-teaching lesson planning and post-teaching self-reflection and discussions.
- *Autonomous Learning Self-efficacy Beliefs*: Refers to one’s beliefs in their capabilities to learn autonomously and promote autonomy in their students (adapted from Bandura, 1977a, 1997b, 1982).

### **1. 8. Organisation of the Thesis**

This thesis is organised as follows.

Following the Introduction chapter, the chapter on Literature Review provides a review of pertinent research on the topics of autonomous learning and teacher beliefs. Then the Methodology chapter and Study Design and Data Collection chapter are presented consecutively, followed by Data Analysis. After that, the findings are presented through Chapters 6-9, organised by *suprathemes*, which are groups of the most frequent themes

identified in the data. In the subsequent chapter of Discussion and Synthesis of Findings, the findings are synthesised and discussed in relation to how they answered each of the three research questions. Finally, the Conclusion chapter closes the thesis, alongside the references and appendices.

## Chapter 2: Literature Review

This chapter reviews and summarises the relevant literature on the two key topics connected to the purpose of this PhD study: autonomous learning, and teacher beliefs and perceptions. Thus, this literature review is divided into two main sub-chapters: 1) Autonomous learning and 2) Teacher beliefs and perceptions.

In the sub-chapter on autonomous learning, the following topics are described. First, some of the most prominent autonomous learning definitions and conceptualisations are reviewed as they help situate the autonomous learning concept in a theoretical framework and shed light on the major elements and aspects of autonomous learning as proposed in the pertinent literature and as relevant to the purpose of the study, which is to investigate the participants' beliefs and perceptions of autonomous learning. Next, the notion of autonomous learning as socio-political interdependence and the promotion of autonomous learning in formal education are briefly described, as these topics are relevant to the setting of the study, which is partially centred around the TILT course and the Autonomous Learning Intervention that required the participants to engage in autonomous learning through social interaction. Then, the literature on the role of the teacher in autonomous learning is described, specifically concerning teacher feedback, affective support and general guidance, which are topics frequently discussed in the literature on autonomy. These topics directly concern the study participants as they were pre-service teachers transitioning into novice teachers and participating in teacher-led activities aimed at fostering their autonomous learning skills and encouraging them to similarly promote autonomous learning as teachers.

The sub-chapter on teacher beliefs and perceptions focuses on the following topics. First, teacher beliefs as a general concept are introduced, and the main definitions and conceptualisations are presented. Then, the topic of teacher perceptions is briefly described,

especially in relation to how it may intersect or overlap with the concept of teacher beliefs and why these two were studied together in this study—as ‘teacher beliefs and perceptions’—instead of as two separate phenomena. Next, a section is dedicated to reviewing some of the proposed ways of measuring teacher beliefs and perceptions. Following this, a description of how beliefs and perceptions were operationalised in this study concludes the general review of literature on teacher beliefs and lays out the framework used to identify teacher beliefs and perceptions in this study. Then, the literature review moves on to more specific belief-related topics relevant to the study purpose and the setting of the study, in which pre-service teachers trained to promote autonomous learning transitioned into novice teachers. These topics are autonomous learning self-efficacy beliefs (as described previously), pre-service teachers’ beliefs and perceptions, including pre-service teachers’ beliefs of autonomous learning, and novice teachers’ beliefs and promotion of autonomous learning.

## **2. 1. Introduction to Autonomous Learning**

Autonomous learning (herein also referred to as ‘learner autonomy’) has attracted an incrementally growing body of research and interest to date. More than a decade ago, Benson (2007) noted that the literature on autonomy was so abundant that “it has begun to overflow the banks of the specialist literature” (p. 21). Indeed, in the last 30 years, numerous trends in autonomy research have emerged, some of which include but are not limited to: autonomous learner strategies (e.g., Medina & Nagamine, 2019; Oxford, 2011), new technologies affordances for autonomous learning (e.g., Lenkaitis, 2019; Raya & Fernández, 2002; Reinders & White, 2011, 2016; Ting, 2015); distance/out of school learning and informal learning (e.g., Sockett & Toffoli, 2012; White, 2006), teacher training for autonomy promotion (e.g., Gardner et al., 2012; Reinders & Balcikanli, 2011; Smith & Vieira, 2009),

the teacher autonomy-learner autonomy link (e.g., Little, 2000; Sinclair et al., 2000; Viwira, 2020), self-access centres (e.g., Hobbs & Dofs, 2015; Mynard, 2012).

Although all these autonomy-related topics (and other ones that are frequently researched) are important to understand the construct of autonomous learning, due to the limited scope of this thesis, this section of the literature review largely focuses on the aspects of autonomous learning which are most critical to the present study, its objectives and research questions. Specifically, this refers to the concept and definition of autonomous learning, teacher role in autonomous learning, and promotion of autonomous learning.

### **2. 1. 1. The Autonomous Learning Definitions and Conceptualisations**

In order to investigate the study participants' beliefs, perceptions and promotion of autonomous learning, it is important to first discuss the different understandings of the construct of autonomous learning and its status in the pertinent literature. While autonomy's significance seems to be universally agreed on, the definition of the concept of learner autonomy is elusive. A consensus on what autonomous learning means and how it should be defined has not been reached to date. There have been various definitions and delineations of its scope proposed over the last 40 years or so, ever since Holec (1981) coined the term "learner autonomy" and defined it as "the ability to take charge of one's own learning" (p. 3). Since then, a number of authors have contributed to the understanding of learner autonomy, building on Holec's definition. Some of the most influential are Benson (2007), Cotterall (1995), Dickinson (1995), Little (2007), Littlewood (1996), Nunan (1996), Reinders (2010) and Oxford (2003).

However, many of the definitions proposed overlap only partially or are, at times, inconsistent with each other, making it difficult to analyse autonomy in a systematic and orderly way (Oxford, 2003). Moreover, autonomy has been discussed through different



theoretical underpinnings that highlight the multitude of potential meanings of autonomy. For example, seen through the lens of Self-Determination Theory (SDT) by Deci and Ryan (1985), learner autonomy is a human psychological need that we must enact in order to attain self-realisation. In turn, this may not be the same concept as *language learner autonomy*, which is seen as an ability to take ownership of one's learning independently of teachers and in a self-directed and self-regulated way (M.-K. Lee, 2017). These different definitions and theories make it difficult to establish whether autonomy is a set of skills and abilities, an exhibition of specific behaviour, or a political construct (Benson, 2014)—or a combination embodied in a holistic approach to learning that encompasses several constructs such as learner motivation, self-direction, self-regulation, self-assessment, and so on.

Many definitions of autonomous learning entail some type of (inherent) ability or capacity. For example, Holec's previously mentioned definition of autonomous learning is "the ability to take charge of one's own learning" (1981, p. 3). As noted elsewhere (e.g., Benson, 2007), Holec's definition seems to imply that this ability to "take charge" of the learning process is a personal attribute that an individual may or may not inherently have. Similarly, Nunan (1995) refers to autonomous learners as "learners who have reached a point where they are able to define their own goals and create their own learning opportunities" (p. 145), which seems to characterise autonomy as an endpoint of some process in which one learns to become autonomous.

However, when studied empirically, it becomes clear that learner autonomy is likely not a fixed trait that someone does or does not manage to develop in their lifetime, but rather a dynamic variable that is dependent on multiple factors such as the specific point in time, subject of learning, personal circumstances, to name just a few. To this researcher's knowledge, no study in the education field has managed to identify someone's "absolute"

learner autonomy as a general ability that is present in all learning endeavours of that individual. It is hardly likely that any individual person, with all their complexity, can be permanently characterised as more or less autonomous. The closest proposition is by Little (1991), in which he argues that some learners have a greater latent potential for autonomy than others. However, studies have repeatedly shown that learner autonomy is a complex construct that involves dynamic processes that vary over time and space (e.g., Tassinari, 2012).

In the 21<sup>st</sup> century, autonomous learning can take place in manifold settings, including instructor-led classes (see Sinclair's (2000) and Benson's (2011) framework of autonomous learning settings). According to Crabbe (1993), autonomous learning can occur both in the private domain (i.e., learning activity initiated by the learner) and also in the public domain (i.e., learner activity instigated by the teacher in the classroom). There is a substantial body of literature that focuses on fostering autonomous learning in the classroom. In particular, there is a growing body of research in the study of autonomy in technology-enhanced pedagogies, based on the notion that technology allows learners a higher level of control over their learning experience. These studies principally cover online learning, blended learning, and the use of digital tools in in-person classrooms (e.g., Antoro et al., 2019; Du, 2020; Mısır et al., 2018). In addition, there have also been reports of autonomy promotion in more conventional classroom settings that promote and implement learning strategy exploration, personalised tasks, and self-assessment (e.g., Pershukova et al., 2020). Hence, if learner autonomy is to be understood as learners assuming higher levels of responsibility and taking control over their own learning, these different potential settings for autonomy imply that autonomy may look very different depending on the context where it is manifested (and investigated).

Assuming that learner autonomy should probably not be seen as a fixed individual trait but rather as a complex and highly variable contextually situated process, we now review the specific indicators of autonomous learning behaviour and related concepts as identified in the literature. To begin with, the consensus appears to be that metacognitive awareness—i.e., not only being able to learn on one's own but also being aware of one's learning process through self-reflection and the consequent decision making—are *sine qua non* of learner autonomy. For example, Little (1991) specified that learner autonomy means the ability to make decisions and act independently and responsibly by detaching oneself and reflecting critically (as cited in Benson, 2007). According to him, independence, flexibility, and transferable skills—i.e., the ability to transcend the particular learning situation by applying the learned skills to new situations—also indicate learner autonomy. Dam (1995) affirmed the importance of the development of awareness of learning processes and reflective thinking ability for autonomy, and as did Sinclair (2000), Raya and Fernández (2002), and Schwienhorst (2003). Reflection has been described as a powerful learning tool elsewhere, too, e.g., Lamy and Goodfellow (1999) described online reflective conversations between students as being more conducive to “noticing” (an essential process in language learning) than any other type of interaction, including the interactions had with more competent interactants. Dooly (2007) reported that students' conscious reflection on the importance of autonomous learning increased their readiness for autonomy and their overall sense of individual responsibility and role in the process of becoming autonomous learners. Therefore, it can be concluded that autonomous learning likely involves not only independent execution but also the high-level cognitive/higher-order processes that underlie this execution.

Motivation and volition are also concepts that are frequently mentioned in definitions of autonomy. For example, Littlewood (1996) tapped into these notions for his interpretation

of autonomy. According to him, autonomy is the ability to perform independent choice-making willingly.

We can define an autonomous person as one who has an independent capacity to make and carry out the choices which govern his or her actions. This capacity depends on two main components: ability and willingness. Thus, a person may have the ability to make independent choices but feel no willingness to do so (e.g., because such behaviour is not perceived as appropriate to his or her role in a particular situation). Conversely, a person may be willing to exercise independent choices but not have the necessary ability to do so. (Littlewood, 1996, p. 428)

Similarly, Nolen (1995) saw autonomy as the ability to assume “control over the reasons for your own learning” (as cited in Raya & Fernández, 2002, p. 62), which leans towards the concept of self-motivation. According to Ushioda (1996), “autonomous learners are by definition motivated learners” (p. 2), which is echoed by Dickinson (1995) in his overview on the relationship between autonomy and motivation. Dickinson highlighted that those who took responsibility for their learning and perceived their learning outcomes as within their control were likely to be more motivated and succeed in their studies. Others have since identified that feeling motivated and positive about learning is a crucial asset of autonomous learners (Sinclair, 2000). That said, this link between motivation and autonomy could also be seen the other way round, i.e., it may also be that (self-)motivation pre-determines one’s belief in their own capacity to act autonomously, thus leading someone to exercise their own agency and autonomy (Bandura, 1989, 2000).

In terms of the specific *behaviour* that autonomous learners are supposed to exhibit, a great deal of research refers to one’s ability to be agentic in their own learning through activation of self-processes such as self-direction, self-organisation, self-regulation, self-

direction, self-evaluation. Ahearn (2001) referred to these agentic skills as “socioculturally mediated capacity to act” (p. 112), a definition which seems quite compatible with the understanding of autonomous learning as willingly taking control over one’s learning to the extent to which it is possible in the given context. Indeed, the interplay or, perhaps more accurately put, hierarchical relationship between autonomy and other closely related concepts like agency, self-direction, and self-regulations is not clear-cut. However, since it is beyond the scope of this literature review to discuss how autonomy overlaps or is interrelated with these constructs, it suffices to say that in this study, agency and these self-processes are prevalently seen as integral to or closely related to autonomous learning. Most definitions of autonomy describe characteristics that coincide with agency, which is reported as taking voluntary action on one’s own initiative because that action is seen as somehow beneficial and relevant for one’s learning, and out of the sense that one is in control of their learning (Moore, 2016). According to Mercer (2011), like autonomy, agency could be described as a complex system composed of equally complex interdependent constructs (e.g., motivation, affect and self-regulation) that interact dynamically to control the stability of that system. In her study, Mercer (2012) also concluded that a sense of agency might exist in learners to varying degrees, but at the same time, she found that the activation of agentive behaviour needs to be induced by certain components such as self-beliefs and context.

Self-direction and self-regulation are also intertwined with autonomous learning. To illustrate, Holec (1981), the “father” of learner autonomy, proposed the following traits as indicative of autonomous learning: “determining the purpose, content, rhythm and method of their learning, monitoring its progress and evaluating its outcomes” (as cited in Benson, 2007, p. 23). Similarly, Reinders (2010) identified phases of development of learner autonomy as identifying needs, setting goals, planning their learning, selecting resources, selecting learner

strategies, practice, monitoring progress, assessment, and revision. At the same time, these traits are also reflected in Zimmerman's (2000) seminal model of self-regulated learning according to which self-regulation entails three interdependent phases: 1) forethought, where a task is analysed, and a strategic approach is developed; 2) performance, where these strategies are implemented and progress is monitored; and 3) self-reflection, where the evaluation of the outcomes, their attribution to causes and appropriate adaptation take place. Moreover, these traits are also contained in some models of self-directed learning, e.g., in Garrison's (1997) model that features self-management and self-monitoring as integral to self-directed learning. From this, it can be concluded that autonomous learning involves multiple complex constructs, abilities, and behaviours that seem to share a holistic approach to learning whereby the learner willingly uses metacognitive and reflective processes to identify their needs and brings to bear their ability to act in order to attain their goals. There is also one more component to add to the mix. Littlewood (1999) suggests that autonomously made choices in learning need to be based on comprehensive knowledge of the pertinent topic of choice and need to be made confidently. Summing up all these criteria, it can be argued that autonomous learning could simply be seen as optimal learning, and autonomous learners as "good" learners, i.e., those with good general learning skills. However, as we have seen, the concept is far more complex than that.

Another commonly mentioned trait in autonomous learning is the ability to use appropriate resources that are available. Littlewood (1999) suggested that autonomy is manifested on two levels: as the organisation of one's own learning resources and as initiation and organisation of collaborative learning (where group collaboration can also be seen as a resource in learning). Palfreyman (2006) defined learner autonomy as students' informed use of resources for learning, stressing the importance of not only how they are used but also with

what level of metacognitive awareness. According to this definition, one can infer that in the 21<sup>st</sup> century, with the ever-increasing access to digital resources, there could be ample opportunities for engaging in autonomous learning. Despite this, how well they will be exploited depends on the learner's ability to employ adequate and appropriate resources for their learning goals. This entails the learner is aware of the affordances of different tools for autonomous learning. For example, a student might or might not be aware of the affordances of voice recording software for autonomously practising speaking skills, pronunciation, developing summarising skills, expanding vocabulary and developing a more complex syntax (Smith & Craig, 2013). Some studies have also looked at learner awareness according to different genres of interaction through technology. For instance, the technology used for digital storytelling has been foregrounded as offering abundant affordances for self-assessment, peer assessment and collaboration in another study (Kim, 2014). Other studies have shown that students could identify games with best affordances for learning English, even when their motivation to play games was not at all connected to language learning, for instance, demonstrating awareness of the potential of textual mode integrated into the game to improve English competence (Chik, 2014). Another affordance that has been perceived by learners is the positive effect on self-confidence brought about by interaction with native speakers of languages (predominantly English) through online media and its power to encourage more autonomous participation in online exchanges (Mynard & Troudi, 2014).

This raises the issue of instructing students to learn autonomously—how does the learner get informed on how to use resources independently? As Raya and Fernández (2002) propose, when it comes to the use of online resources, the teacher should have a central role as a provider of a well-selected “batch of learning material” (p. 64), from which students can autonomously select the ones they deem best suitable for their learning. The role of the

teacher in autonomous learning is discussed in more detail later on in this chapter; for now, let us conclude that the learner needs to rely on different types of resources around them, including other people.

### **2. 1. 2. Learner Autonomy as Socio-political Interdependence**

As seen from the aforementioned definitions and conceptualisations, autonomous learning has often been viewed as a demonstration of individualism, independence, and the ability to do things on one's own and take responsibility for all the aspects of one's learning. However, in the classroom setting—which, according to researchers such as Sinclair (2000), Crabbe (1993), Reinders (2010), and many others is a legitimate setting for autonomy development—any learning outcome is unlikely to be a product of complete independence if we consider that all learning is socially constructed (Vygotsky, 1978). As Little (1991) said, “because we are social beings, our independence is always balanced by dependence; our essential condition is one of interdependence.” Therefore, it is difficult to maintain that independence is the main indicator of autonomy, especially if “learner autonomy is the product of an interactive process in which the teacher gradually enlarges the scope of her learners' autonomy by gradually allowing them more control of the process and content of their learning.” (Little, 2007, p. 26). Indeed, as Little (2007) further argues, independence does not by default equal autonomy as one can be independent in their learning (not rely on others) but still do it in a non-self-determined way, as the learner may not feel free and willing to act as an active agent in their learning.

Therefore, it can be contended that autonomous learning is also a social construct that involves an intersubjective contribution and a shared role in the classroom (Kostina, 2012). This coincides with Sinclair's (2000) view of autonomy as having both an individual dimension (reflected in individual learner's experimentation and application of learning



strategies) and also a social dimension (reflected in learning through collective interaction while applying individual autonomy skills). In conclusion, autonomy may be less of an individualistic construct than it is commonly thought, and one's autonomy may also be reflected more in the ability to draw on social resources and create interdependent relationships that foster learning. In the same way, it may then also be concluded that autonomous learning is, to some extent, synonymous with being able to learn in general, including the capacity to exploit affordances of the different resources available in the 21<sup>st</sup> century.

Finally, when describing the concept of autonomous learning, its socio-political dimension should be considered as well. Autonomy is not only a function of someone's agency, metacognitive skills, ability to self-direct and self-regulate their learning and learn from social interactions, but it is also determined by external factors, such as institutional or societal customs, rules, and limitations. For instance, Littlewood's (1996) aforementioned definition of learner autonomy by which "a person may have the ability to make independent choices but feel no willingness to do so (e.g., because such behaviour is not perceived as appropriate to his or her role in a particular situation) (p. 428)" touched on this factor. According to him, autonomous learners need to *feel* independent, self-fulfilled, and free from the limits imposed by the learning environment. Similarly, Dickinson (1995) maintained that autonomy could be measured by the extent to which the institutional context allows for learners' independence in activities such as setting their own learning aims and monitoring their progress. Such understanding of autonomy seems to coincide with Benson's (1997) political dimension of autonomy that defines it as a "recognition of the rights of learners within educational systems" (p. 29). Similarly, Sinclair (1997) described the political aspect of autonomy and remarked there might be alternative political interpretations of autonomy

depending on the cultural liberal values of the given context. Crabbe (1993) also referred to the individual's right to exercise choice-making freely and not defer to the externally imposed decisions (by the institution or society) if that does not suit them in their learning. In a way, this socio-political dimension of autonomy is consistent with the more philosophical interpretation of autonomy in general, which sees it as "the struggle to become the author of one's own world, to be able to create one's own meaning, to pursue cultural alternatives amid the cultural politics of everyday life" (Pennycook, 1997, p. 39). Going back to Holec's (1981) definition of learner autonomy as "the ability to take charge of one's own learning" (p. 3), it can be concluded that autonomy can only be exercised where one is allowed and encouraged to take control over their learning (Smith, 2008).

A more general conclusion we may thus draw is that it is of little or no use in aspiring to provide the ultimate definition of learner autonomy or bring more order to the messy concept of autonomy. The constructs and characteristics described in the previous paragraphs are useful for understanding autonomy as they "together represent diversity in autonomy" and "can be considered agents of a complex system because they interact within the system and with other systems in which they are nested, such as in educational settings" (Painva & Braga, 2008, p. 445). As Reinders (2010) points out, what this means for educators is that they should treat their students' autonomy as a perpetual process instead of seeing it as an ultimate goal.

Consequently, it is difficult to operationalise learner autonomy in research (although a few models of measuring autonomy have been proposed, most notably that of Tassinari (2012). Thus, it is less challenging to identify individual instances or episodes of autonomous learning by recognising the manifestation of its previously discussed traits and characteristics, such as agentic decision-making, independent goal settings, or self-assessment (Reinders,

2010). For this same reason, the research on autonomous learning is quite diverse as autonomy means different things to different people. For example, in one study, autonomy was operationalised as learners' understanding of requirements and goals set by the teacher, making their own learning plans, implementing and monitoring learning strategies, and evaluating that entire process (Lou, 2021). In another study, autonomous learning was conceptualised as students' "informed use of multimodal environments" (p. 84), i.e., student agency enacted through the "ability to transform the resources according to their personal, social, cognitive, and affective needs and interests, tasks demands and institutional circumstances" (Fuchs et al., 2012).

### **2. 1. 3. Promotion of Autonomous Learning in Formal Education**

Much of the autonomy-related research is dedicated to exploring ways to foster autonomous learning in and out of the classroom. Several studies have reported the lack of autonomous learning skills and awareness as a problem in students. For example, Bjork et al. (2013) observed that students commonly lack the ability to self-manage one's learning and have insufficient awareness of their metacognitive processes. Other studies point out the frequent misconceptions of students about their own abilities and learning strategies as well as lack of self-regulation ability (e.g., Marjanovic, 2018; Ohst et al., 2015; Vosniadou et al., 2020). Lack of explicit training or instruction on autonomous learning has also been mentioned as key missing components (e.g., Aminatun & Oktaviani, 2019; Dignath-van Ewijk, 2016; Kistner et al., 2010).

The simple act of giving students more control and choice-making authority has been frequently employed to promote autonomous learning. In the previous section, it was proposed that learners taking control over their learning is a crucial prerequisite for autonomous learning to take place. In line with the Self-Determination Theory (Deci & Ryan,

1985), it is a need of every student to be able to exercise control over their learning in order to attain their desired goals and to feel self-realised, empowered, and intrinsically motivated. For example, in a study by Reeve et al. (2003), it was found that when students took control and were able to implement intended actions coming from their volition rather than external and internal pressures, it helped them to feel more self-determined. As Fishman (2014) pointed out, with control comes responsibility, by which he meant that when students perceive they have control, they tend to enact it, as they perceive it as their responsibility. In short, taking on responsibility is an intrinsic part of autonomous learning (Wang, 2010). This was consistent with the findings in Lamb's (2009) study, whereby young students seemed to recognise the benefit of taking on control and more responsibility. For example, this was shown in choosing learning activities that would help them meet their perceived needs and goals, which they willingly sought from their teachers, who, in turn, were sometimes reluctant to give it, which potentially contributed to lower levels of student satisfaction.

However, promoting autonomy may not be as simple as allowing more control by removing teacher interference and requiring students to work more independently on their tasks. According to Sinclair (2000):

Learners can be encouraged or left to work on their own without organised support, but there is no guarantee that they will benefit from this experience in terms of developing a capacity for making informed decisions about their learning or in terms of improving their competence. (p. 8)

Furthermore, there is no consensus on the optimal or realistic amount of control that a learner should have in their learning. For example, in the aforementioned study by Lamb (2009), the students' desires for control did not always match the realistic scope of control they could assume. Less frequently, there have even been arguments *against* the notion of

students taking over control as an educational aim *per se*, one notable example being Hand's (2006) article. His argument is that as control can only be manifested as the freedom to make choices in one's learning (coming from an inner disposition towards making choices), for students to benefit from taking it, they must always be able to choose the best approach for their learning, which he sees as realistically impossible. While this is by no means a popular stance in research on autonomy, it speaks about the complexity of students taking control over their learning and the need to provide them with a structured and strategic way of exercising their control.

One of the frequently employed instructional strategies aimed at increasing student control and thus promoting autonomy is the flipped classroom method. The flipped classroom—a type of learner-centred blended learning in which students process the course materials and content autonomously at home and then engage in it in class under teacher guidance—is widely seen as an effective way of empowering learners and promoting autonomy, with its affordances having been reported in numerous studies (Challob, 2021; Han, 2015; Huang, 2020; Wulandari, 2017; Xiao et al., 2018; Zainudin & Perera, 2017).

The premise of the flipped classroom—when designed effectively and planned in detail—is that students' (autonomous) learning skills improve not simply because they are placed in a situation where they need to assume more control, but also because they are engaged in carefully designed tasks and activities that strategically help them develop the metacognitive and practical skills needed for autonomous learning. This is summed by Dooly and Sadler (2020) as follows:

[i]deally, flipped instruction is more than merely having students complete activities outside the classroom that were traditionally done inside the classroom (e.g., viewing

of recorded mini-lectures); this approach should be seen as placing emphasis on active learning, both inside and outside the class. (p. 2)

Along these lines, it has been reported that the flipped classroom implementation helped improve students' self-management and self-regulated learning skills (Du, 2020). In another study, flipped instruction allowed learners to practice seeking assistance, support and guidance from more competent persons when needed during their autonomous study (Sun et al., 2016). Dooly and Sadler (2020)—as described in the section on the TILT course, have been implementing flipped classrooms with generation after generation of Catalan and American pre-service teachers for 16 years to date—described how flipped instruction has helped their pre-service teachers self-manage more efficiently in the face of the need to organise many aspects of their learning on their own. They also highlighted the pre-service teachers' agentic uptake of the control and decision-making freedom given to them, as reflected in their selection of different creative ways of completing the open-ended task to record their individual and collaborative reflection processes. However, it is important to emphasise that, as Dooly and Sadler (2015, 2020) noted, students benefit from the insights gained in the autonomous learning component of the flipped classroom to a large extent because they were able to connect them to the learning that took place in-class. Namely, the tasks and activities done in-class such as discussion with peers allowed the pre-service students to verbalise their insights gained during individual reflection in a more structured and purposeful way. This dialogic process with others also helped reinforce their learning and awareness of the importance of taking responsibility for one's learning (which is an important awareness for future teachers to have and transfer to their own teaching practice in future). This corroborates the notion that autonomous learning happens through social interaction and interdependence rather than complete independence (Little, 1991, 2007).

Another instructional strategy that involves increased student control and can reportedly contribute to promoting learner autonomy is telecollaboration, which is the practice of project-based technology-mediated collaboration between geographically distant students with the aim to enhance intercultural, linguistic, and other key competencies for the 21<sup>st</sup> century (Dooly, 2017; O'Dowd, 2012; Sadler & Dooly, 2022). The affordances of telecollaboration for fostering autonomy have been described in many studies (e.g., Dooly, 2017; Fuchs et al., 2012; Kramsch et al., 2000; Little, 2016; Little & Brammerts, 1996; Puranen & Vurdien, 2016; Reinders & White, 2016; Schwienhorst, 2001). In telecollaboration, student participants are required to self-direct and manage their online exchanges on their own, thus exercising individual and group autonomy (Mangenot & Nissen, 2006). Typically, the telecollaborative activities the students engage in are learner-centred and require each students' participation, reflection and activation of interaction and collaboration skills, which, according to Little and Brammerts (1996), is what makes telecollaboration conducive to autonomy development. More specifically, Little (2016) advocated for the inclusion of autonomy promotion in any telecollaboration programme whose aim is to develop communicative skills in a foreign language. They argued that telecollaborative practice holds affordances for fostering autonomy through its dialogic structure, as it enables reflection and further use of authentic language. For Little (2016), students should also be prompted to assume responsibility in planning, executing, self-monitoring and self-assessing their learning during telecollaboration. Likewise, a call for including autonomy in telecollaboration task design has also been made by O'Dowd and Waire (2009).

In empirical studies based on the implementation of a telecollaborative practice, it has been seen that when fostered, autonomy is enacted by students during telecollaboration. For example, Dooly (2011) found that decreased teacher involvement in telecollaboration allowed

students to take control over their telecollaborative activities and agentively adapt the intended work plans for task execution while simultaneously attaining the intended learning outcomes. In other words, the learners created their own “desire paths” for achieving the learning goal set by the teacher (Fendler, 2019). In another study, Fuchs et al. (2012) described how autonomy was exercised as *purposeful* and informed interaction with appropriate online learning resources and multimedia tools in telecollaboration. However, as Dooly (2017) cautions, like flipped classrooms, telecollaboration does not—by default—lead to more autonomy. Thus, many factors need to be taken into consideration, such as the task design, individual students’ pre-existing autonomous learning skills, teacher involvement, their willingness to give students control, and the learners’ willingness to decide their ‘paths’.

#### **2. 1. 4. Teacher Role in Autonomous Learning: Feedback, Affective Support and General Guidance**

According to Little (2007), teachers have a central role in the promotion of learner autonomy. This may seem counterintuitive to some teachers and learners, and especially those learners who have had little experience with autonomous learning and construe autonomy as a “teacher-less” way of learning. For example, Smith and Craig (2013) found that when an English self-study project aimed at fostering their autonomy was implemented, their Japanese university students initially expected that they would be studying completely on their own without structured support from the teacher. As the project advanced, they gradually understood the necessity for their teachers’ facilitation and their role as someone “who can show me new software and websites, then help us with parts we don’t understand”, and “who teaches us new ways to study (on the computer) which are helpful” (p. 261).

Many studies have reported that teachers should be seen as an indispensable resource in autonomous learning for several reasons. Firstly, teachers can be a source of motivation for



students faced with the challenges of self-regulation in autonomous learning. For example, Collentine (2013) found that the teacher played a role in activating and motivating students who lacked intrinsic motivation while studying Spanish via task-based technology-enhanced instruction. Similarly, another study reported that, by students' admission, the successful completion of a project involving autonomous learning required the teacher to motivate and uplift students partaking in it (Sadaghian & Marandi, 2020).

Secondly, the teacher is needed to introduce their students to the relevant content and provide tutorship and guidance such as information, instructions and direct and indirect suggestions, especially in e-learning environments (Novillo & Pujolà, 2019). Mangenot and Nissen (2006) examined student perceptions of the teacher's role in autonomous technology-enhanced learning and found that tutor involvement was seen as highly relevant when it came to counselling on specific useful technology tools and teaching strategies of autonomous learning with technology. Teacher's corrective feedback is equally crucial in learning settings where students work on their own, even if not immediately available (Canals et al., 2020). Another important teacher's role is to provide scaffolding during autonomous learning. Scaffolding comes in different forms, but in general, it refers to the support received from a more competent peer or tutor, which facilitates learning (Benson, 2007). In Vygotskian terms—which entails that learning happens through negotiated support between the more and less competent individual (Lantolf, 2000)—in autonomous learning, scaffolding facilitates the transition from other-regulation to self-regulation. In this process, the teacher gradually helps the student become more self-reliant in their learning, which becomes even more critical in contexts where students are less used to autonomous learning. For example, Mont and Masats (2018) highlighted that when implementing telecollaboration with very young students, the teacher's role becomes indispensable as they need to provide guidance and

scaffolding to the students as the students take more responsibility. This also presupposes that, relative to the student role, the teacher is seen as an expert in the context of autonomous learning. Finally, studies have shown that students tend to perceive their teachers as expeditious sources of knowledge and factual information, requisite for when they assume autonomous learning (e.g., Sadaghian & Marandi, 2020).

Teacher feedback can have a crucial role in the improvement of students' autonomy-related and metacognitive skills, such as goal setting, task planning and organization, self-correction, self-reflection, self-monitoring and self-assessment (Kim, 2014; L. Lee, 2016; Pujolà, 2001; Snodin, 2013). Furthermore, tutor feedback in autonomous learning could also encourage students to experiment with useful technology outside of the classroom (Lai et al., 2015) and represents invaluable assistance in managing tasks (Puranen & Vurdien, 2016). However, it is uncertain whether tutors are equally aware of feedback importance in autonomous learning. For example, Reinders and White (2016) argue that in the case of self-access centres, what prevents successful autonomous learning is precisely the lack of tutor scaffolding—a fact that few tutors were aware of. These findings align with Mangenot and Nissen (2006), who found a similar discrepancy between tutor awareness and learner needs when it comes to scaffolding. In another analysis of the tutor's role, the students saw teacher feedback as beneficial for their comprehension of the studying material in autonomous learning and a vital source of affective support (L. Lee, 2016). Finally, the importance of feedback was also identified in student reflections on technology affordances, when students suggested implementing a feature for providing direct feedback to improve an online platform used in autonomous learning (Fuchs et al., 2012).

It is also important to stress that a teacher's role in learner autonomy is not only to implement pedagogies that foster it but also to model autonomous behaviour and be able to relate to their learners' experience of autonomous learning. As argued by Little (2000):

The development of learner autonomy depends on the development of teacher autonomy. By this, I mean two things: (i) that it is unreasonable to expect teachers to foster the growth of autonomy in their learners if they themselves do not know what it is to be an autonomous learner; and (ii) that in determining the initiatives they take in the classrooms, teachers must be able to exploit their professional skills autonomously, applying to their teaching those same reflective and self-managing processes that they apply to their learning. (p. 45)

Arguably, however, the teacher autonomy-learner autonomy interrelationship may be less direct and more complex than described in the above quote (Lamb, 2008; Benson & Huang, 2008). Still, the premise that the teachers' sense of autonomy and the value they put on it affects their pedagogic choice-making and how much they tend to orient their teaching towards the promotion of autonomy is reflected in many teacher education programmes—including how they train future teachers to develop their autonomy skills in order to foster autonomy with their students later on (Smith & Erdoğan, 2008).

Finally, it is worth mentioning that scaffolding in autonomous learning can also be provided by peers and even family members. For example, in Mynard and Troudi's (2014) study, the students who had before hesitated to engage in online chatting in a foreign language reportedly benefitted from the scaffolding offered by the native chat participants, which encouraged them to engage in more autonomous technology-enhanced learning. A similar effect of native speaker scaffolding was described by Kim (2014), who reported that the scaffolding that the students provided to each other in the form of written feedback for an

activity done outside of the classroom proved to be rich and fruitful for the development of autonomous learning. Moreover, when learning autonomously with technology, scaffolding can also come from members of communities that are not strictly online. Namely, it was found that gamers receive scaffolding from family members or close friends who also participate in digital game playing, although not at the same time or in the same online community. The more experienced gamer-close relative/friend will often be a source of learning support and advice (Chik, 2014).

## **2. 2. Teacher Beliefs and Perceptions**

### **2. 2. 1. Teacher Beliefs**

In the last 30 years, teacher beliefs have been researched extensively (e.g., Fang, 1996; Fives & Buehl, 2008; Nespor, 1987; Pajares, 1992; Richardson, 2003; Stuart & Thurlow, 2000; Verloop et al., 2001; Yook, 2010). Teacher beliefs have been recognised as a crucial element in education research, based on abundant evidence that they determine teacher behaviour (for an overview, see: Pajares (1992); for the synthesis of pertinent research, see Fang (1996), and for a more recent historical review, see Gao (2014)), lesson planning and decision-making (Beeson, 2013). Apart from influencing teacher actions and decisions, teacher beliefs have been described as a crucial component of teacher professional identity formation, not only in deterministic and static influence on identity but also as an alterable and fluctuating influence. Just as teachers' beliefs can change, so do their identities (Gormally, 2016; Huang et al., 2019; Vidovic & Domovic, 2019). Teacher beliefs have been identified and researched at pre-service, novice, and in-service teacher stages—in all stages, there is a consensus regarding their importance for both teacher and impact on the learner. According to Pajares (1992), teacher beliefs appear to be embedded in teaching at all levels and thus, should be researched since this can give clues to teacher behaviour and vice versa.

As with autonomy, any endeavour to define teacher beliefs must start with a disclaimer that it is neither a straightforward concept nor one with a consensual definition. Indeed, Pajares (1992) highlighted that it is a “messy construct” (p. 307), thus making it difficult to draw more definite conclusions about findings related to it. He cautions that this makes it easier for researchers to adapt the definition/conceptualization of teacher beliefs to suit their research needs. Cladinin and Connelly (1987) refer to teacher beliefs as a “bewildering array of terms” (p. 487), while Kagan (1992) states that “some researchers refer instead to teachers’ ‘principles of practice’, ‘personal epistemologies’, ‘perspectives’, ‘practical knowledge’, or ‘orientations’”(p. 66).

As early as 1933, Dewey (1933) drew a parallel between beliefs and knowledge, describing beliefs as a function of knowledge—while defining belief as something one was less certain about than something they know but certain enough to make decisions based on them. Other theorists also find the distinction between beliefs and knowledge to be thin. For instance, Pajares (1992) argues that since there is a judgement component ingrained in beliefs, they inevitably overlap with knowledge to some extent. For him, beliefs differ from knowledge because there is a spectrum of many different conviction levels contained within beliefs, and the level of conviction will vary, whereas with what one considers to be knowledge, the variability is much lower. Given the above, one may argue there is a thin line between “knowing” and “believing”, but a distinction can and must be drawn in order to delineate boundaries for this study.

Furthermore, one must distinguish between teacher beliefs and teacher belief systems. The existence of belief systems brings more confusion to an already convoluted analysis. Belief systems are schemata-like sets of beliefs that may or may not be mutually supportive but which nevertheless form a relatively rigid structure that can be likened to ideology and

subsequent sets of norms. Belief systems are thus larger constructs than individual beliefs and involve a stronger personal attachment than single beliefs (Usó-Doménech & Nescolarde-Selva, 2016). According to Bandura (2001), people form belief systems to serve them as guidelines to navigate the complexity of the world we live in, thus informing their decisions and enabling them to activate their agency and self-regulative processes necessary for attaining their goals. Thus, for this study, belief systems are understood as ideologies and involve norms, while teacher belief systems are seen as being made up of individual beliefs, or more precisely, to our context, the interplay between teacher beliefs. That said, when it comes to specific phenomena or events such as learner autonomy and related concepts, individual teacher beliefs are usually investigated. As mentioned previously, these are complex constructs in themselves, not holistic teacher beliefs systems (c.f. Ahmadianzadeh et al., 2020; Chang, 2020; Eren, 2020; Üztemur et al., 2020; Yasmin & Sohail, 2018).

Having introduced the complexity of the concept of teacher beliefs, it is important to specify what definition will be employed in this study. Specifically, two definitions of (teacher) beliefs informed this study. One is the general view of beliefs as “psychologically held understandings, premises or propositions about the world that are felt to be true” (Richardson, 1996, p. 103)—and the other is a more narrow definition of teacher beliefs as “the highly personal ways in which a teacher understands classrooms, students, the nature of learning, the teacher’s role in the classroom, and the goals of education” (Kagan, 1990, p. 423). It is important to highlight that both definitions entail a cognitive aspect, as understanding and judgement of truth-value are essentially cognitive processes. At the same time, there is an effective component in these definitions: beliefs are “subjective” and “psychologically held” and “felt to be true”. Teacher beliefs thus inevitably are tied to their way of making sense of the phenomena around them and are lenses through which they

observe the world and make judgments accordingly in—one must emphasise and acknowledge—interactions with other variables that influence teacher judgements such as schemata, perceptions, among others (Pajares, 1992).

This implies that integral to teacher beliefs is a degree of subjective conviction of their truth-value. By drawing from the previous comparison of belief and knowledge overlap, one can now conclude that belief can be differentiated from knowledge by the level of conviction. Conviction is higher in knowledge, but conviction embedded in beliefs can vary in its intensity nevertheless. Nespor (1987) highlighted the subjectivity of beliefs stating that the holder of beliefs need not seek external validation of accuracy or appropriateness. One can thus infer that teachers can hold beliefs that can be objectively true and not/less true. This is seen as a particularly interesting notion for this study, i.e., that (teacher) beliefs exist independently of the objective truth, and furthermore, that they “persist even when they are no longer accurate representations of reality” (Nisbett and Ross, as cited in Pajares, 1992, p. 317). This suggests that teachers have subjective realities that may be more important for their teaching than objective realities. For instance, Menz et al. (2021) compared German in-service teachers’ beliefs to the current state of research on topics concerning educational psychology and found that the majority of the participants in their study (on average over 80%) held misconceptions (belief contrary to the research stated facts) on a range of issues related to popular and widely spread “myths” such as learning styles and multiple intelligences theories. Likewise, Tangdhanakanond and Archwamety (2019) found that teachers who attended training on portfolio assessment and those who did not both demonstrated similar misconceptions about student portfolio assessment principles and best practices—for instance, the notion that portfolios serve for summative assessment only and are mere collections of all student work so that it does not get lost. In another study, Rasul et al. (2019) found a

significant mismatch between domain-specific beliefs of heat and temperature and the proven facts in future science teachers in Pakistan. These incorrect beliefs, no matter which subject matter, can lead to incorrect information retention, i.e., incorrect knowledge. Arguably, in pre-service students, this is especially problematic as they can teach these misconceptions to their own students or integrate them into their own teacher behaviour once they become in-service teachers.

As indicated in the introduction, this is critical for teacher education, especially considering the widely reported connection that has been described between teacher beliefs and practice (Ashton, 2014; Borg, 2001; Cornett, 1987; Chant, 2009; Pajares, 1992; Peacock, 2001; Whitley et al., 2019; Yook, 2010). While there have been some studies that highlighted the mismatch between teacher beliefs and practices or challenged the assumed link (e.g., Fajardo, 2013; Tillema, 2000; Yussuf, 2020), it is predominantly understood that teacher beliefs drive, inform and are generally aligned with teacher performance in the classroom. Furthermore, it has been argued that teacher beliefs may predict teacher actions better than knowledge (Nespor, 1987), and as such, they are an important element to focus on in professional development. Therefore, teachers should be encouraged to critically reflect on their own beliefs and how they influence their teaching (Cochran-Smith & Lytle, 1999; Peacock, 2001; Ross et al., 1992).

Finally, if teacher beliefs are independent of objective truth, and moreover, may drive teacher behaviour, this brings into question another important element—their nature as static or dynamic, i.e., whether they can be changed from incorrect to correct, and whether a change in beliefs may provoke a transformation in teacher behaviour. While it seems that the body of literature does not yet provide a conclusive answer, many studies assume that changing



teacher beliefs is a precursor of learning and professional development (cf. Aelterman et al., 2016; Castellanos Jaimes, 2013; Pajares, 1992; Peacock, 2001; Richardson, 1996).

### **2.2.2. Teacher Perceptions**

The *SAGE Encyclopaedia of Qualitative Research Methods* defines perceptions as follows:

Individual perception influences opinion, judgment, understanding of a situation or person, meaning of an experience, and how one responds to a situation. A common way of defining perception is “how we see things.” However, perception is a process involving not only the senses but also complex underlying mechanisms. (Bell, 2009, p. 606)

It is evident from the quote above that the concept of perceptions can be seen as overlapping to some extent with that of beliefs, especially in the way it influences how one makes meaning of the world around them. Indeed, it has been argued that perceptions—as a concept in general—are interrelated with beliefs in such a way that a person needs to first perceive a phenomenon in order to form a belief about it and/or vice versa, that a person can only perceive a phenomenon if they believe in its existence (Smith, 2008). Similarly, Toch and McLean (1962) posit that perceptions are outcomes of giving meaning to things based on the knowledge and experience gained thus far. Hence, similarly to beliefs, perceptions of one phenomenon will differ depending on the person who perceives it and the aspect of the observed phenomenon they choose to orient themselves to (Smith, 2008). Also, like beliefs, perceptions can be inaccurate, especially if the perceiver makes hasty conclusions (uses cognitive shortcuts) about the phenomena they are not familiar with (Baumeister & Vohs, 2007).

When it comes to teacher beliefs and perceptions, according to Pajares (1992), they are interconnected—teacher beliefs affect their perceptions and, ultimately, their teaching practice. Meaning that if a teacher’s belief misaligns with reality, their perception of what happens in the classroom or with their students can be distorted, ultimately misguiding their teacher decision-making and behaviour. Teacher perceptions are thus seen as an important factor in the transformation of pre-service teachers’ beliefs, which is “the process in which a student substantively modifies his/her self-perceptions and perspectives on various issues” (Malone et al., 2002, p. 62). This interconnection between teachers’ beliefs and perceptions has been recognised in research as there has been an increasing focus on exploring them as inseparable phenomena, especially concerning pre-service teachers and the effectiveness of the teacher education reflected in the relative transformation of pre-service teachers’ beliefs and perceptions (e.g., Bedir, 2019; Özgün-Koca & Şen, 2006; Tarman, 2012).

#### **2. 2. 4. Operationalization of Beliefs and Perceptions in the Study**

Considering the complexity and elusiveness of the concepts involved in this study, it is worth specifying how they were operationalized for the purpose of collecting and interpreting data. Drawing from the proposed definitions and the literature review of the concepts of teacher beliefs and perceptions, the following definitions and operationalization of teacher beliefs and perceptions were developed for this study.

Teacher beliefs and perceptions refer to those beliefs and perceptions held by pre-service or in-service teachers; these beliefs are subjective and context-embedded, implicit or explicit understandings, assumptions, and opinions about autonomous learning that are thought to be true with varying degrees of conviction. Perceptions are teachers’ subjective and context-embedded observations and conclusions about specific autonomy-related phenomena felt to be true regardless of their objective truth value. Both beliefs and perceptions are

demonstrated by what the teachers say or what can be observed in their teaching practices. Since beliefs and perceptions are interdependent and can sometimes overlap, they will be observed jointly as one complex concept, and the study objective will not be to distinguish between beliefs and perceptions.

In this operationalization of beliefs and perceptions, the exclusion criteria also need to be considered. Belief systems— i.e., the complex belief structures made of individual beliefs—are out of the scope of the study. Subconscious beliefs that may influence teacher practice (Borg, 2001) are also beyond the scope of the study, as the study goal is to investigate manifested beliefs, identified through what the participants explicitly say or do or what can be reasonably inferred from what they say or do.

### **2. 2. 3. Measuring Teacher Beliefs and Perceptions**

In order to research teacher beliefs and perceptions, it is important to understand how they can be identified in teachers. There are two main ways that teacher beliefs and perceptions can be measured: what participants say and what they do. According to Rokeach (1968), beliefs can be identified as “any simple proposition, conscious or unconscious, inferred from what a person says or does, capable of being preceded by the phrase, ‘I believe that’” (p. 113). The SAGE encyclopaedia also states that beliefs and perceptions can be explored qualitatively to get an understanding of how individuals or groups make meaning of the world around them, as they can be interpreted from both what participants say (narratives and storytelling) and do (behaviour) (Bell, 2009).

Teacher beliefs are commonly measured via surveys and interviews that track what participants say. However, there has been criticism of such methods, especially in using Likert scales to capture beliefs. For example, Jang (2010) highlighted a few problems using surveys, such as item ambivalence, lack of context, lack of possibility to confirm whether the

respondent interpretation of the item is correct, inability to standardize references, inability to expand on answers (such as closed options, or agree-disagree answers). According to the author, these factors put the validity of surveys in question as their results depend on how the respondent interprets the question they are being asked and thus the likelihood that they will respond incorrectly, i.e., provide an irrelevant belief. Safrudiannur and Rott (2019) compared eliciting beliefs through questionnaires, surveys, and interviews. They similarly questioned the accuracy of Likert scales in measuring beliefs, pointing out that social desirability, i.e., intentionally changing one's answers to fit into well-accepted social norms can interfere with the accuracy of these surveys (depending on the context in which they are elicited). They suggest using interviews, observations and focusing on a smaller sample size as a more reliable method of eliciting participants' beliefs.

Interviews are used to help elicit beliefs through reporting what participants say. It has been argued that one's language, or what they express using it, is an appropriate indicator of beliefs because language, beliefs, and knowledge develop simultaneously and that verbal expression signals possession of thought, belief, or knowledge (Smith, 2008). On the other hand, the risk of measuring beliefs via interviews is that one can use incorrect words to express their belief, which can be problematic. In the case of autonomous learning—the focus of this study—this challenge is manifold as the understanding of the concept is a “messy construct” involving overlapping terms (see [literature review](#)).

Arguably then, *manifestations of beliefs in practice* should also be considered when measuring one's beliefs. It has already been posited that teacher beliefs are reflected in their practices—therefore, teacher behaviour can be an indicator of their beliefs (e.g., Kagan, 1992; Pajares, 1992; Richardson, 1996). Furthermore, Clandinin (1985) argued that teachers'

personal practical knowledge, i.e., their knowledge and beliefs, is enacted in their teaching practice.

### **2.2.5. Autonomous Learning Self-Efficacy Beliefs**

A teacher's autonomous learning self-efficacy beliefs are an essential prerequisite for the implementation of autonomy promotion in their teaching practice (Bandura, 1997a, 1997b). One of the crucial factors in self-efficacy is one's subject matter expertise. For example, in Bjerke and Solomon's (2020) two-year longitudinal study, it was reported that the pre-service teachers highlighted the importance of their subject knowledge in the development of their self-efficacy. In another study, it was found that pre-service teachers perceived themselves as the ones who would "give their students knowledge", so they believed pedagogical knowledge and subject matter knowledge were the most important factors for effective teaching. Fives and Buehl (2008) similarly emphasised the connection between pedagogic and subject matter (content) knowledge and effective teaching. Thus, when it comes to *teaching* autonomous learning, pedagogic knowledge would be equivalent to teachers *knowing how to* promote autonomy. In contrast, content or subject matter knowledge would correspond to *knowing about* autonomous learning, which, as described in the literature review chapter, is a complex, ambiguous, and multifaceted concept. Therefore, as Lawson et al. (2018) argued, in any teacher training programme, it is important not only to encourage positive attitudes about promoting autonomous learning but also to focus on increasing pre-service teachers' knowledge about the concept itself and support their confidence in their ability to promote it in their own learners.

### **2.2.5. Pre-service Teachers' Beliefs and Perceptions**

It is sometimes assumed that teacher beliefs are those beliefs held by professional teachers, and that one must be an in-service teacher in order to have teacher beliefs. This

makes sense in the context of some philosophical discussions on the epistemology of belief. For example, Dretske (1983) proposed that to believe something about an object, person, or phenomenon, one must first learn and possess information about that object, person, or phenomenon. In other words, he argued that cognitive processing of information *precedes* belief formation. This implies that if teachers are not sensitized about specific concepts, they will not develop teacher beliefs about them.

However, there exists a body of literature that claims that teacher beliefs are formed even prior to gaining real classroom teaching experience (Ross, 1987). Bruner (1996) argued that many teachers hold “folk pedagogies” that are informed by implicit theories about how students learn and the best teaching approach. These implicit theories are tacit—but ubiquitous—and come from intuition rather than explicit pedagogic learning and knowledge. They reflect what the teacher intuitively knows about people, how their minds work and also their wider cultural beliefs. Furthermore, they underlie and guide the teacher’s practices and affect the formation of teacher knowledge and beliefs during their education. Indeed, Borg (2004) argued that teacher beliefs form during the entire education, beginning when teachers were learners themselves. Students inevitably observe and analyse their teachers, which Borg called “observation apprenticeship” (p. 274).

Ultimately, this means that pre-service teachers are more than likely to enter their pre-service teacher training with some already formed teacher beliefs. For example, in Lo’s study (2021), mathematics pre-service teachers were explicitly asked to recall and critically analyse their previous teachers’ pedagogical approaches. The study found that the pre-service teachers already held beliefs about what is good and bad teaching and what kind of teachers they imagined themselves to be in future, based solely on affective factors such as their own pre-existing fear of mathematics and how bored or interested they found themselves to be in their

prior classes. Furthermore, the initial beliefs teachers start their careers with were often simplistic and idealistic, e.g., some pre-service teachers tended to think other students think and learn in the same way they do (Pajares, 1992; Wall, 2016).

This is important because ill-informed or inaccurate pre-service teachers' beliefs can accumulate over time and transfer into and affect their in-service teaching (Cornett et al., 1990; Pajares, 1992). Thus, changing incorrect teacher beliefs is seen by many as a *sine qua non* goal of teacher training. For example, Arzi and White (2008) conducted a longitudinal 17-year long study on changes in teacher knowledge (which includes beliefs) from pre-service teachers to experienced in-service teachers. They concluded that change of teacher knowledge is largely curriculum-dependent and that incorrect knowledge gained during pre-service teaching tended to be consolidated in the in-service teaching period. In another study, Ohst et al. (2015) called for implementing pedagogical interventions to speed up the solidification of (presumably accurate) pedagogical knowledge and beliefs to enable future teachers to implement teaching based on these in practice. This need for additional efforts in dispelling incorrect teacher beliefs may be especially relevant to autonomous learning. This is because these beliefs are often not taught explicitly to pre-service teachers and once they graduate, their knowledge about autonomy remains largely based on their inert (and possibly inaccurate) assumptions.

Measuring pre-service teachers' beliefs through their teaching practice is more complicated than with in-service teachers because internship teaching conditions and requirements are different from "real life" teaching. As Castellanos Jaimes (2013) emphasises, there is a need to investigate the discrepancies between pre-service teachers' beliefs, their behaviour in the classroom and how their beliefs are implemented in the face of external limitations such as institutional constraints. For example, Fajardo (2013) described in

his study how two Columbian pre-service teachers' beliefs were not reflected in their teaching practice. He hypothesized that this is likely because the context—teaching was done under teacher guidance and supervision and was more controlled. Other studies also highlighted external constraints and restrictions impacting pre-service teaching practices, e.g., Wadanambi and Leung (2019) investigated Sri Lankan pre-service teachers who managed to enact their flexible beliefs (they were in favour of constructivism and active student engagement). The participants employed flexible approaches and focused on constructivist activities, facilitating understanding, student exploration and participation as much as possible. However, they were not always able to do so due to external constraints such as socio-contextual factors that limited their ability to enact their beliefs. Similarly, in another case study of one pre-service teacher, the teacher believed in implementing flexible approaches in teaching. However, that was not always reflected in the observed practice due to external constraints, including time management, socio-cultural norms and habits, and curriculum (Purnomo et al., 2016).

Pre-service teachers are likely to focus on themselves and their own needs when teaching because their teaching is essentially a learning process, which limits their capacity to orient towards the learner and enact all their pedagogic beliefs (Fuller & Brown, 1975; Katz, 1972). Given that most experts agree that autonomous learning entails implementing learner-centred approaches, this may imply that pre-service teachers are not always able to focus on autonomy in their pre-service teaching. For example, in White and Chant's (2014) study, because the pre-service teachers had limited and brief teaching experience, they tended to implement teacher-centred practices in their classroom placements. In turn, this reinforced their pre-existing beliefs. In a similar vein, Roberts et al., (2016) found that the pre-service teachers' intended teaching approaches did not match their previously stated beliefs, e.g., their



beliefs were pro-experiential learning, but their accounts of their visions of how they would teach did not include any experiential learning practices.

However, a few studies have shown that teacher beliefs can be changed at the pre-service teaching stage through interventions and conscious instruction. For example, Thomson et al. (2018) tracked four pre-service teachers in one academic year and found that while they entered teacher education with pre-existing self-efficacy beliefs (i.e., beliefs about their own teaching abilities), these beliefs changed during that academic year. The authors proposed that this was because they were given explicit instruction on effective teaching strategies and because they were presented with challenging tasks that helped them “unlearn” the pre-existing incorrect knowledge. Likewise, Wilkins and Brand’s (2004) study found that explicit coaching about teaching approaches and strategies led to a positive shift in pre-service teachers’ beliefs towards promoting a more active and involved student’s role in learning. Similarly, Milner (2005) found that pre-service teachers’ beliefs about promoting diversity changed during the teacher training as a consequence of explicit coaching on the subject.

However, it also must be emphasised that any progression observed in pre-service teachers’ beliefs may neither develop linearly nor signal a permanent change. Research shows that permanently changing hard-wired beliefs is difficult—and sometimes impossible—and this change process may be affected by pre-service teachers’ perception of how realistic it is to enact those beliefs in their teaching. For instance, Letwinsky and Cavender (2018) studied nearly 100 pre-service teachers over two years, and they observed that some teacher beliefs on specific topics changed positively during that period, influenced by the educational activities such as group discussions on those topics. However, they simultaneously noticed that their overall attitude towards those topics regressed when the pre-service teachers considered them from the aspect of their practical application in elementary education. Similarly, Pilitsis and

Duncan (2012) reported positive changes towards adopting more learner-centred approaches in 13 pre-service teachers during their pre-service teacher training while also reporting that some of these students reverted to their initial beliefs, most likely as they doubted their ability to enact them.

### **2.2.6. Pre-service Teacher's Beliefs and Perceptions of Autonomous Learning**

There are fewer studies on pre-service teachers' beliefs about autonomy in comparison to the studies on teachers' beliefs about autonomy. A topic of interest in the pertinent literature seems to be pre-service beliefs and perceptions of their experience with autonomous learning and the prospect of promoting autonomy with their future students. This includes pre-service teachers' understanding of the concept of autonomous learning, which is linked to their practices of fostering it in their teaching (Smith, 2003). Some studies suggest that pre-service teachers' knowledge and understanding of autonomous learning is mostly implicit and unstructured, as well as that some teacher trainers expect the pre-service teachers to implicitly know what autonomous learning is when they start their education (e.g., Lawson et al., 2018).

This is problematic because it is likely that the pre-service teachers may not clearly understand what autonomous learning is when they enter teacher education programmes, especially given that even the experts on the topic cannot reach a consensus on the meaning of autonomy. Indeed, Camilleri (1999) found that Maltese pre-service teachers experienced uncertainty around the concept of autonomous learning and did not think they could correctly answer the question of what autonomous learning is. However, once they completed mini-projects in which they were required to learn and present about autonomous learning, they self-assessed their understanding of autonomy more favourably and demonstrated recognition of its value for their future teaching practice. Similarly, in Galiniene (1999), pre-service teachers at the beginning of teacher training defined learner autonomy as the ability to learn

without the teacher, but later included a wide array of skills such as self-assessment ability, student-centred approaches, taking responsibility for decision making, self-reliance, and knowledge of foreign language learning processes as indicators of autonomous learning. This could imply that their understanding of autonomous learning became more sophisticated upon completing teacher training.

Some studies have also reported ambivalent feelings about autonomy among pre-service teachers. They may hold positive attitudes towards promoting autonomy but are unsure about their ability to foster autonomous learning with their students. For example, Sumsion (1994) reported that empowering pre-service teachers' by giving them more voice and control in their learning process revealed a lack of confidence and uncertainty to enact the voice given to them, although they developed a more positive predisposition towards autonomy. Similarly, Vázquez (2020) found that the majority of the pre-service teachers in the study were positively predisposed towards the idea of fostering autonomous learning. This positive attitude included showing conviction and willingness in implementing autonomous learning and helping their students to develop critical competencies such as assuming agency and responsibility in their learning and their self-awareness and self-regulation. However, they were notably less convinced of their ability to promote autonomy and about their knowledge on the subject of autonomy. Other studies indicate that future teachers need to be made explicitly aware of their role in autonomy promotion. For example, Izadinia (2015) found that when EFL teacher educators encouraged pre-service teachers to see their role as someone who should motivate students to become more autonomous, it raised their awareness of the importance of their role in autonomy promotion. Likewise, Raya (2020) found that pre-service teachers' self-image changed during teacher training. They began to orient themselves towards integrating autonomous learning into their own teaching after participating in

reflection activities that prompted them to challenge their pre-existing beliefs—that envisioned autonomy as an “alternative” learning method rather than something that could be a principal aim of education.

Studies of pre-service teachers’ beliefs and perceptions (about how much encouragement of autonomy they or their students should receive) provide an inconclusive insight. In some educational contexts, it has been reported that some pre-service teachers viewed their institutional setting and external constraints as not sufficiently encouraging of autonomy development (e.g., Balçıkanlı, 2010; Cubukcu, 2016; Vázquez, 2020). By contrast, in some other studies, pre-service teachers believed that students should be “given knowledge” by an expert on the subject who teaches and controls classroom activities to ensure this transaction of knowledge (i.e., learning) occurs (Roberts et al., 2016; Nicolaidis, 2008). Cubukcu (2016) found that the pre-service teachers they studied believed that students should have little to no control over aspects such as course objectives, topics and content, materials, lesson timing and pace, activities, learning tasks, and homework. Fewer studies reported clearly negative attitudes towards learner autonomy, e.g., Martinez (2008), who found that the pre-service teachers believed the development of autonomous learning skills was an unrealistic goal in education.

### **2.2.7. Novice Teacher Beliefs and Promotion of Autonomous Learning**

How *novice teachers* (typically teachers in their first three years of teaching) perceive autonomous learning and what they believe about it may be different from experienced teachers. As noted in the definitions at the beginning of the literature review, it is important to distinguish this group as they are a group of students in an ‘artificial’ but important intermediary stage between pre-service teachers and experienced in-service teachers. Some studies report that novice teachers’ perceptions and beliefs about autonomous learning more

resemble that of pre-service teachers. For example, a recent study found that novice EFL teachers demonstrated a less profound understanding of autonomous learning, less autonomy promotion in their practice, and less positive attitudes and predispositions towards encouraging autonomous learning than experienced teachers (Yuzulia, 2020). In another study, the experience level, i.e., whether the teacher was a novice or a seasoned teacher, was a determining factor in their promotion of autonomous learning. In this study, a significant portion of novice teachers reported a lack of knowledge of autonomous learning, with the authors having linked this reporting to their lack of autonomy promotion in the classroom (Ahmadianzadeh et al., 2020).

There is also evidence that novice teachers' practices are influenced by their student experiences prior to teacher training (Richardson, 1996). In Erkmen (2014), nine EFL novice teachers were studied over nine months, and it was found that they consistently made links to their student experience by trying to teach differently from the negative models they were exposed to as students. It was found that their beliefs about their students' experience and what their teaching should look like were based on their own student beliefs rather than, for example, their pre-service teacher knowledge. Škugor and Sablić (2018) also found that novice teachers' prior student experiences informed their current teacher beliefs and practices. Even though they demonstrated knowledge of the benefits of a student-centred approach and innovative teaching, in practice, they were not willing to give control to their students and did not encourage student autonomy because they preferred to replicate the approach they experienced as students, which was a teacher-centred approach (Škugor & Sablić, 2018).

Novice teachers' beliefs about students' age affecting their ability to engage in autonomous learning have also been reported in the body of literature on this topic. For example, Saraç and Tarhan (2020) reported that novice teachers believed their pre-schooler

students were less able to develop metacognitive and self-reflection skills, which are integral to autonomous learning. Thus, these novice teachers dedicated more time and effort to helping their older students develop these skills than the pre-schoolers. In contrast, another study found that the novice teachers believed autonomy could be promoted in students of any age, whereas expert teachers believed younger students were less likely to develop autonomous learning skills (Ahmadianzadeh et al., 2020).

It has been documented that novice teachers demonstrate less flexibility than experienced teachers regarding classroom management and the ability to turn unforeseen circumstances into learning opportunities (Tsui, 2003). Mehrpour and Moghaddam (2018) noted how novice teachers believed that having full control over their class meant they were successfully maintaining discipline, so this aspect was prioritised in their classroom management. By contrast, experienced teachers focused on a wider array of classroom management aspects such as learner engagement. These findings may have something to do with the theory of teacher development stages. Although teacher development is not necessarily a straightforward process with clearly delineated stages (Khoshnevisan, 2017), many agree that novice teachers find themselves at a stage that Katz (1972) calls the “survival stage”. In this stage, they sometimes have to centre on their own needs more than on the students’ learning when facing the challenges of their new job, one of which is classroom management. Fuller and Brown (1975) also argued that survival is the principal goal of novice teachers, during which they often get disillusioned and (temporarily) drop some optimistic intentions formed during their training, which may also include ideas about promoting autonomy. Indeed, a few studies showed that novice teachers found it challenging, if not impossible, to promote autonomous learning due to various reasons, including but not limited to: not wanting to contradict more experienced colleagues, strategically complying with the

institutional rules and norms, and not wanting to oppose students expectations (cf. Erkmen, 2014; Glas et al., 2019; Jiang et al., 2021; Xu, 2013).

### **2.3. Literature Review Summary and Synthesis**

The Literature Review chapter focused on the aspects of autonomous learning that are most critical to its objectives and research questions, which are: the concept and definitions of autonomous learning; teacher role in autonomous learning; promotion of autonomous learning in formal education; and teacher beliefs and perceptions, including pre-service teacher and novice teachers' beliefs in general and on autonomous learning. The main points are summarized below.

When it comes to the concept of autonomous learning, it was concluded that it is a rather messy construct with many proposed definitions (c.f. Benson, 2007; Dickinson, 1987; Holec, 1981; Little, 2007; Littlewood, 1996; Nunan, 1996; Oxford, 2003; Reinders, 2010). Specifically, indicators of autonomous learning skills that are recurring in the most prominent definitions include but are not limited to: the ability to take control over one's learning (e.g., Holec, 1981; Nunan, 1996), ability to engage in high-order cognitive processes such as self-reflection and self-assessment (Dam, 1995; Little, 1991; Schwienhorst, 2003; Sinclair, 2000), being motivated and willing to learn on one's own (Dickinson, 1995; Littlewood 1996; Nolen, 1995; Ushioda, 1996), ability to engage in self-study via self-direction, self-organization, self-regulation (Reinders, 2010; Zimmerman, 2000), and ability to purposefully select and use resources for one's own learning (Palfreyman, 2006).

In the context of formal education and classroom learning, which Crabbe (1993) referred to as the public domain of autonomous learning, three important points can be drawn from the literature review on autonomous learning. One is that autonomous learning, more likely than not, does not mean complete independence and the manifestation of one's

individualism but is instead a social process characterized by interdependence and even dependence to some extent (Little, 2007). The second point is that the teacher has a crucial role in that autonomous learning process as someone who gradually allows students “more control of the process and content of their learning” (Little, 2007, p. 26). This role also includes the provision of scaffolding, general guidance and being an expeditious source of knowledge and factual information in support of students’ self-study (Benson, 2007; Collentine 2013; Mangenot & Nissen, 2006). The third point is that the promotion of autonomous learning in formal education is also determined by socio-political factors, such as institutional or societal customs, rules, and limitations (Benson, 2014; Dickinson, 1987; Littlewood, 1996; Sinclair, 1997).

Teacher beliefs and perceptions about autonomous learning—their subjective and context-embedded understandings, observations, and conclusions about autonomous learning (including those held about themselves) that are felt to be true regardless of their objective truth or value—affect and determine teacher practice both at the pre-service and novice in-service teaching stage (Borg, 2001; Cornett et al., 1990; Nespor, 1987; Pajares, 1992; Peacock, 2001; Yook, 2010). For example, a (pre-service) teacher’s beliefs of their own ability to learn autonomously and to promote autonomous learning can prevent their implementation of autonomy promotion in their teaching, even when they generally have positive attitudes about autonomous learning (Bandura, 1997a, 1997b; Fives & Buehl, 2008; Sumsion, 1994; Vázquez, 2020). Similarly, *novice* teachers can (temporarily) adopt more pro-teacher-directed beliefs and consequently avoid encouraging autonomous learning in their classrooms as a way of coping at the ‘survival stage’ of their teacher development (Katz, 1972; Tsui, 2003). For example, novice teachers’ promotion of autonomy can be influenced by their beliefs about students’ cognitive abilities connected to their age (e.g., Saraç &



Tarhan, 2020) or their disillusionment when faced with the realities of teaching (Fuller & Brown, 1975).

Therefore, the goal of teacher education should be to prevent the transfer of ill-informed or inaccurate pre-service teachers' beliefs and perceptions, as well as unstructured and implicit knowledge of autonomous learning (that can form even before teacher education) into novice in-service teaching practice (Cornett et al., 1990; Pajares, 1992). As a result, changing teacher beliefs are assumed to be a precursor to learning and professional development (cf. Aelterman et al., 2016; Castellanos Jaimes, 2013; Pajares, 1992; Peacock, 2001; Richardson, 1996).

### Chapter 3: Methodology

This chapter begins by describing the qualitative case study approach and the rationale for adopting it in this study. Next, the researcher's role, ethical considerations, and the interpretivist paradigm are discussed.

#### 3.1. Qualitative Case Study Approach

The analytical approach taken here consists of a case study with two participants. As shown in Table 1 below, the data was compiled for the case studies on two teachers during different time frames and multiple contexts: first, in specific periods as pre-service teachers and then later, following graduation, in their early period of in-service teaching. The data was then analyzed through a qualitative lens, adopting a case study approach.

**Table 1.**

*Overview of the Study Phases and Methods Employed*

Stage	Phases	Methods employed
Pre-service teaching	Pre-study	Research synthesis
	Pilot Study	Pre-testing of research instrument and concept understanding
	Main Study	Case study, Autonomous Learning Intervention
In-service (novice) teaching	Follow-up	Case study

In this study, autonomous learning is seen as a highly complex, contextualized, and situated phenomenon that requires in-depth empirical investigation, as it occurs on the level of individual's cases rather than attempting to make generalisations about it, which calls for

qualitative case study (Yin, 2009). In prior studies on autonomous learning (see the [literature review section on autonomous learning](#)), it has been argued that autonomous learning is an ambiguous and potentially arbitrary concept. As such, perceptions and practices of autonomous learning may differ significantly on the case level, this complicates attempts at broad generalisability and targeting large and diverse populations. Given this complexity, the researcher has opted to narrow down the focus on two participants and their perceptions and performances of autonomous learning and investigate them in-depth and holistically. To that end, the case study method was adopted.

According to Mitchell (1983), a case study is a “detailed examination of an event (or series of related events) which the analyst believes exhibits the operation of some identified general theoretical principles” (p. 192). The case study is a commonly used qualitative research method that empirically explores context-embedded phenomena occurring within their boundaries (Yin, 2003). A case study involves a detailed investigation over a period of time and analyses not only the phenomenon of interest but also the context in which it occurs. This phenomenon-context relation is one of the critical elements of a case study, and it is examined to explain the issue being studied (Hartley, 2004). The case study method entails in-depth and systematic analysis to explain the meaning of a process, person, or event, especially on those subjects that are bound to yield information-rich, comprehensive, and complex results (Merriam, 1998). These features make the case study approach suitable for the purpose of this study, which is to investigate the two specific participants’ perceptions and beliefs of autonomous learning in the period of their transition from pre-service teachers to novice in-service teachers. The study does not attempt to make any generalisations about beliefs and perceptions of autonomous learning but rather seeks to longitudinally observe and systematically analyse the participants’ beliefs and perceptions in-depth. These are understood

as interrelated and interdependent phenomena shaped by the socio-cultural and educational context parameters in which they are formed, which inevitably determine how participants make meaning of autonomy and its related concepts and processes (Yin, 2009).

Secondly, the purpose of the study fits the frame of a case study. Adopting a case study framework was seen as suitable for investigating the phenomenon of autonomous learning in this context as it provided an approach to the potential interplay of perceptions, beliefs, and practices of autonomous learning (Cozby et al., 1977). The two participants' perceptions, beliefs, and their manifestations through teaching and learning practices are seen as potentially interrelated aspects that make the *unique* and holistic experience of autonomous learning of the two individuals of this study (Yin, 2009). Following Creswell's (2007) outline, the complexity of autonomous learning and any emerging constructs related to it are best captured by case study.

Third, according to Yin (2009), the case study approach is appropriate in non-experimental studies, i.e., when no control over the research environment is required to investigate the phenomenon of interest, which is true for the present study. Furthermore, this case study focuses on contemporary phenomena, i.e., the beliefs and perceptions of autonomous learning as they occur at the time of the study, which is another criterion for using case study methodology. No experimental approach was taken, and the purpose is rather to *describe in-depth* what goes on at the moment of investigation. Within this approach, the researcher does not look into the historical state but is instead interested in capturing the situation only at the moment of the investigation.

The researcher was interested in obtaining an 'inside view' into the participants' autonomous learning-related practices that further illuminate and give context to their beliefs and perceptions at the pre-service teaching stage. A case study can help uncover the hidden

(insider view) aspects of the beliefs and perceptions of autonomous learning, i.e., those that are not immediately visible if only the participants' accounts are considered (Walliman, 2005). The participants' recorded experiences in the self-study activities, undertaken as a part of their pre-service teaching, are seen as unique. Each student could implement the self-study process differently at home, and applying a case study approach helps gain access to this rich data.

Further refining the approach, this study can be qualified as an *exploratory* case study as it *explores* perceptions, beliefs, and practices of autonomous learning of the two study participants within the studied context without a pre-established hypothesis (Yin, 2003). To the researcher's knowledge, there had been no prior investigation into these particular participants' beliefs, perceptions, and autonomy-related practices, neither as pre-service nor novice in-service teachers—so there was no existing framework to guide the analysis, thus making this explorative case study. In addition, there had been no known investigation into these pre-service teachers' out-of-school autonomous learning practices to date, which meant there were no expectations as to what kind of themes or data may emerge from this aspect. Therefore, this study is seen as potentially setting a stage for further investigation of autonomous learning in this and similar contexts—a characteristic of exploratory studies. However, it must be underscored that this does not aim to be a comparative study as the two study participants were not compared, and the study is not explanatory as no links and causations were presumed before starting research. This explorative approach and qualitative methodology were needed to achieve flexibility in the study design and cater for the longitudinal nature of data collection.

Finally, a qualitative approach was selected for a number of reasons. First, it was a suitable approach for the nature of the phenomenon studied. A qualitative rather than

quantitative or mixed-method approach was adopted because qualitative methods align with the purpose of the study: 1) to investigate autonomous learning holistically by exploring perceptions, beliefs, autonomous learning practices, and 2) to investigate the promotion of autonomy and any potential interplay between these to get an in-depth understanding of these factors (Merriam, 2009). Qualitative methods also align with the interpretivist framework (explained in more detail in the interpretivist paradigm section) adopted in the study to analyze and understand the phenomena of beliefs, perceptions, and autonomous learning practices (Creswell, 2013). Furthermore, there is a longstanding tradition of applying qualitative methods to studies on teacher education and teachers in practice. More relevantly, this approach has been used to explore attitudes of graduate students, pre-service teachers, and in-service teachers towards autonomy (e.g., Dwee & Anthony, 2017; Swatevacharkul & Boonma, 2020). Although quantitative methods have been employed for studies on perceptions on autonomous learning, these have most often measured autonomy (development) (e.g., Osmani, 2019) and described the connection of autonomy to other factors such as motivation (e.g., Günes & Alagözlü, 2020). Moreover, a quantitative focus tends towards precision, transferability and generalisation (Dornyei, 2007), which were not the aims of the present PhD study.

Similarly, while it is acknowledged that a mixed-methods approach could ensure a collection of comparable and rich data, the number of participants was limited and, therefore, not suitable for statistical relevance. Instead, the richness of data was achieved by drawing on many different data sources and using a longitudinal approach, i.e., collecting data over the period beginning from October 2017 to June 2018 (Lincoln & Guba, 1985) from both participants.

### 3. 2. Researcher's Role

In this qualitative case study, the researcher's role was of critical importance as it was the researcher who decided on what was to be included in the studied case, i.e., what were the limits of the case (and also what did not belong to the case). This is one of the biggest challenges in case studies, as argued by Nunan (2000). The researcher designed and led the autonomous learning intervention, collected and analyzed the data, and interpreted the emerging patterns and themes (Creswell, 2007). It should also be emphasised that the researcher was also the coach in the autonomous learning intervention designed to collect the data from the two participants. Consequently, this entailed continuous contact with the two study participants during the entire study period (see autonomous learning intervention).

Carrying two simultaneous roles, the researcher needed to be wary of any potential biases that might interfere with her interpretation and decisions taken in the research. Although it is impossible to eliminate biases completely in qualitative research (Thirsk & Clark, 2017), in this study, the researcher took the following measures to minimize her biases and increase objectivity as much as possible. First, the researcher ensured she was not familiar with the two participants before the study. The two participants were not familiar with the researcher either, despite the researcher conducting her PhD at the Universitat Autònoma de Barcelona at the time of the study. This is because the researcher did not teach any subjects to the students or otherwise have any contact with them, aside from attending one class for observational purposes (to get a general idea of a TILT class as enacted by the teacher and students).

Once the study started and the researcher communicated with the study participants—hence becoming an insider—the researcher needed to ensure the shared references and understanding of topics were not taken for granted (Burgess et al., 2006). For that reason, the

researcher continued to ask questions during the meetings to avoid any assumptions and misinterpretations. For example, whenever one participant repeatedly referenced her “perfectionism problem” throughout the intervention, the researcher asked what she meant by it, despite previous discussions regarding it.

The researcher’s role was also to ensure the two study participants were encouraged and could talk about the topics they found important and wanted to share during the online meetings and at any point during the intervention and later in the follow-up study (Blaschke, 2012). This was done partially as an incentive for the participants to continue participating in the online meetings during the intervention in the face of their demanding final-university-year tasks (see the [section on the study setting](#) for more details). One benefit of these online meetings was that they were used to vent about their school obligations and the challenges of autonomous learning activities, which was possible given the meetings were semi-structured and allowed room for the participants to decide topics of discussion. This meant that the researcher needed to make certain that the participants felt free to address the topics of their interest while, at the same time, the conversations were directed towards eliciting the participants’ perceptions, beliefs, and practices of autonomous learning as much as possible. The researcher also needed to ensure that the conversations emerging in the online meetings were as minimally influenced as possible by the power dynamics between the researcher-intervention coach and the intervention participants. To this end, the researcher deliberately avoided positioning herself as an authority on autonomous learning and reiterated in the meetings that there were no right or wrong beliefs, perceptions, conceptualizations and notions of autonomous learning. She also explained to them that there is no consensus on what constitutes autonomous learning in the pertinent literature and helped them understand that the researcher was keen on learning about autonomous learning *with* the participants.



That said, the researcher acknowledges the possibility that what the participants were divulging in the meetings could, to some extent, be what they thought they should say or what the researcher wanted to hear. This is especially possible given that as a researcher, the researcher was inevitably perceived by the undergraduate students as being in a relative position of authority.

Another important aspect of the researcher's role was that it also needed to be flexible and adaptive enough to change the case study design during the study if necessary (Yin, 2009). An example of such researcher adaptability in this study is the researcher's adaption of design and research questions to the findings of preliminary data analysis. Initially, the intention of this PhD research was to implement the autonomous learning intervention as a part of the design-based research methodology (DBR) (Anderson & Shattuck, 2012) and to focus on identifying the effects of the intervention and their pedagogic implications. However, as the study progressed, the researcher engaged in preliminary data analysis as a part of the DBR protocol and noticed that interesting themes were emerging that were not covered by the original research questions. Thus, the researcher decided to adapt the study design to a qualitative exploratory case study and alter the research questions. The researcher also periodically reminded the participants of the research aim and assured them that they could inquire about the results and any other study aspects that interested them at any given time during the study.

### **3.3. Ethical Considerations**

The following guidelines were followed to guarantee the ethical correctness of the study. First of all, the individuals participated in the study completely voluntarily. Before starting the research, both case study participants signed a written consent document that informed them about the provisional title of the study, the researcher's full name and contact

details, the reasons why they were appropriate candidates to participate in the study, and the description of the procedures to be implemented in the study. The consent form (see [Appendix B](#)) also advised them that there were no foreseeable or expected risks involved in participating in the study. It also informed them of the potential benefits of doing so, such as helping them better understand themselves as learners, acquiring strategies to help autonomous learning with technology, as well as helping them in encouraging their future students to learn autonomously with technology. The consent form also specified that the participants could withdraw from the study at any given moment and that they had the right to ask any questions about the study and express any concerns directly to the researcher.

The participant names were anonymised, and care was taken that their participation in the study did not interfere with the participants' other academic activities and responsibilities. This was done by adapting the research activities such as online meetings according to the participants' availability and preferences. Furthermore, any information concerning specific university staff members (e.g., information on their teachers voluntarily shared by the participants during the study) were not disclosed to the people in question or anyone else. The participation in the study did not in any way affect or influence the participants' marks or performance in their school subjects of their final university year. As indicated, the researcher ensured the participants benefitted from their participation by providing them with coaching on autonomous learning while not interfering (relating the coaching topics) with their school assignments.

### **3. 4. Interpretivist Paradigm**

The data analysis in the main study and the follow-up was informed by an interpretative paradigm which entailed:

- Viewing the participants' accounts as deeply situated in and shaped by the context in which they were told. This context was composed of variables including but not limited to the participants' age, culture, life circumstances, as well as the Spanish educational system, their university curriculum, final-year teacher education courses, their dual experience of being students and pre-service teachers, flipped classroom and telecollaboration experiences. This information was collected during the documentation and conversations had with the TILT course teacher about the curriculum, practicum, courses, and specific events that took place during the study. This was then used as background information during the analytical phase.
- Understanding that the participants likely had their own working definitions and theories about autonomous learning—which represent ever-changing and evolving systems of hypotheses that drive participants' understanding and interpretation of autonomous learning and related concepts—that are based on the participants' experiences and attempts at making links between what they already know and their new experiences. This was achieved by repeatedly going back to the critical topics in the online meetings by asking selected questions in every meeting (same or similar questions) to elicit how participants understood the topic in different points of time and circumstances.
- Making sense of what participants were saying and manifesting by comparing their statements and behaviour to the study's conceptual framework, but not imposing any categories or measures of autonomy. This was achieved by conducting a high-level analysis of the statements and behaviours of the participants after completing each step of the data collection. For example, after each online meeting, a less

formal and structured high-level coding was done on raw videos in ELAN software to identify the autonomy-related topics they focused on. These were then compared with the findings of the research synthesis done in the pre-study.

- Focusing on areas that participants highlighted as important to them. This was achieved by employing a flexible approach in the online meetings, whereby the participants were enabled and encouraged to initiate a topic of their choosing. They were also minimally interrupted in their speech. The researcher also took note of the topics they explicitly labelled as important to them or that they frequently mentioned and incorporated them into the questions for the next meeting.
- Being aware that the analysis was driven by the researcher's own understanding and interpretation of the data, as it generally is with interpretivist paradigms. Engagement with the data was done as open-mindedly as was possible and using creativity and self-reflection to make meaning of what was seen in the data. In relation to this, it needs to be acknowledged that the data analysis entailed focusing on those phenomena that were judged as "interesting" by the researcher as interpretivism posits that there are no right or wrong theories and ways to meaning of the world.
- Adopting a hermeneutical approach to making sense of the data by which autonomy-related phenomena are examined as individual phenomena and also in relation to their interplay with other phenomena that are of interest in the study. This was achieved by the researcher constantly asking herself "why" and "how" during the analysis process.
- Minimising researcher bias by having multiple data sources and having both participants review the findings in the follow-up phase of the study.



## Chapter 4: Research Design and Data Collection

### 4.1. Introduction and Overview

In this section, the research design is elaborated on, including the description of the four study phases (pre-study, pilot study, main study, and follow-up study), the main study participants and the sampling used. After that, the data collection process, the main instruments used to collect data in the main and follow-up study are described. Finally, the data analysis approach and procedures are explained in detail.

The following subsection describes the qualitative research design, which consisted of 4 phases. First, a pre-study was conducted to establish a conceptual framework for exploring beliefs and perceptions of autonomous learning in the main study. This was a research synthesis of the recently published research on technology-enhanced autonomous learning described in the pre-study section of this thesis. Second, the pre-study research synthesis was conducted to identify specific traits used in operationalisations of autonomous learning in selected studies (n=11) in order to design the Autonomous Learning Intervention. As such, it is to be distinguished from the much broader and extensive literature review conducted in setting the theoretical framework for this study (see literature review). Following that, a pilot study was conducted to test the pre-intervention questionnaire. After which, the main case study was conducted during the pre-service teacher phase. Finally, the autonomous learning intervention (workshop and coaching) was implemented, and the main study was completed when the intervention ended. Later, a follow-up study was done when the participants became novice in-service teachers. These 4 phases are described in detail and summarised in Table 2 below.

**Table 2.***Research Design: Phases, Methods, Instruments, Foci, and Participants*

Phase	Method	Main Instruments	Focus	Participants
Pre-study	Research synthesis (review of published research on technology-enhanced autonomous learning from 2012-2017).	Secondary literature	Autonomous learning operationalisations and conceptualisations (definitions and markers) to be used for setting up the Autonomous Learning Intervention	No participants as it was not an empirical study. A total of 11 studies were analysed.
Pilot Study	Pre-testing of research instrument and concept understanding	Online questionnaire and respondent feedback	Identifying flaws in concept operationalisations and vague or ambiguous items in the questionnaire and instructions	15 pre-service/novice in-service teachers of English
Main Study	Case study, Autonomous Learning Intervention	Online meetings and recordings of naturally occurring data in Autonomous Learning Intervention	Perceptions, beliefs, and practices of autonomous learning at the pre-service teacher stage	Gemma and Maria as pre-service teachers
Follow-up	Case study	Online meetings and reflection sheets	Perceptions, beliefs, and practices of autonomous learning at the in-service teacher stage	Gemma and Maria as in-service teachers

#### **4. 2. Pre-study: Research Synthesis of the 2012-2017 Studies on Technology-Enhanced Autonomous Learning**

Before conducting the main empirical study, a research synthesis study was conducted to establish the conceptual framework for the main study. This research synthesis was therefore not an integral part of the main empirical PhD case study. However, since it provided a conceptual and analytical framework for the present study, the methodology used in it needs to be described in this methodology section to understand the research design better. During this time, reading on the main topics of the study was also carried out, with a more focused synthesis also elaborated (see [literature review](#)). The synthesised studies on autonomous technology-enhanced learning were conducted from 2012–2017, the most recent 5-year span immediately preceding the start of the main PhD study. The main question relevant for creating the conceptual framework was ‘how is autonomous technology-enhanced learning conceptualised and operationalised in recent research?’ The synthesis also included qualitative and quantitative work to provide a holistic image of autonomous technology-enhanced learning (Cooper et al., 2009). Empirical research was considered for this study as it revealed real-life examples of how autonomy was operationalised in various formal and informal settings, which was needed given the context of the case studies.

Two rounds of screening of published peer-reviewed papers were conducted to collect the relevant papers for the synthesis. In the initial screening for relevance, the keywords “learner autonomy”, “autonomous learning” were typed in Google Scholar, ERIC search engine, as well as a selection of specialised academic journals including *ReCall*, *Innovation in Language Learning and Teaching*, *Computer Assisted Language Learning*, *Language Learning & Technology*. However, it was practically impossible to include all the potential terms related to learner autonomy and technology in the search for the keywords as there is no



consensus on the terminology (see [literature review](#)). For example, it is not clear whether self-directed learning signifies one component of autonomy or its synonym. Therefore, it was decided to narrow the search to those papers that explicitly use *learner autonomy* and *autonomous learning* as keywords, thus adhering to Suri and Clarke's (2009) qualitative research synthesis principles of informed subjectivity and purposefully informed selective inclusivity.

A screening template was applied to analyse each study's abstract, keywords, and introduction in order to select the studies. This initial screening was driven by the following criteria: a) The title contains at least one of the keywords, b) The field is language education, c) The study was published between 2012 and 2017, d) The study was published in a peer-reviewed journal or as a conference proceeding, and e) The study is empirical. As a result, 19 studies were selected. After a backward search was completed, the final number amounted to 21 studies.

The second screening aimed to identify the main focus of the study, i.e., whether exploring autonomy in technology-enhanced learning was its central topic. For example, some studies that focused centrally on other topics (e.g., vocabulary learning or oral proficiency), but addressed autonomy alongside, were not seen as eligible. Hence, the second screening aimed to include those studies with at least one research question directed at exploring learner autonomy and that provided enough material to analyse. To ensure that these criteria were met, the abstracts, research questions and results were scanned. The resulting number of studies after this phase of screening was 11.

The 11 studies were then analysed using Applied Thematic Analysis (Guest et al., 2012), i.e., not using *a priori* codes (Grounded Theory) (Glaser & Strauss, 2017). The analysis was guided by researcher interpretation (Interpretivism) and was aimed at

understanding autonomous technology-enhanced learning as a phenomenon (Phenomenology) (Guest et al., 2012.). This process entailed repeated reading of the selected studies to identify and annotate explicit and implicit references to learner autonomy. However, identifying how autonomous technology-enhanced learning was conceptualised and operationalised in the studies entailed going beyond pinpointing explicit definitions of autonomy. As such, a spreadsheet was also developed to answer the question of how autonomous learning is conceptualised and operationalised in recent research. More concretely, to provide a comprehensive image of autonomy, the studies were analysed for data such as examples of autonomous student behaviour (e.g., Chik, 2014), comparisons of student work and attitudes before and after the treatment (e.g., Snodin, 2013), administered data collection instruments (e.g., L. Lee, 2016). The collected data was subsequently inserted into the spreadsheet, and then individual markers of autonomy were extracted.

#### **4. 3. Pilot Study**

Once the conceptual framework for exploring autonomous learning was established, a small-scale pilot study was set up with the purpose of: 1) helping the researcher prepare for obstacles that may arise in the main study, and 2) testing the pre-intervention questionnaire (see [pre-intervention questionnaire](#)) that was to be administered in the main study. In a longitudinal case study such as the present one, conducting a more minor scale pilot study can be an essential step in preparing the main full-scale study (Malmqvist et al., 2019). In particular, conducting a pilot study on the pre-intervention questionnaire helped increase confidence that the main study participants would correctly understand the questionnaire items and have a similar interpretation of the terminology used, i.e., autonomous learning, agency, self-direction, self-regulation, and metacognition. Understanding the terminology used in the questionnaire was vital because it would be repeatedly referred to in the

intervention later on; however, that terminology could likely be ambiguous or unclear, so for each segment of the questionnaire, i.e., *Self-direction and Self-regulation*, *Metacognition*, and *Agency*, descriptions were inserted to facilitate participants' interpretation of what they stand for.

In order to conduct the pilot study, 15 volunteer participants were recruited from a closed Facebook group whose majority of members were pre-service and novice teachers based in Barcelona, Spain. The sampling for the pilot study was non-purposive, and the participants were randomly selected from the group as they were estimated to be typical representatives of the main study participants (Neuman, 2009). The pilot study participants were administered with an online questionnaire copy of the pre-intervention questionnaire intended to be used in the main study. It contained questions whose purpose was to elicit respondents' feedback on the questionnaire. Specifically, the participants were asked to rate their understanding of the terminology, their definitions and descriptions used in the questions on a 1–5 Likert scale. In addition, they were also asked to use a 1–5 Likert scale to rate the clarity of the questionnaire items in general and were asked to give suggestions for questionnaire improvement via open-ended questions. As a result, the researcher identified ambiguous items and the most prominent questionnaire pitfall, which was “too wordy”. The questionnaire was then revised to implement the feedback.

Following the completion of the pilot study, the main case study was initiated. This phase investigated the two study participants' perceptions and beliefs of autonomous learning during the transition from their pre-service teaching in the final university year to novice in-service teaching (the rationale for selecting the sample is provided in the participants and sampling section). The base of the main case study was the autonomous learning intervention (empirical online coaching sessions) implemented with the two study participants while they

were pre-service teachers. Two and a half years after completing the main study and the intervention, a follow-up study was conducted with the same two participants who were then novice in-service teachers having graduated from UAB Faculty of Education and started teaching primary school students. The next session describes the two participants, sampling, the intervention, and the follow-up study.

#### **4. 4. Participants and Sampling**

The two participants of the main study and the follow-up study were Gemma and Maria (pseudonyms used for privacy and data protection reasons), two Catalan young women based in Barcelona, Spain. In 2017, at the beginning of the study, Gemma and Maria were pre-service teachers. They were both 21 years old and were completing their Bachelor's degree in Primary Education at the Faculty of Education at the Autonomous University of Barcelona, specialising in the fourth year in the Teaching of English as a Foreign Language (TEFL). This study program was different from the standard Primary Education program; all instruction was in English, and they were required to have a C1 CEFR level to enrol. Completing the program in English provided them with the qualification to teach English at the Primary level. At the fourth (final) year of their studies, when the present case study started, Gemma and Maria were attending the "Technology-infused Language Teaching" (TILT) course, which is based on the FIT pedagogical design that integrates telecollaboration and flipped classroom model (Sadler & Dooly, 2016; see also [the TILT course](#)). They were also working on the assignments required in their final-year practicum subjects and their Bachelor's Degree Final Project, which entailed observation of senior teachers' classes in primary education and supervised teaching practice, including the creation of lesson plans and teaching activities to be implemented under senior teacher supervision, self-reflection on their

own practice, and final paper writing. The intervention followed their entire final university year, from October 2017 to June 2018.

The researcher then reconnected with Gemma and Maria in December 2020 to do a follow-up study. At that moment, they were 24 years old and were both in-service teachers in Barcelona, Spain. Gemma was teaching two subjects: English and Coding, to very young learners in a public primary school. Maria was teaching English to teenagers in a primary school and teaching Spanish as a foreign language to a group of Chinese students privately.

It is also worth mentioning that both Gemma and Maria were highly successful academically at university with high marks in most of their subjects. In addition, they were both engaged in several extracurricular activities. For example, Gemma worked as a scout leader for children in a local scout group. Maria worked as a ballet teacher balancing a very high workload and responsibilities of organising performances, creating choreographies, and teaching and coaching other ballet dancers. Due to this high workload in school and out of school, as well as her insecurity about what career path she should take, in spring 2018, Maria decided to take a break from the university and did not graduate in June 2018 when Gemma and the rest of her classmates graduated. Instead, she decided to do her internships in a London language school where she spent three months, from October to December 2018. Upon returning to Barcelona from London in January 2019, she got her first teaching job, and by the time of the online follow-up meeting in February 2021, she had changed a few jobs and worked in a few different schools in the Barcelona district. This was not uncommon given that in Spain, most newly graduated language teachers struggle to find a full-time job in the first several years post-graduation. That said, at the time of the follow-up study, the COVID-19 crisis and its effects on the job market did not seem to affect either Gemma's or Maria's

positions at the schools they were teaching in, and they were both giving in-person classes at the time of the follow-up study when many novice teachers were facing temporary job loss.

As for the sampling for this study, purposive sampling was employed when selecting the participants for the case study. As the study was qualitative and aimed to explore a highly contextualised phenomenon of autonomous learning in a specific setting, non-random, purposefully biased sampling was employed (Yin, 2009). According to Neuman (2009), purposive sampling is suitable for exploratory case studies such as this one because the goals are not to generate findings that are representative of autonomous learning of the entire population, i.e., all pre-service teachers becoming novice teachers in the studied context. Instead, the purpose was to “select unique cases that are especially informative” about autonomous learning in the studied context of the UAB final-year courses (Neuman, 2009, p. 274) and thereby gain a more comprehensive insight into a highly complex, ‘real-life’ situation (Hartley, 2004; Mitchell, 1983; Yin, 2003). Specifically, this entailed selecting participants who were attending university courses that required them to engage in autonomous learning, such as the TILT course, and who were also likely to be engaged in out-of-school autonomous learning. It was opted to focus on this participant profile as the researcher was interested in studying the cases of autonomous learning holistically, i.e., not only what they did in school but also their perceptions, beliefs, and autonomous learning practices in out-of-school contexts. For that purpose, the criteria of selecting participants were:

- The participants needed to be willing to voluntarily accept to participate in the autonomous learning intervention, which would indicate their interest and readiness to engage in the extracurricular activities that the participation in the intervention entailed.

- The participants needed to be interested in autonomous learning in general; willing to improve and learn about their own learning processes, all of which was specified as a requirement in the invitation to participate in the intervention.
- The participants needed to be likely to engage in autonomous out-of-school learning activities.

The above criteria were used to tailor the email invitations that were then sent to the pre-service teachers with the aim to recruit two pre-service teachers who would fulfil the above-mentioned criteria for participating in the study. The number of participants (n=2) was decided based on the premise that it is highly challenging to find many participants with a similar profile for a case study that explored autonomous learning of individuals in the specific setting of UAB Faculty of Education final-year students (pre-service teachers) involved in courses/subject that require learner autonomy (Nunan, 2000). Moreover, it was necessary to have participant commitment over an extended period of time.

It has been argued that the point of participant saturation (sample size) in qualitative research is difficult to ascertain and almost impossible to determine in a case study as the case study quality and rigour has more to do with reliability and validity and less with the number of participants (Guest et al., 2006; Morse, 2000; O'Reilly & Parker, 2013). That said, it is common to have 2-4 participants in a case study (Faltis, 1997). The researcher decided to go for two because the purpose of the study was to describe autonomous learning from a number of aspects, and the scope of the study did not allow for more than 2 participants. Also, only one participant would have been risky because of the potential dropout.

#### **4. 5. Autonomous Learning Intervention (Main Study)**

The autonomous learning intervention lasted from October 2017 until June 2018, which coincided with the final (4th) university year of the teacher education program the

participants were enrolled in. The intervention had a two-fold purpose, the pedagogic purpose and the purpose of serving as a framework for data collection. As described in the research design overview section, the intervention was initially designed as a part of the DBR protocol that was to be used in a study aimed at investigating the effects of the intervention on autonomous learning of the pre-service teachers. However, as the research purpose was modified and a case study was designed instead to explore the two participants' perceptions, beliefs, and practices of autonomous learning, the intervention ultimately served as a framework for multiple data collection instruments.

The pedagogic aim of the intervention will be briefly described first before describing the research aim, i.e., how the intervention was used to collect data. The pedagogic aim was to support the final-year pre-service teachers in the autonomous (self-directed/initiated) learning required in a particular university course, the TILT course, which involved flipped classroom method and telecollaboration (see Chapter 2; see also Dooly and Sadler (2019), Marjanovic et al. (2021), Sadler and Dooly (2016)). At the same time, conducting research synthesis in the pre-study phase, it was found that lack of autonomous learning strategies and conscious fostering of autonomous learning in students was a frequent theme in proper research. This led to designing an (online coaching) intervention led by the researcher that would: 1) explicitly instruct the two pre-service teachers on autonomous learning skills as per the components of autonomous learning identified in the pre-study research synthesis, 2) provide support in their autonomous learning, and 3) provide modelling of digital tool use in autonomous learning. As said before, the participation in the intervention was voluntary and had no bearing on the students' academic scores as it was an extracurricular activity.

The intervention was built on heutagogy principles (Hase & Kenyon, 2013) which entail fostering learner autonomy through instructional design. The design involves a learner-



centred and learner-controlled experience that allows the individual to learn and discover on their own (Blaschke, 2012). In heutagogy, the ultimate goal is capacitating the learner to develop life-long skills such as self-directed and self-regulated learning. This is not confined to formal educational settings. It may take place in informal learning settings (e.g., out of school) where the teacher's role is to scaffold and coach and be a resource rather than teach and provide knowledge.

In accordance with these principles, in the intervention, the researcher assumed the role of a coach who scaffolded Gemma and Maria in their autonomous learning. Drawing on the approaches and intervention designs used in similar studies—in particular, Smith and Craig (2013), Kim (2014)—the intervention focused on increasing awareness and encouraging self-reflection on technology-enhanced autonomous learning while employing a flexible approach that was adaptable to participant preferences and decisions. Gemma and Maria were continuously encouraged to participate in the design of the intervention assignments and activities and decide on various aspects of the intervention and their participation in it, such as what to talk about in the meetings, what to record in their screencast recordings, what to write about in their blog posts, and similar. In addition to heutagogy principles, the rationale behind the high student control was to let them experience taking charge of their learning (Holec, 1981), to personalise the learning experience, and to intrude on their in-school and out-of-school responsibilities minimally.

The research aim (different from the pedagogical aims) of the intervention was to enable the collection of the data needed to answer the research questions of what are the two pre-service teachers' perceptions, beliefs, and practices of autonomous learning. This was possible as the intervention allowed the researcher to employ data collection instruments (see data collection). There has been an increase in the use of pedagogical interventions in studies

focusing on technology-enhanced learning environments, especially where new technology innovation is being introduced or new instructional designs are being implemented into a learning cohort (e.g., Chanyawudhiwan & Mingsiritham, 2021; Chavan & Mitra, 2019). In education research, such interventions are often implemented with the purpose of measuring progress and outcomes, and while there were effects noted during the intervention implemented in the present study, studying these effects was not within the scope or design of the present study as it was an exploratory case study aimed at exploring the themes and patterns in participants' perceptions, beliefs, and practices of autonomous learning, as emerged through the themes and patterns in the participants' accounts and observed practices.

The autonomous learning intervention was done entirely online. It consisted of three main elements: 1) recurrent online videoconference meetings between the researcher and Gemma, researcher and Maria, or researcher and Gemma and Maria simultaneously, 2) Maria and Gemma's screencast recording of their autonomous learning practices, and 3) various assignments and activities Gemma and Maria needed to perform with the pedagogic aim of improving autonomous learning skills.

In total, there were nine online video conference meetings held during the intervention. These online video conference meetings focused on Gemma's and Maria's output in the intervention assignments and activities, the episodes recorded in their screencast recordings, as well as discussions of topics related to autonomous learning in general and in their school and out of school activities. The meetings were done in the form of semi-structured interviews (see [online meetings](#)), during which the researcher had a list of broad topics to address while giving space to the participants to address topics of their interest and choice.

In the intervention, the two pre-service teachers were also requested to make screencast recordings of their screen activity while studying autonomously on their computers (see [Appendix P](#)). These activities could be related to anything they were studying or doing at the time (e.g., assignments for the TILT course). They used Screen-o-Matic free screencast recording software. Being motivated to become better autonomous learners, the pre-service teachers committed to submit these screencast recordings to the researcher as they saw it as a chance to obtain some feedback from her on how well they managed their autonomous study. Gemma and Maria were not given specific instructions regarding what activities to record; instead, they were given the freedom to choose what they wanted to show to the researcher.

The two pre-service teachers predominantly recorded their autonomous study required by the flipped classroom activities, working on telecollaboration project activities, making lesson plans, as well as out of school autonomous learning such as working on online course content. Upon recording the screencast videos, they would send them to the researcher, and then the researcher would watch them multiple times and take notes of interesting episodes, moments or themes to further discuss in the meetings and request clarification or additional information on what was seen in the videos. The videos showed the on-screen activity, as well as any audio played or produced in the room where the screencast recording was taken. These videos did not show non-screen (non-digital) participant activity while studying autonomously, e.g., checking their phone or writing in a paper notebook (unless the activity had been captured by the screencast recording).

In addition to the online meetings and the screencast recordings, Gemma and Maria were asked to complete two assignments that involved a number of ongoing activities. These assignments were designed to be learner-centred and to enable the participants to engage in decision-making, experience some control over the flow of the intervention and the activities

that they needed to complete, as per heutagogy principles (Blaschke, 2012). Subsequently, the participants were asked to give their input about the activities they found relevant for their learning and improvement of autonomous learning skills and making autonomous decisions, such as on the deadline for completing assignments. The learner goals, co-constructed between the coach-researcher and the participants, were taken into account when designing these activities. Assignment 1 was administered to Gemma and Maria in the first semester of the 2017/2018 academic year. It required them to complete the following actions:

- Use Trello, a free productivity web-based software, to organise and manage their autonomous study, e.g., make to-do lists and study plans.
- Complete a self-reflection activity sheet before and after the assignment. The activity sheet was designed to help the participants reflect on their experience while completing the assignment and identifying any outcomes. It contained questions that served to guide the self-reflection process. In the pre-assignment part, they were to write a brief description of their assignment, what steps they will take to complete it, and the deadline by which they wanted to have it done. In the post-assignment part, the guiding questions asked them to reflect on the outcomes they noted upon completing the assignment, i.e., what they learned, what they were satisfied/less satisfied with, what they would do differently next time.
- Write a blog post about the learning experience in Assignment 1 and post it on the autonomous learning intervention project website.

Assignment 2 was administered to Gemma and Maria at the beginning of the second semester of the 2017/2018 academic year. The activities it involved were as follows:

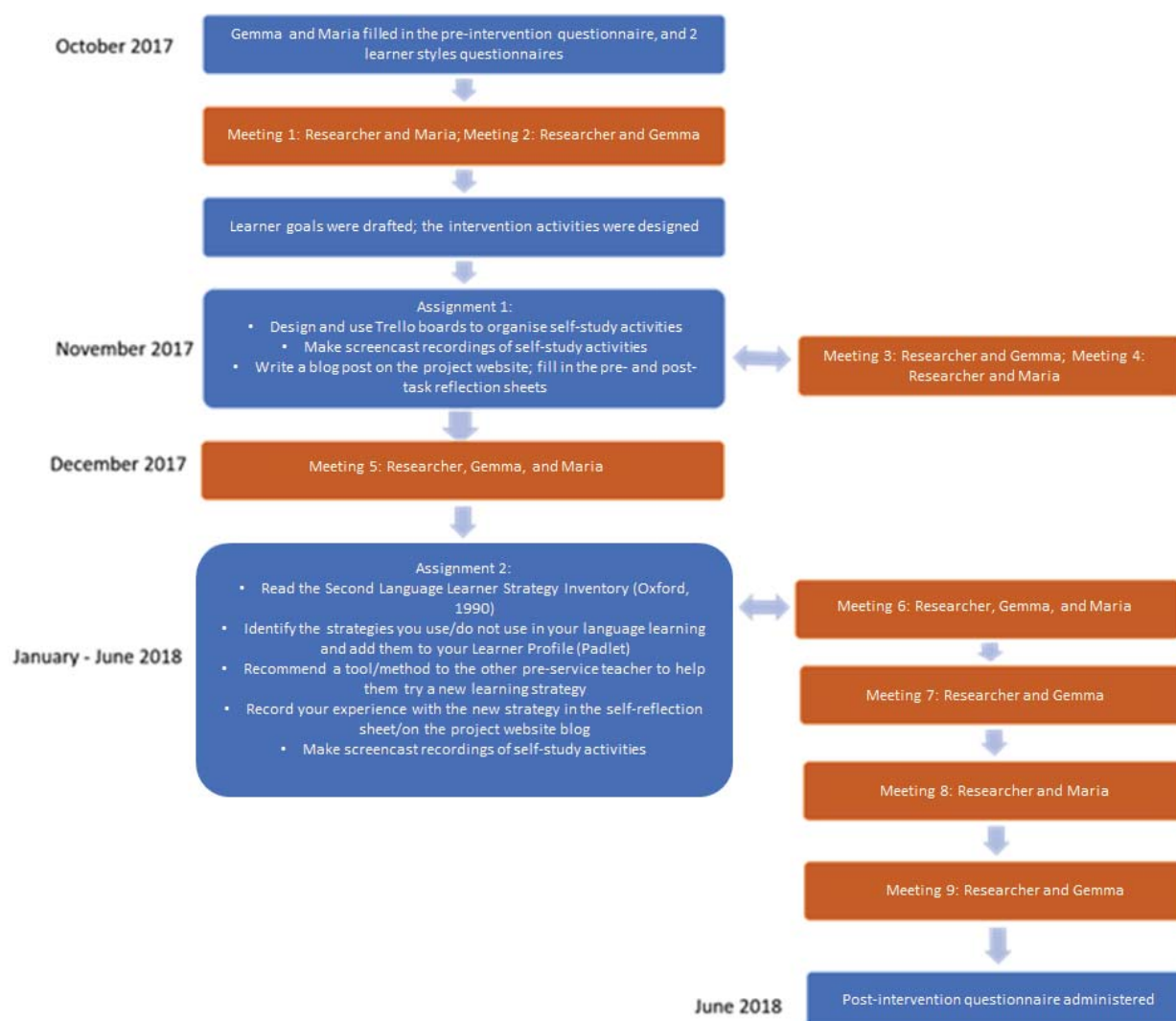
- Complete the Strategy Inventory for Language Learning (SILL) (Oxford, 1989). The SILL form contains 50 statements about different language learning strategies (e.g., “I ask English speakers to correct me when I talk.” or “I practise English with other students.”) divided into six parts. The researcher added a seventh part which contained statements about using computer-assisted language learning (CALL), e.g., “I use digital resources for learning”, “I listen to podcasts”. The CALL part was added based on the approach used in Smith and Craig (2013).
- Using the self-awareness gained by completing the SILL inventory, the participants had to create a Padlet board and list out the learning strategies they thought they used frequently, and those they did not use much and that they would like to use in their autonomous learning (language or any other subject-related).<sup>3</sup>
- Comment on each other’s Padlet posts and recommend strategies and further courses of action on the posts about the strategies the other participant wants to improve.

It needs to be said that the participants agentively selected how to complete these assignments, which included omitting some parts as they saw fit since they were given control over this aspect as per heutagogy principles (Blaschke, 2012). For example, Maria chose not to make a Padlet board for her strategies as she was experiencing stress and rethinking her career choice at that time.

In addition to these activities, regular WhatsApp communication and email communication took place during the intervention between the coach-researcher and the two participants. This communication tool allowed the researcher to recommend resources for the issues discussed in the online meetings (e.g., reading resources) or for the participants to seek

help on some aspect of autonomous learning. For example, at one point, Gemma reached out to the researcher to ask for advice on her autonomous learning of the Italian language.

The intervention ended in June 2018, when Gemma completed the final university year and graduated from the Faculty of Education. An in-depth description of the intervention, including all the steps, procedures implemented, and activities done, is provided in [Appendix J](#). This appendix describes the intervention in detail, including what was discussed in meetings and what was done in each step, giving screenshots and examples. The diagram below summarises the flow of intervention.

**Figure 1.***Summary of Steps in the Autonomous Learning Intervention***4. 6. Follow-Up Study**

In December 2020, which was approximately two and a half years after the intervention ended, a follow-up study was conducted with Gemma and Maria. At that time, both Gemma and Maria were working as primary school and/or English/Spanish teachers in Barcelona, Spain. Two online meetings were conducted, one with Gemma and the other one

with Maria. In addition, a self-reflection sheet was administered to both participants (see [Appendix F](#) and [Appendix G](#)).

The purpose of the follow-up study was twofold. The first was to catch up on Gemma and Maria once they had become in-service teachers, which served to provide additional data for answering [research questions 2 and 3](#). The other purpose was to increase the credibility of the preliminary results for research questions 1a and 2a by performing member checking. This is a form of respondent validation done to “assess intentionality, to correct factual errors, to offer respondents the opportunity to add further information or to put information on record; to provide summaries and to check the adequacy of the analysis” (Sada & Maldonado, 2007, p. 108). In this case, since the researcher had performed a [preliminary analysis](#) on the data obtained in the main study through the autonomous learning intervention, preliminary results had been prepared for the research questions of what were the two participants’ beliefs, perceptions, and practices of autonomous learning as pre-service teachers. The follow-up study served to evaluate the reliability and validity of those results by asking the participants to confirm, invalidate, or correct these preliminary results as they had originated from the researcher’s interpretation of what the participants said or did during the intervention stage of the study.

## **4. 7. Data Collection**

### **4. 7. 1. Main Data Instruments and Sources**

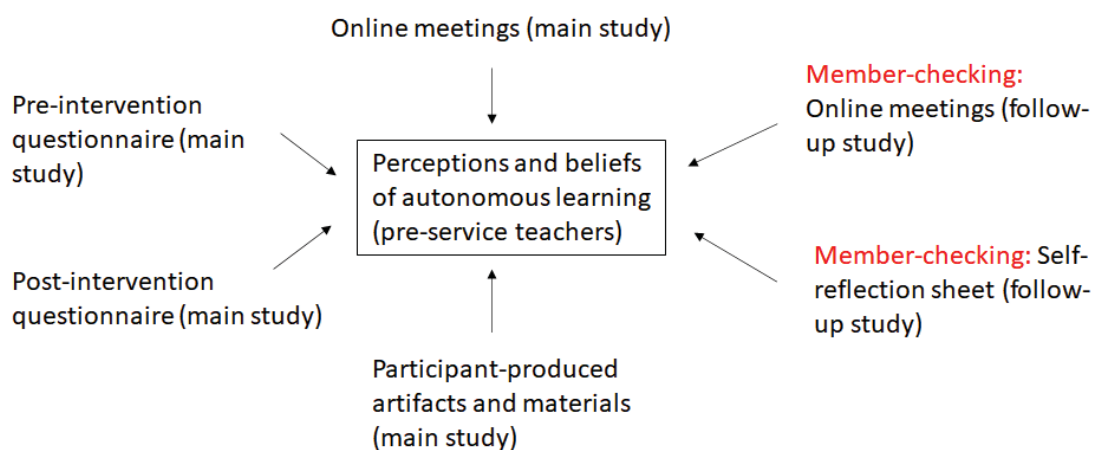
As described in the [autonomous learning intervention](#) section, the coaching intervention served as a framework that allowed the researcher to collect data. In this case study, various instruments were used to gather multiple sources of data, as per Principle 1 for data collection (Yin, 2003). In the case of studies, numerous complementary data sources are essential for assuring the quality and rigour of the research conducted. Accuracy of findings in



a case study largely depends on whether or not “converging lines of inquiry” (Yin, 2003, p. 98) can be developed through the process of data triangulation. This was achieved in the present study by having multiple sources of evidence for each of the phenomenon that was investigated, i.e., perceptions and beliefs of autonomous learning when pre-service teachers, practices of autonomous learning when pre-service teachers, beliefs and perceptions of autonomous learning when novice in-service teachers, and practices of autonomous learning when novice in-service teachers, including practices of fostering autonomy in their teaching. The diagrams below illustrate the convergence of evidence for each of the research questions.

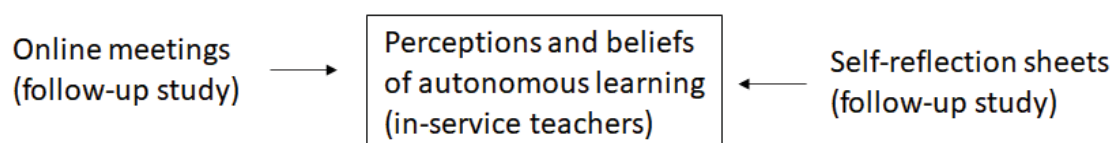
**Figure 2.**

*Convergence of Evidence for Perceptions and Beliefs of Autonomous Learning (Pre-Service Teachers)*



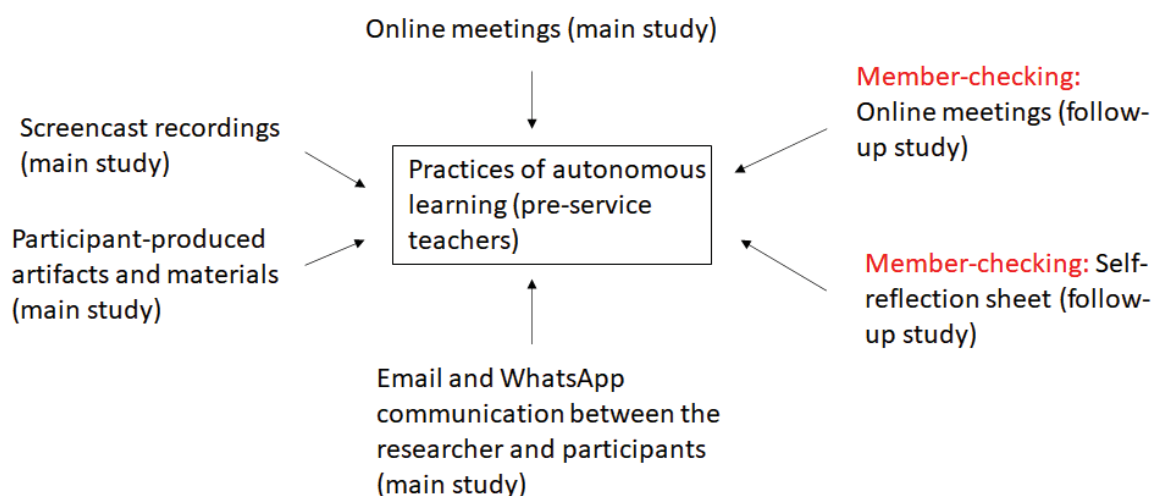
**Figure 3.**

*Convergence of Evidence for Perceptions and Beliefs of Autonomous Learning (In-Service Teachers)*



**Figure 4.**

*Convergence of Evidence for Practices of Autonomous Learning (Pre-Service Teachers)*

**Figure 5.**

*Convergence of Evidence for Practices of Autonomous Learning (In-Service Teachers)*

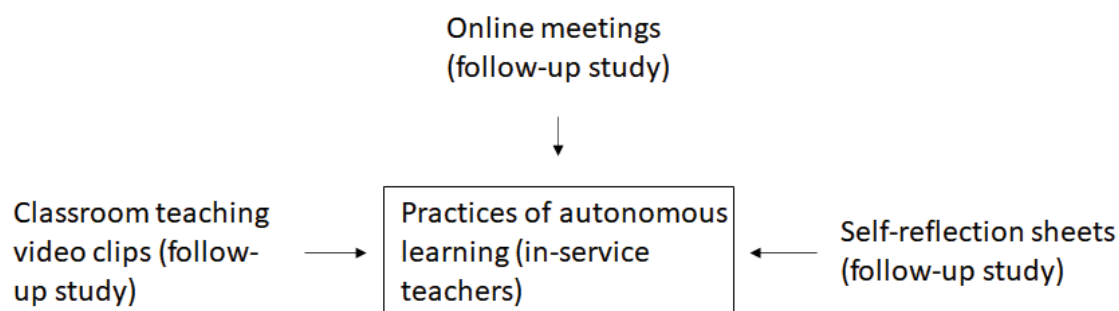


Table 3 below presents all the instruments/data sources used in the study. The research instruments are further described in the paragraphs below the table. An in-depth description of all the instruments and data sources used in the study can be found in [Appendix J](#).

**Table 3.***Instruments and Data Sources Used in the Study*

Instruments	Evidence/Data Sources	Time When Collected
Online Meetings	Nine online video conference meetings were held during the intervention (642 minutes in total)	October 2017 - June 2018
	Two online video conference meetings were held post-graduation (in-service teacher stage) (115 minutes in total)	December 2020 - February 2021
Online Questionnaires	Pre-intervention Questionnaire	October 2017
	Post-intervention Questionnaire	June 2018
Participant-Produced Screencast Recording	15 screencast video recordings (404 minutes in total)	October 2017 - June 2018
Participant-Produced Artifacts and Materials	Learner Goals sheet	November 2017
	Trello boards screenshots	November 2017 - June 2018
	Padlet boards screenshots	December 2017 - January 2018
	Pre-service teaching lesson plans (Practicum)	June 2018
	Pre-service teaching blog posts (Practicum)	June 2018
Self-Reflection Sheets	Pre-activity reflection sheet	November 2017- February 2018
	Post-activity reflection sheet	November 2017- February 2018
	Follow-up study self-reflection sheet	December 2020
Classroom Teaching Video Clips	40 in-service classroom teaching video clips (~200 minutes in total)	December 2020
Researcher-Participant Communication	Email and WhatsApp communication screenshots	October 2017 - February 2021

#### 4.7.2. Online Meetings

In total, 11 online meetings were held. Nine online meetings between the researcher and the study participants were held during the entire intervention, from December 2017 to June 2018. In addition, two more online meetings were held post-intervention, in December 2020 and February 2021, in the follow-up phase of the study. Out of the 11 meetings, nine were meetings between the researcher and one of the participants individually, and two were meetings where both participants met the researcher at the same time. Combining meeting the individual participants with meeting both participants at the same time helped detect any collusion between respondents while providing an opportunity for the participants to demonstrate a shared understanding of the autonomous learning phenomenon in their individual learning setting (Yin, 2009).

All the meetings were done online via Zoom video conferencing tools and were recorded either via Zoom integrated meeting recording tool or via screen recording software (e.g., Screen-o-Matic). The participants were also asked to record the meetings from their computers as a backup. In addition, the researcher recorded the audio externally using a dictaphone device. Gemma and Maria were not requested to do any preparatory work prior to the meetings. The meetings lasted for one hour on average.

The format of the online meeting can be described as semi-structured open-ended interviews. The discussion topics were partially pre-determined, opening with the researcher asking previously prepared open-ended questions. At the same time, the semi-structured open-ended format entailed flexibility to abandon the “script”, to change the sequence of questions as needed, and to facilitate and encourage the participants to initiate new topics and thus disrupt the structuredness of the interview that allowed them “to demonstrate their unique way of looking at the world” (Sada & Maldonado, 2007, p. 241), in this case, their perceptions and

beliefs about autonomous learning. Adopting an open-ended approach also helped maintain a minimally threatening environment for the participants while still ensuring the attainment of the research objectives (Yin, 2009).

The prepared open-ended questions were related to the participant-made screencast recordings and materials they had produced in the intervention activities. The researcher decided on the questions after viewing and analysing the previously uploaded screencast videos and any other material produced by the pre-service teachers while completing their activities. The researcher also noted instances found in the data that were relevant in terms of autonomous learning as per the conceptual framework and that required further clarification and/or could be discussed in the first part of the upcoming meeting. In the last part of the meetings, after answering the questions, the participants would raise topics they wanted to discuss. These were mostly related to their experiences of autonomous learning they had engaged in during both in and out-of-school as pre-service teachers. Thus, the researcher could get insight into what topics and aspects of their autonomous learning experiences were relevant for these two pre-service teachers and elicit information on their perceptions, beliefs, and practices of autonomous learning. In other words, the non-standardised form of these open-ended meetings allowed for exciting and yet unforeseen issues to be raised by the participants (Sada & Maldonado, 2007).

The two online meetings held in the follow-up study followed the same semi-structured open-ended format. The meetings started with the researcher asking questions and then continued with the participants raising discussion points of their choice and which they thought were relevant. In these two meetings, there were no previously submitted screencast recordings or activity materials because the intervention had ended already. Instead, the researcher prepared questions based on her analysis of the data from the main study. This

allowed for member checking for validity and accuracy of the preliminary findings (Yin, 2009). The questions also aimed to elicit information about the participants' beliefs, perceptions, and practices of autonomous learning in their new status as (novice) in-service teachers.

#### **4.7.3. Online Questionnaires**

Two online questionnaires were administered during the study. One was a pre-intervention questionnaire administered before the coaching intervention started. The second online questionnaire was a post-intervention questionnaire, which was an almost identical copy of the pre-intervention questionnaire and was administered upon the completion of the online coaching sessions. Both online questionnaires were hosted on Google Forms, a free online survey application, chosen because of its accessibility and because the participants were already familiar with it.

The purposes of the pre-intervention questionnaire were: 1) to help design the intervention by eliciting participants' self-assessed needs and preferences when it comes to autonomous learning; 2) to help answer the RQ 1a (their perceptions and beliefs of autonomous learning), and RQ 4 (how their perceptions and beliefs affect their promotion of autonomy when teachers); and 3) compile their observations about autonomous learning in general and in the context of their university courses. The online questionnaire included a combination of multiple-choice and open-ended questions that asked the participant to identify those areas of autonomous learning that they would most like and need to improve in the intervention. They needed to select the statements that applied to them from the multiple-choice answers and/or write their own answer. These multiple choice answers were drawn from the autonomous learning markers as per the conceptual framework. This framework, drawing from the synthesis of most recent research on technology-enhanced autonomous

learning (see conceptual framework), was grouped thematically into 1) Self-direction and self-regulation; 2) Metacognition; 3) Agency; 4) Learner control in the classroom; 5) Open-ended questions about participants' needs, preferences, and availability to participate in the autonomous learning intervention. The participants' answers in group 5 (in the pre-intervention questionnaire) aided in the design of activities, scheduling meetings, and decisions about the workload, topics, and the digital tools to be used. It also helped indicate the most preferred assessment method in the autonomous learning intervention. Some examples of the statements the participants needed to select/unselect were as follows:

I most want and need to improve...

#### **Self-direction and self-regulation**

- setting learner goals
- overcoming motivation obstacles in learning
- continuously monitoring and evaluating my own progress

#### **Metacognition**

- Critically reflecting on my own learning strategies
- Knowing what motivates me to learn and what hinders my motivation to learn
- Knowing affordances and constraints of different modes in online learning

#### **Agency**

- Continuously and actively seeking new technological resources for learning
- Making decisions about my learning process independently of my tutor
- Taking risks in my learning

#### **Learner control in the classroom**

I think students should have more control over and decide more on...

- task design
- learning content (what is to be learned)
- learning objectives

In June 2018, upon completing the intervention, an almost identical questionnaire was administered to the participants. The difference was that the statements about the participants' preferences and availability for the intervention were replaced by a section to rate their experience in the intervention and identify any outcomes. The participants were also asked to express their opinion on how much control students should have in the classroom.

#### **4.7.4. Participant-produced Screencast Recording**

The participants were asked to make screencast recordings of their self-study done at home using Screencast-o-Matic, which is web-based free software. Alternatively, if they preferred, they could choose software to make the recordings. The purpose of this was to answer the question of what autonomy learning practices they do outside the classroom. These recordings offered "direct insight" into what was happening on the participants' screens (Pujolà, 2002). Additionally, these screencast videos captured any audio input, providing insight into what was happening around the participant while recording the screencast video. It is important to note that the researcher is aware that the screencast recordings showed the on-screen activity of the active screen only (in case there was more than one screen).

The participants were given complete control over what activities they would record and upload to the shared Google Drive folder. They could choose what they felt most important to them and the activities they considered as autonomous learning activities and wished to share with the researcher. This freedom of choice of what to share also incentivised them to do so without requiring them to reveal any personal information that they were not comfortable with (ethical considerations). This method was considered the least intrusive



when compared to other ways of directly accessing student autonomous learning practices (e.g., using an in-person camera such as go-pro that would capture the entire physical studying environment).

#### **4.7.5. Participant-produced Artifacts and Materials**

The following paragraphs will describe the autonomous learning intervention activities in which the participants produced much of the material that was used in the study (they also shared some materials produced outside of the intervention).

##### ***Learner Goals***

Inspired by Smith and Craig's (2013) study, learner goals were established at the beginning of the intervention. They were stored on Google Drive in the project folder, and the researcher had access to them. These were used to personalise the design of the intervention activities. Some examples of stated goals were:

- To learn about many more technological tools that can help me in my learning and future teaching.
- To learn to prioritise tasks and learning objectives and to procrastinate less on the tasks that I do not enjoy doing (e.g., writing reports).
- To feel more comfortable and confident when making decisions about my learning (i.e., not to be discouraged by the absence of teacher's validation/rejection of my ideas).

In the February 2018 meeting, the goals were revisited together by Gemma, Maria, and the researcher during a group discussion. These were discussed in light of the new information and increased awareness of autonomous learning they gained during the

intervention, and accordingly, some changes were made to their goals (e.g., new goals were added).

### ***Trello Boards Screenshots***

As a part of Assignment 1, which was designed to target the learning goals, the participants were modelled an example of Trello, a popular web-based productivity app, to organise and plan one's study time and tasks. They were then asked to use Trello to create their own boards to organise their autonomous study time and tasks. The researcher had direct access to these boards and took weekly screenshots of their activity (on Trello, user activity is shown on the mainboard and also in the Activity column that lists all the actions taken by the user chronologically) during the completion of assignments, and then monthly after the assignment because Gemma continued using Trello. (The study participants ended up using Trello also in activities such as organising personal errands, which was out of the scope of the study and hence those screenshots were not included in the analysis.)

### ***Padlet Boards Screenshots***

In Assignment 2, inspired by Smith and Craig's (2013) approach, the students were asked to review the adapted Oxford's (1989) strategies inventory (see [autonomous learning intervention](#)). Only Gemma completed this activity.

### ***Pre-Service Teaching Lesson Plans and Teaching Blogs (Practicum)***

In their final university year, Gemma and Maria needed to complete the activities required by their practicum, which entailed (co-)creating lesson plans and implementing them in real classrooms via supervised teaching, as well as engaging in post-teaching reflection through activities such as writing blog posts, creating interactive presentations and presentational videos to look back at the experience and identify their takeaways. Gemma

shared her lesson plans and post-teaching reflection materials with the researcher; Maria preferred to communicate about her lesson planning process to the researcher verbally but did not submit any materials. This is perhaps because, at that moment, she was deciding whether to suspend her teacher education studies temporarily.

### ***Reflection Sheets***

In this study, two different self-reflection sheets were used to collect data, one at the pre-service teaching stage and the other at the in-service teaching stage.

At the pre-service teaching stage, the students were asked to fill in a reflection sheet before and after carrying out their intervention activities. This sheet provided them with an additional framework for planning and reflecting on the execution of the activities. An example of a reflection sheet can be found in [Appendix F](#).

At their in-service teaching stage, the participants were asked to fill in self-reflection sheets containing a selection of their statements given as pre-service teachers. These served as cues to elicit their in-service teacher beliefs and perceptions about the statements and to prompt them to reflect on whether these beliefs and perceptions were reflected in their teaching practice (potential transformation). Its purpose was to complement the information obtained in the online meetings.

These reflection sheets are included in [Appendix F](#) and [Appendix G](#). They contained three columns—one containing transcriptions of the selected statements they had made during the 2017/2018 intervention (main study) about how much control and autonomy they thought students should have in the classroom, and two empty columns. In one empty column, Gemma and Maria were to write their current perceptions and beliefs about the selected statements, and in the other empty column, they were to write their reflections on how these

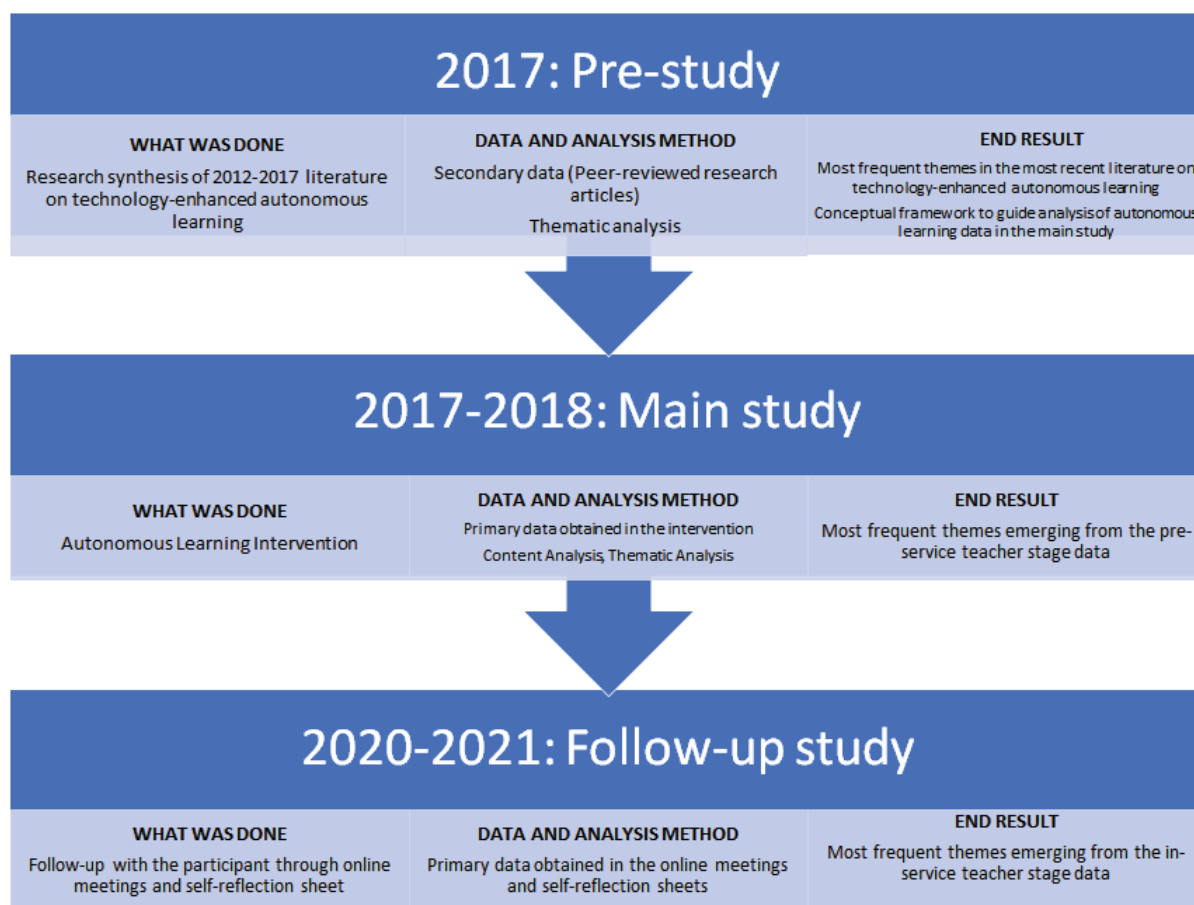
beliefs and perceptions were reflected in their teaching practice. They were administered to Gemma and Maria after the online meetings in the follow-up phase of the research.

## Chapter 5: Data Analysis

### 5. 1. Introduction

This chapter describes the qualitative analytical approach to the data collected for the study, including the practical steps taken for the analysis procedure. The data analysis conducted in both the principal phase and the follow-up phases of the research is described. Below, Figure 5 summarises the different phases of the research, indicated chronologically from 2017 to 2021, and the analysis carried out in each stage.

It should be noted that, as described in the literature review chapter, before conducting the main study and during the preparation phase, a research synthesis was done to establish a conceptual framework. This framework was used for establishing criteria for investigating autonomous learning in the context of the pre-service teachers' development stage. In addition, the work on the research synthesis included analysis of secondary data, i.e., published peer-reviewed articles on autonomous learning. While this synthesis provided the backbone for the subsequent empirical research, it is not discussed in this chapter as it did not form a direct part of the empirical study (the main study and the follow-up).

**Figure 5.***Data Analysis Summary Through Research Phases***5. 2. Data Management**

In this longitudinal case study, data management was particularly challenging due to the size and variety of the amassed data. To obtain a holistic insight into autonomous learning in the studied context, the researcher opted to collect all the data produced during the 9-month-long intervention, as well as any data produced post-graduation, i.e., in the follow-up phase for the two participants. This resulted in a copious amount of data, the majority of which were multimodal. Thus, the data management stage entailed 1) deciding which data to consider; 2) deciding which data to discard as not relevant for the purposes of this study; 3) deciding how

to prepare the multimodal data for analysis. It is also worth noting that all of the data was collected via online modes of communication (e.g., videoconferencing, texting, file sharing, email correspondence). According to Yin (2009), qualitative case study research should collect data from a variety of resources, evaluate the data, analyse evaluations to produce findings, and present the findings. Table 3 summarises all the data analysed during the intervention and the follow-up phase of the study. The first two columns represent the main study period, whereas the last column represents the follow-up period. For a more detailed description of the data, see [Appendix K](#).

**Table 3.**

*All Data Analysed in the Study by Period of Collection*

	Intervention Start	Intervention End I	Follow-Up Phase
	Semester I: Oct-Dec 2017	Semester 2: Jan-June 2018	2019-2021: Post- Graduation, In- Service Teaching
Videoconference Meeting Recordings (Audiovideo)	✓	✓	✓
Screencast Recordings (Audiovideo)	✓	✓	
Self-Reflection Task Sheet (Open-Ended Questions)	✓	✓	
Pre-Intervention Online Questionnaire	✓		
Post-Intervention Online Questionnaire		✓	
Self-Reflection Teacher Sheet (Open-Ended Questions)			✓
Teaching Plans		✓	
Video Recordings of Classroom Teaching			✓
Trello Boards	✓	✓	
Padlet Boards		✓	

Pre-Service Teacher Blog Entries		✓	
Gmail and WhatsApp Correspondence	✓	✓	✓
WhatsApp Audio Messages			✓

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Since the online (videoconference) meetings were the only source of data that was consistently collected throughout all the study periods and the source that yielded the most considerable amount of data, it was decided that the online meetings would be analysed first, thus establishing the analytical baseline to be used for analysing the rest of the data. There are a number of recommended ways to analyse multimodal content, such as video conference recordings. For example, Multimodal Discourse Analysis is an emerging approach that is particularly suitable for analysing multimodal data since it looks at participant interaction in multimodal environments and how they use different modes at their disposal to make meaning and communicate (Forceville, 2011; O'Halloran, 2006). However, as the purpose of the study was to investigate the participants' beliefs and self-reported behaviours rather than their interactions in the online meetings, methods such as multimodal discourse analysis were not used, and the analysis was mainly focused on the audio mode of the videoconference recordings (i.e., on the transcriptions of audio content). Non-verbal communication such as gestures were not analysed either as they were not sufficiently accessible in the video recordings due to the web camera limitations. However, non-verbal communication in the form of pointing at objects of reference or raising them to the webcam, as well as illustrators—gestures used to reinforce the verbal content that is being said (Andersen, 1999)—was considered where the researcher deemed them relevant for a more profound understanding of what was being said. For example, in one online meeting, Gemma talked about her system for organising her autonomous learning and simultaneously showed a



timetable written on a large piece of paper or carton to the camera. This non-verbal communication was taken into account because it complemented and thus enhanced the understanding of Gemma's verbally communicated message.

### **5.3. Analysis Procedure**

As mentioned in the methodology section, the analytical approach to the data was from an interpretivist paradigm. With the above items and the interpretivist paradigm taken into account, the analysis procedure was done in the following order:

1. Familiarisation with the online meeting videos.
2. Annotation of online meeting videos in ELAN.
3. Data transcription.
4. Coding: online meetings.
5. Content analysis.
6. Coding: other data.
7. Follow-up phase.
8. Coding 2.
9. Theming.

#### ***Step 1: Familiarisation with the Online Meetings Videos Data***

The online meeting videos were first watched and rewatched by the researcher to familiarise herself with the data in them and get a general sense of the topics discussed in the online meetings. Although the meetings were done in the form of semi-structured interviews, it is essential to highlight that the participants had the freedom to talk about anything they deemed necessary, resulting in the majority of topics discussed in the meetings being voluntarily initiated by the participants. This was taken into consideration when determining what was vital for them.

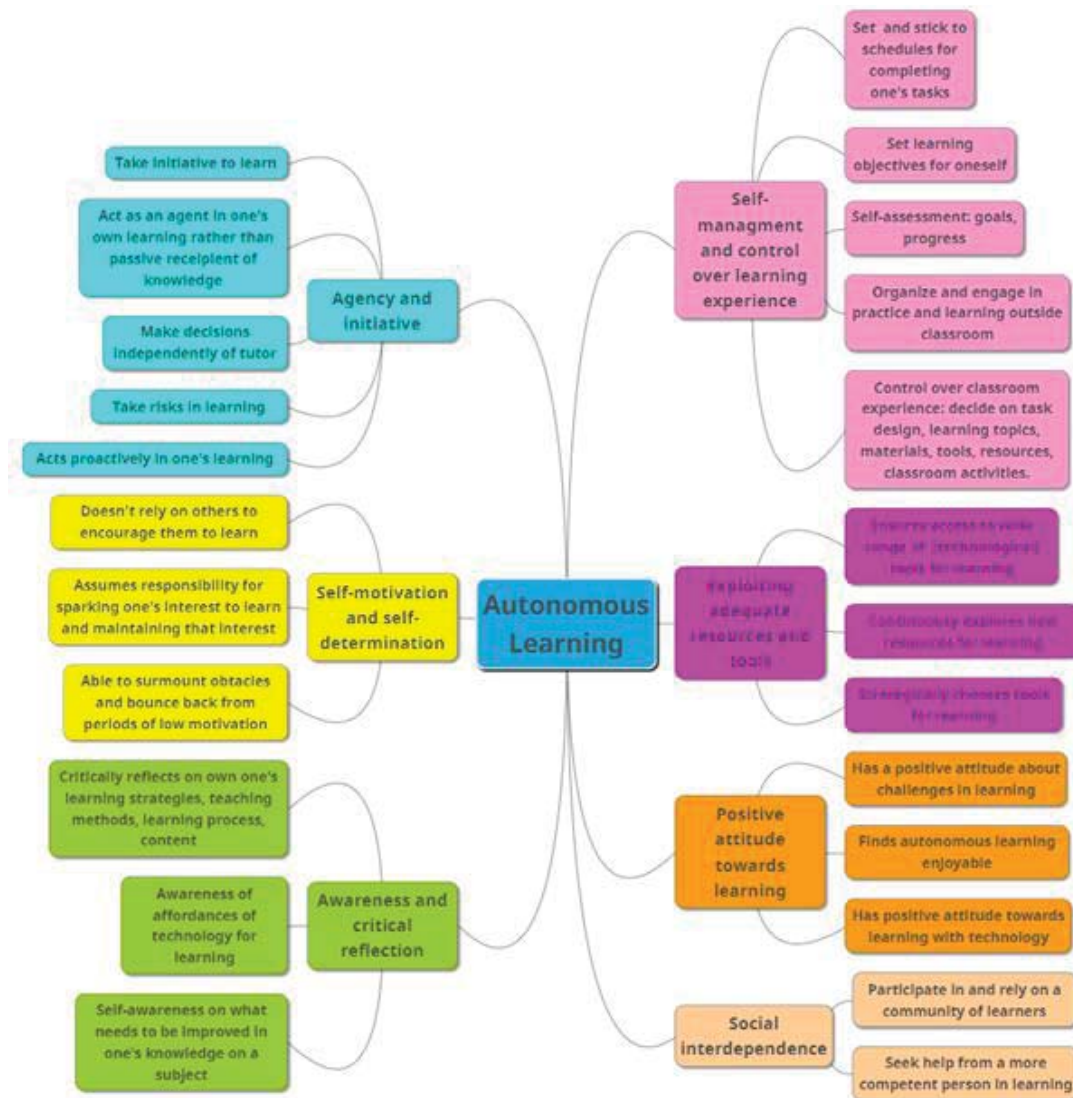
### ***Step 2: Annotation in ELAN to Identify Episodes Related to Autonomous Learning***

Following this familiarisation, the researcher used the ELAN software tool to annotate the videos. The purpose of this step was to identify those sections that were related to autonomous learning. Selection criteria were established to help filter the data. At least one of the following criteria needed to be fulfilled for the episode to be considered related to autonomous learning:

- Participant explicitly refers to autonomous learning, e.g., by saying “autonomous learning” or “learner autonomy”.
- The participant refers to an element/trait of autonomous learning as per the conceptual framework (see Figure 6 below) in a context that relates to autonomous learning as per the conceptual framework. For example, participants who referred to taking the initiative to learn a new language on their own or being required to learn at home on their own without teacher guidance in the flipped classroom were considered data pieces related to autonomous learning.

At this stage, extensive and provisional coding was applied during annotation. The codes included the elements and traits of autonomous learning as per the conceptual framework, as well as any emerging themes that were coded, for example, when the participant explicitly described autonomous learning and introduced new topics that were not initially included in the conceptual framework. This was done to ensure the analysis was not restricted to only those elements of autonomous learning aligned strictly with the conceptual framework (as per its interpretivist paradigm). In addition, this approach also allowed for a more fluid perception of autonomous learning as a contextually and situationally embedded concept that could have many potential interpretations, meanings, and manifestations.

**Figure 6.**  
*Conceptual Framework*



### ***Step 3: Transcription***

After the annotation and identification of these sections, all online meetings were transcribed verbatim with timestamps. Despite having already selected specific episodes for further analysis, the researcher opted to transcribe all the interviews in their entirety as she wanted to retain any contextually relevant data for the selected autonomous learning sections.

This allowed for the possibility of an expanded selection of sections in the event they could help or amplify the interpretation of the already selected data pieces.

#### ***Step 4: Coding: Online Meetings***

The online meetings were analysed in the first round of coding in NVIVO software, starting with the excerpts selected as related to autonomous learning in the video annotation process. This entailed reading the transcribed text line by line, ascribing initial codes to text fragments such as sentences, groups of sentences, and paragraphs. Descriptive coding was used, i.e., excerpts were labelled by their topic (Huberman & Miles, 2002). This resulted in provisional codes that were used to analyse the rest of the online meetings data. At the beginning of the coding process, the researcher attempted to use components of autonomous learning from the conceptual framework as codes; however, it quickly became necessary to introduce emergent codes as well. Needless to say, these codes were adapted and extended as needed when the rest of the online meeting data was analysed. It is also important to highlight that concurrent coding was allowed, i.e., one excerpt could have multiple codes assigned to it. This was necessary as the data contained complex perceptions, descriptions, and accounts that often focused on multiple aspects of autonomous learning.

Below is an excerpt from the initial list of codes after the first round:

- Claiming insufficient knowledge
- Doubt
- Lack of education on autonomous learning
- Teacher feedback
- Teacher guidance
- Control in classroom/over learning
- Managing workload

- Procrastination
- Planning and executing studying
- Parental support
- Learning new job skills

### ***Step 5: Second Round of Coding***

When reading the data line by line, the researcher noted that it was interesting how both Gemma and Maria hesitated more than usual when defining and talking about their understanding of autonomous learning *as a concept*. Thus, the researcher decided to investigate this further by examining the language used when conceptually describing autonomous learning. To do so, she revisited those excerpts that contained Gemma or Maria talking about their understanding of autonomous learning, i.e., providing their definitions and conceptualisations of it. For these data fragments, a more in-depth focus on the frequency of words was used (Vaismoradi et al., 2013). This allowed for more information on the different ways in which meaning of Gemma and Maria understood the concepts (Abrahamson, 1983).

Next, in order to ensure the objectivity and validity of this second round of analysis and support quantifiability (in the sense of being able to determine the frequency of words and phrases), an explicit set of rules (Holsti, 1968) that narrowed the selection was drawn up:

- Use of an inductive approach, i.e., draw codes from the data (Abrahamson, 1983).
- Selection of the “most suitable meaning unit” for analysis (Graneheim & Lundman, 2004, p. 110) and coding of only that unit.
- Analysis of only those excerpts in which Gemma and Maria describe and define autonomous learning as a concept.

The unit chosen to focus on was individual words and short formulaic phrases such as “I think” or “I do not know” (Berg, 2001). These were coded *in vivo*, i.e., using the participants’ words. By counting the units of analysis, the most frequent codes were identified in the data and categorised as *uncertainty* to encompass hesitation, insecurity, and doubt, all of which were interpreted as implicit stances communicated by the employment of these words and formulaic phrases.

### ***Step 6: Coding: Other Set of Data***

The rest of the data was analysed using the provisional code list obtained in the first coding round in the thematic analysis of the online interviews. In this phase, no emergent codes were obtained—the purpose was to triangulate the data from the online interviews with the data from the rest of the sources used in the study. The data analysed can be seen below in Table 4.

**Table 4.**

#### *Description of the Remaining Analysed Data*

Data Analysed	Type of Data	Approach
Screencast recordings	Audio-video recording	See screencast recordings analysis below.
Pre-intervention online questionnaire	Text	Thematic analysis, predefined codes
Post-intervention questionnaire		
Reflection sheet (open-ended questions)	Text	Thematic analysis, predefined codes
Reflection teacher sheet (open-ended questions)		
Teaching plans	Screenshots	Content analysis, predefined codes
Trello boards		
Padlet boards		

Pre-service teacher blog entries		
Video recordings of classroom teaching *	Audio-video recording	Thematic analysis, predefined codes
Gmail and WhatsApp correspondence *	Screenshots	Thematic analysis, predefined codes
Whatsapp audio messages *		

\*No instances of the existing codes were found in these data sources, so they were discarded.

### *Screencast Recordings Analysis*

The screencast recordings analysis was elaborated on separately in detail due to the challenge of conducting it. Furthermore, as it is a novel approach in research, there is little literature on how to analyse this type of data, particularly in the issue of dealing with the multimodality of screencast videos (e.g., the video, the audio, the mouse movement). Despite a growing body of studies on this, there is little consensus on the exact focus of analysis. However, most publications propose that multimodal analysis (especially screencasts) require a carefully structured approach (Bezemer & Jewitt, 2010).

It has been argued that screencast video analysis shares many characteristics with traditional ethnographic observation (Kedzior, 2014), as it is a method that enables one to observe the actor as they are immersed in their experience (in this case digital) while interacting with their environment (such as working on a computer). Provided that obtrusiveness is minimised, screencast recording can capture the naturalistic behaviour of the person whose digital activity is being recorded, similar to in-person ethnography.

As with the analysis for the online meetings, for analysis of screencast recordings, the researcher first viewed and then reviewed the videos to identify sections of interest (those that would fit with the existing code framework). She then developed a simple observation sheet used to analyse those episodes. However, different from the last analysis, the criteria for

selection purposes were not verbal (what was said). Instead, each section represented one high-level action, e.g., change of cursor location, switching tabs, opening a document). This was important to understand what the participants were doing in the excerpts of self-study they had selected and submitted to the researcher. Table 5 below shows an example of the observation sheet.

**Table 5.**

*Excerpt from a Screencast Recording Observation Sheet*

Timestamp	What is Going On?	Gemma's Follow-Up Comment	Code / Observation
02:30–04:50	Gemma is organising her tasks for flipped classroom + telecollaboration course. She is using Trello. In the browser, she toggles between the different tabs of the course site. She copies the text from each tab into Trello tasks.	She explained that she was organising the readings for the flipped classroom. She complained there is too much information, and the site is not well organised.	Lack of teacher guidance Managing workload

### ***Step 7: Follow-up Phase***

The preliminary findings were drafted upon coding all the data, and the researcher followed up with Gemma and Maria via online meetings and a self-reflection sheet (open-ended questions). The researcher also asked them to comment on the preliminary findings and give their current perspectives on the same topics.

### ***Step 8: Third Round of Coding***

The two new online meetings from the follow-up phase were transcribed, and the transcriptions and the self-reflection answers were coded with the existing coding framework. The researcher then went through the entire data once again to refine the codes.



### ***Step 9: Theming***

As the last step, the most frequent codes were identified by counting them. The researcher also identified those codes that were present both at the pre-service and in-service teacher stage, which were then grouped into themes, and then further grouped into four main supratemes (i.e., *uncertainty, teacher guidance, teacher feedback, and control shift*).

### ***Organisation of Findings***

To help understand the findings, they were organised chronologically in separate chapters (Chapter 6–9). The findings from the pre-service teaching period were presented first, followed by the findings from the in-service teaching period. Thus, any progression and transformation in beliefs and perceptions found can be illustrated more clearly. The findings were organised into the structure seen in Table 6 below:

**Table 6.**

*Organisation of the Findings in Chapters 6-9*

Period - study stage	Chapters	Description
Pre-service teaching period	Chapter 6: Uncertainty Chapter 7: Teacher guidance, feedback, and control shift	Main findings on Gemma's and Maria's beliefs and perceptions of concepts related to autonomous learning in general and the autonomous learning experienced and observed as pre-service teachers. Answers research question: RQ1: What are the two study participants' beliefs and perceptions of autonomous learning during their final university year as pre-service teachers? Guiding question: What are the autonomous learning practices that the two study participants' are involved in during their final university year as pre-service teachers?

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In-service teaching period	Chapter 8: Uncertainty Chapter 9: Teacher guidance, feedback, and control shift	<p>Main findings on Gemma's and Maria's beliefs and perceptions of concepts related to autonomous learning in general as in-service teachers, and the autonomous learning observed and promoted in their students, as well as the connection between their perceptions and beliefs as pre-service and in-service teachers, and promotion of autonomous learning as in-service teachers.</p> <p>Answers research questions: RQ 2 What are the two study participants' beliefs and perceptions of autonomy as novice in-service teachers?</p> <p>RQ3: Do these beliefs and perceptions change, and if so, can any underlying factors for change be identified?</p> <p>Guiding questions:</p> <p>How do the two study participants promote autonomous learning as novice in-service teachers?</p> <p>How do the two study participants' beliefs and perceptions of autonomous learning affect their promotion of autonomous learning as novice in-service teachers?</p>
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The findings chapters represent significant themes that emerged at the pre-service or in-service teaching stage. The overview of all the themes, their frequency count, and their description is presented in [Table 7](#). To further understand the organisation of this chapter, it is essential to emphasise that each theme is presented as a *supratheme*, understood here as more general themes that subsume other associated themes. For example, uncertainty was found as one of the most frequent themes and, at the pre-service teaching stage, it is divided into themes based on the specific topic of uncertainty, resulting in sub-sections named:

“uncertainty about the autonomous learning concept”, “uncertainty about autonomous learning ability”, and “uncertainty about responsibility in the autonomous learning process”.

It is also essential to explain that the themes representing sections in this chapter on “Findings” do not strictly correspond to the themes found in the pre-study phase of the research. This is because the latter were themes that emerged from analysing secondary data, i.e., published papers on autonomy, and that were organised into a conceptual framework to aid the exploration of autonomous learning in the context studied in the main study and follow-up study. The themes presented in the following findings chapters are those that emerged from the data collected in the empirical research consisting of the main and follow-up study. While they are related to the conceptual framework, it was not used as *a priori* set of themes but rather as a guideline informing the analysis.

In summary, the findings of this study were grouped under their corresponding themes, each of which represented a chapter (or, in the case of teacher guidance, feedback, and control shift, these were grouped into one chapter). A findings matrix was developed for visualisation and organisation purposes, which shows the main findings, their related themes, and the connection between the findings, as can be seen in Appendix L. This was considered necessary due to a large amount of qualitative data and subsequent findings. Each chapter started with a brief overview of the theme and finished with a summary of its findings. The findings across all the sections are synthesised and discussed in Chapter 10: Discussion and synthesis of findings.

### ***Overview of Themes and Findings***

Table 7 (below) was created to present an overview of the main findings in this study—it summarises *all* the themes that emerged from the data presented in this study, the

research questions that guided their discovery, and their frequency, i.e., the number of times they emerged in the data overall.

The themes presented in this chapter emerged via the analysis process described at the start of this chapter. They were identified based on their frequency of appearance in the data for both cases (Gemma and Maria). Thus, the themes presented and described in the rest of this chapter are those that emerged as *most recurrent themes* in both cases, as the purpose of the study and the research questions were aimed at describing the similarities rather than contrasts between the two cases.

Table 7 below provides an overview of the themes grouped by the two periods: pre-service teachers' beliefs and perceptions and in-service teachers' beliefs, perceptions, their count, and the data sources in which they were found.

**Table 7.**

*Overview of Themes and Data Sources*

Section	Suprathemes (count) and themes	Data sources
Pre-service teachers' beliefs and perceptions of autonomous learning	<p><b>Uncertainty (200)</b></p> <ul style="list-style-type: none"> <li>• Uncertainty about the autonomous learning concept</li> <li>• Uncertainty about own autonomous learning ability</li> <li>• Uncertainty about responsibility for developing autonomous learning skills</li> </ul> <p>(The supratheme is described in Chapter 6)</p>	<p>Main study:</p> <ul style="list-style-type: none"> <li>• Online Meetings</li> <li>• 2 x Online Questionnaire (pre-intervention and post-intervention)</li> </ul> <p>Follow-up:</p> <ul style="list-style-type: none"> <li>• Online Meetings</li> <li>• Self-reflection Sheet</li> </ul>

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**Teacher guidance (47)**

- Being accustomed to teaching guidance
- Prioritising intended learning outcomes over self-directed learning

(The supratHEME is described in Chapter 7)

**Main study:**

- Online Meetings
- 2 x Online Questionnaire (pre-intervention and post-intervention)
- Self-recorded screencast videos
- Self-reflection post-teaching blogs

**Follow-up:**

- Online Meetings
- Self-reflection Sheet

**Teacher feedback (24)**

- Contradiction between perceived and objective teacher feedback in the TILT course
- Perception of peer assessment and self-assessment as less effective than teacher feedback

(The supratHEME is described in Chapter 7)

**Main study:**

- Online Meetings
- 2 x Online Questionnaire (pre-intervention and post-intervention)

**Follow-up:**

- Online Meetings

**Control shift (21)**

- Positive attitudes towards control shift in general
- Perceptions and beliefs of control shift when implemented in real-life practice

(The supratHEME is described in Chapter 7)

**Main study:**

- Online Meetings
- 2 x Online Questionnaire (pre-intervention and post-intervention)
- Pre-service teaching self-reflection blog post

**Follow-up:**

- Online Meetings
- Self-reflection Sheet

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In-service teachers' beliefs, perceptions, and promotion of autonomous learning

**Uncertainty (29)**

- Autonomous learning working definitions and their connection to teaching practice
- Uncertainty about autonomous learning ability and its implication for teaching
- Responsibility for fostering autonomous learning (internalised adjustment to institutional context)

Follow-up:

- Online Meetings
- Self-reflection Sheet

(The supratHEME is described in Chapter 8)

**Teacher guidance 34**

- Perception of Students Needing Teacher Guidance

Follow-up:

- Online Meetings
- Self-reflection Sheet

(The supratHEME is described in Chapter 9)

**Teacher feedback 24**

- Perception of Students Needing Teacher Feedback

Follow-up:

- Online Meetings
- Self-reflection Sheet

(The supratHEME is described in Chapter 9)

**Control shift (35)**

- Contradiction between positive attitudes towards control shift and teacher practice
- Indication of future change

Follow-up:

- Online Meetings
- Self-reflection Sheet

(The supratHEME is described in Chapter 9)

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## Chapter 6: Pre-service stage: Uncertainty

### 6.1. Supratheme Overview

In this study, the supratheme *uncertainty* refers to manifested uncertainty about autonomous learning in general and its specific aspects addressed in this study, such as insecurity, hesitation, and perceived lack of knowledge.

As [Table 7](#) shows, uncertainty was the most frequent supratheme found in the data. It manifested consistently in the participants' statements about autonomous learning and related concepts. It was abundantly clear that uncertainty was deeply embedded in both Gemma's and Maria's beliefs and perceptions regarding autonomous learning. The participants manifested uncertainty around multiple areas associated with autonomous learning. However, in this study, only the three most prominent uncertainty areas are described and discussed, as these were the themes that emerged most frequently. In the subsequent section, they are addressed in the same order as presented below:

- Uncertainty about the autonomous learning *concept* (what it is, how it is demonstrated etc.).
- Uncertainty about their own autonomous learning *ability* (their own capacity to carry it out, etc.).
- Uncertainty about *responsibility* in the autonomous learning process.

### 6.2. Uncertainty about the Autonomous Learning Concept

The theme *uncertainty about the autonomous learning concept* refers to participants' claims of insufficient knowledge and manifestations of insecurity and hesitation found in their understanding and conceptualization of autonomous learning.

Uncertainty about the autonomous learning concept emerged at both study stages (pre- and in-service). During every online meeting (n=10) at the pre-service teaching stage—from

December 2017 to June 2018—the participants were asked about how they defined autonomous learning and what an autonomous learner can and should be able to do. Their answers to these questions were the primary sources that revealed uncertainty about the autonomous learning concept as pre-service teachers. At the in-service teacher stage, Gemma and Maria were shown their statements from the pre-service teaching stage and asked to validate or invalidate the researcher's interpretation and coding of these statements as being related to uncertainty about the concept of autonomous learning or provide follow-up information that would help code them more accurately. They were also asked to compare these statements to their current beliefs and perceptions about the same concepts. These interactions confirmed the theme of uncertainty about the autonomous learning concept at the pre-service stage and revealed it at the in-service stage.

The analysis process that helped reveal this theme involved analysing Gemma's and Maria's speech for implicit manifestations of uncertainty about the concept and definition of autonomous learning (see [Chapter 5: Data analysis](#)). The epistemic stance markers Gemma and Maria employed were critical in interpreting how they understood this elusive concept. Namely, when describing autonomous learning, the participants provided detailed *descriptions* of what they considered autonomous learning and autonomous learners to be like (e.g., autonomous learners study alone, they do not ask for help, they are able to find appropriate tools for their learning, set objectives and decide on what they will do and the teacher does not push them to meet deadlines). However, the linguistic tools they used revealed uncertainty about their *definitions* of autonomous learning. These definitions they were uncertain about will be referred to as *working definitions* hereinafter.

The participants were able to give descriptions of actions of autonomous learning but could not always provide specific definitions. Overall, when asked to describe their working



notions of autonomous learning and autonomous learners, Gemma and Maria were able to elaborate on them in detail, although they did so tentatively. This could be observed in their use of epistemic hedges to mitigate their truth-value and implicitly orient them as having insufficient knowledge about autonomous learning as a concept (Lakoff, 1975). These epistemic hedges—expressions containing epistemic verbs such as “I think”, “I don’t know”, “it may be true”, or “maybe”—communicate their speaker’s epistemic stance and modality towards a subject. Here, epistemic modality is defined as “any utterance in which the speaker explicitly qualifies his commitment to the truth of the proposition expressed by the sentence he utters [...]” (Lyons, 1977, p. 797). As such, Gemma and Maria’s frequent employment of epistemic hedges indicated a stance of uncertainty and partial commitment to their declarations regarding the concept. In particular, the stances marked by participants’ epistemic hedges that were found in the data include:

- Avoidance to commit to a definition of the autonomous learning concept.
- Claiming insufficient knowledge about the concept of autonomous learning.
- Constructing a neutral position to “save face”, i.e., cautioning about one’s own potentially erroneous assessment.

### **6. 2. 1. Avoidance in Committing to a Definition of Autonomous Learning**

As mentioned before, it was found that as pre-service teachers, both Gemma and Maria had their own unique understanding and conceptualization of autonomous learning but the thematic and content analysis of exactly how they discussed this concept indicated that they were still uncertain about it. One way in which this was reflected was in their avoidance to commit to their *definitions* of autonomous learning, despite being requested to do so in sequential online meetings.

For example, as a pre-service teacher, in the first meeting in October 2017, Gemma defined autonomous learning as “the ability of people to be able to learn on their own without receiving any direct instruction from somebody else.” In the following meeting in November 2017, Gemma overtly claimed that her definition of autonomous learning had changed since the previous meeting, but her use of the linguistic hedge “I think” revealed uncertainty about her answer:

Researcher: Have you changed your opinion [about what autonomous learning means]?

Gemma: Yes, *I think so*, um. Because you can work with others but still be an autonomous learner, right? *I think* it's to know what to do and who to ask and where to look, um, even if it is looking for help, *I think* now, I don't know [emphasis added].

In this example, uncertainty was specifically manifested in the final “I think” seen in the above utterance. “I think” is a ubiquitously used stance marker in spoken English. In both English as L1 and EFL (the latter being Gemma’s case), this stance marker has versatile functions. Its core meaning is reflected in deliberative use, which serves to convey personal belief and opinion (Baumgarten & House, 2010). However, there exists a tentative use of “I think” when it is used as an epistemic hedge that serves to mark uncertainty (Aijmer, 1997) and when its function is more similar to modal verbs and epistemic modality expressions (Fetzer, 2014).

In the above example, Gemma used this phrase thrice in her response. The first instance of “I think” is a part of the “I think so” formulaic construction, which represents the deliberative use of “I think” to provide an affirmative response to the researcher’s question (Baumgarten & House, 2010). The second employment of “I think” can also be interpreted as deliberative as it is followed by a that-clause which is a pattern typically used to express

opinions and feelings (Aijmer, 1997). However, the third use of “I think” represents a tentative use of the phrase and is interpreted by the researcher as an epistemic hedge to claim uncertainty about her response. The final-utterance position of “I think” also indicates a pragmatic rather than deliberative function employed to soften the preceding statement and signal uncertainty (Holmes, 1990).

Significantly, while Gemma’s and Maria’s definitions of autonomous learning evolved during the intervention (they gained more awareness about the topic and were explicitly learning and discussing it), no downward or upward trend was found in their uncertainty about these definitions, meaning that they maintained their stance of uncertainty about their understanding of autonomy even when this understanding changed. In other words, as the intervention progressed, changes were noted in both Gemma’s and Maria’s definitions of autonomous learning, but their avoidance to commit to these definitions remained. For instance, it was clear that their definitions did change in one specific dimension, which was the level of independence required to qualify learning as autonomous. A chronological comparison of the definitions of autonomous learning they provided in each online meeting showed that at the beginning of the intervention, both Gemma and Maria believed that autonomous learning entailed *absolute independence* from the teacher or external guidance and input in the learning process. However, during the intervention, they gradually altered this belief to include the possibility that autonomous learning could also mean being able to *solicit appropriate guidance* and did not necessarily entail the physical absence of a teacher/mentor. For example, in the February 2018 online meeting where both Maria and Gemma were present, Maria defined autonomous learning as the absence of externally imposed deadlines and the ability to organize one’s own time and set deadlines without the teacher “pushing her”. Gemma built on this definition and reified that her new understanding of autonomy also

included the ability to reach out to others for help while learning. Nonetheless, despite these additional dimensions to their revised definitions, both Gemma and Maria used epistemic hedges. The quote below illustrates this:

Gemma: And *I would say* that that applies not to just time, but to, for example, quality, quantity, everything, and so that you decide to what point you want to achieve a task or something. And...Well, I mentioned that in my previous meeting, that for me, autonomy also means to know where to go, who to ask and everything. But you decide what you do. *I don't know* [emphasis added]. (February 2018)

As seen from the quote, although Gemma's definition was notably both more expansive and more precise than the one she had given at the beginning of the intervention, the epistemic hedges she used implied that some uncertainty about defining the concept remained. This is most observable in her implicit "softening" of the new definition through the use of "I would say" at the beginning and "I don't know" at the end of her statement.

### **6. 2. 2. Claiming Insufficient Knowledge about the Autonomous Learning Concept**

Gemma overtly claimed insufficient knowledge of and downgraded her epistemic status on the autonomous learning concept. For example, in the November 2017 online meeting, she said, "OK, and, well, first of all, I must say that I don't feel at all very expert on autonomous learning, [...] but. I'm sorry, but it's the truth, and I want to be honest."

Furthermore, the analysis of Gemma's and Maria's utterances revealed that they employed epistemic hedges to imply insufficient knowledge about the concept of autonomous learning. This was identified as a separate finding from the previously described section wherein Gemma and Maria avoided committing to a *specific definition* of autonomous learning. The reason it was considered as a separate finding is that it involved consistent claims of insufficient knowledge about the autonomous learning concept and its related

aspects overall, rather than uncertainty about the specific definitions of autonomous learning that evolved.

Both Gemma and Maria displayed uncertainty about their understanding of autonomous learning and implied insufficient knowledge about the topic. For example, in the following quote, Maria employed the epistemic hedges “maybe” and “I don’t know” when describing her understanding of the autonomous learning concept orienting towards an epistemic stance of insufficient knowledge about the topic:

Maria: [Autonomous learning is] that *maybe* [emphasis added] you are alone, learning something that there's not ... When we, you're alone in a room. *Maybe* [emphasis added] you can use internet [sic] or there's a video that you can learn from it, but there's not a teacher, uh, a student. That you have to do it alone. You can *maybe* [emphasis added] ask for [sic] some questions, you can *maybe* interact with the others, but not, um, like now that we are talking. *I don't know* [emphasis added]. (October 2017)

The multiple uses of “maybe” indicates Maria’s uncertainty about the validity of the examples of autonomous learning she was describing. When used as a hedge, the epistemic adverb “maybe” is used to soften a statement (Pic & Furmaniak, 2012). The final utterance of “I don’t know” seems to both serve its core purpose of displaying insufficient knowledge about autonomous learning as well as the purpose of marking uncertainty (Diani, 2004; Tsui, 1991). A similar meaning conveyed by “maybe” can be observed in Gemma’s quote of “Maybe... Yeah, *maybe* [emphasis added] an autonomous learner is willing to learn, it [sic] doesn't learn because they are told to, but because they have some interest towards what they are learning.”

Reluctance to claim epistemic status was often present when Gemma and Maria discussed the concept of autonomous learning. Both participants deployed linguistic devices to mitigate the truth-value of their statements and to orient towards a stance of insufficient knowledge, which can be observed in Maria's quote below:

Maria: Um, [autonomous learning is] that you plan, what are you going to do, *like* you're, hmm, scheduling. *I don't know how to say* [emphasis added]. That you decide maybe, uh, they gave you, uh, *maybe* [emphasis added] an exam or a, or a specific, uh, project to do, but, uh, *I don't know how to say* [emphasis added]. Um, but you decide when do you [sic] want to do everything, that you...

In the above examples, the phrase "I don't know how to say" was not interpreted by the researcher as a literal declaration of not being able to express her opinion. As an advanced English speaker, Maria demonstrated her English competence and capability to express complex ideas throughout the study. The phrase was rather interpreted as Maria's reluctance to outline descriptors of autonomous learning that she was not sure about. It is also seen as a possible signal of discomfort produced by being put in a situation to define a concept she believed she lacked a full understanding of.

### **6.2.3. Constructing a Neutral Position to "Save Face"**

In addition to avoidance of committing to a definition of autonomous learning and displaying a downgraded epistemic status of knowledge about the concept, Gemma and Maria also sought to construct a neutral stance when discussing their working definitions of autonomous learning. This was interpreted as a demonstration of uncertainty about their working definitions and consequential deployment of an avoidance process to "save face" in front of a more competent person (i.e., the researcher) (Diani, 2004). We can see the face-

saving strategies also being used when revisiting Gemma's quote that was discussed earlier to illustrate her use of epistemic hedges to maintain a neutral stance:

Gemma: Yes, I think so, um. Because you can work with others but still be an autonomous learner, *right?* [emphasis added] I think it's to know what to do and who to ask and where to look, um, even if it is looking for help, *I think now, I don't know* [emphasis added]. (November 2017)

By closing her response with “I think now, I don't know”, Gemma claimed both insufficient knowledge about whether autonomous learners work with others and also sought to assume a neutral stance and avoid committing to her preceding statement. Other hedges in this statement, e.g., the confirmation-seeking “right?” can also be seen as having the same function and serve as an avoidance tool. By asking “right?”, it can be argued that Gemma was not seeking explicit reassurance from the researcher but rather used this rhetorical question to caution her interlocutor about the potential erroneousness of her preceding statement. As evidenced in other online meetings and the responses given in the pre- and post-intervention questionnaires, the idea that one can work with others and still be an autonomous learner was an evolving notion for Gemma in November 2017—and perhaps the underlying cause for her use of this face-saving device.

A particular pattern that was recurrently observed was the use of linguistic hedges to “cushion” statements about autonomous learning, such as in the example shown below:

Gemma: And *I would say* [emphasis added] that that applies not to just time, but to, for example, quality, quantity, everything, and so that you decide to what point you want to achieve a task or something. And... Well, I mentioned that in my previous meeting, that for me, autonomy also means to know where to go, who to ask and

everything. But you decide what you do. *I don't know* [emphasis added]. (February 2018)

As it can be seen, Gemma both started and finished her utterance by signalling caution that she was unsure of what she was about to say and that the statement may be erroneous (i.e., “I would say” and “I don’t know”). By embedding these cautionary clauses in that manner, Gemma mitigated the risk of being wrong by resorting to a tentative tone in her declaration. This is a common strategy used when facing an interlocutor who is perceived as more knowledgeable of the topic—in this case, the study author/Gemma’s coach in the intervention (Beach & Metzger, 1997; Pomerantz, 1984; Sato, 2017).

### **6.3. Uncertainty About Own Autonomous Learning Ability**

The theme of *uncertainty about own autonomous learning ability* refers to the participants’ perception of their own autonomous learning ability, which was self-assessed as insufficient. The primary sources of evidence of these self-beliefs were the online meetings, the pre- and post-intervention questionnaires, and the self-reflection sheet implemented in the follow-up study (see [Table 7. Overview of themes and data sources](#)).

At the onset of the main study in October 2017, the participants responded to the pre-intervention online questionnaire in which they needed to self-assess their autonomous learning skills as per the components of autonomous learning from the conceptual framework. They were then asked to provide follow-up explanations to these responses in the first online meetings conducted in the intervention. In the subsequent online meetings in the period from October 2017 to June 2018, both Gemma and Maria consistently made references to the self-assessed insufficient autonomous learning ability when discussing their university coursework, especially the TILT course, which required an ability to engage in autonomous learning significantly more than other university courses. In June 2018, the participants



responded to the post-intervention questionnaire that asked them to self-assess the same components of autonomous learning as in the pre-intervention questionnaire. In the period from December 2020 to February 2021, two follow-up online meetings were held, and Gemma and Maria each filled in a self-reflection sheet. The data generated from all these sources revealed uncertainty about Gemma's and Maria's self-perceived autonomous learning ability.

### **6.3.1. Uncertainty from Comparisons with Working Definitions of Autonomous Learning**

The online meetings revealed that at the pre-service teaching stage, Gemma and Maria did not perceive themselves as “autonomous learners” in general. Through the conversations with the researcher, they self-assessed their own autonomous learning skills against their working definitions of autonomous learning (see [6.2. Uncertainty about the autonomous learning concept](#)), which led them to conclude they did not fit the criteria that they considered as key indicators of autonomous learning ability. At least initially, Gemma and Maria shared the belief that autonomous learning entailed complete independence of teacher and/or external help and support when learning. Since they did not perceive themselves as capable of engaging in that kind of learning, they concluded they were not autonomous learners in the “proper sense” of that term. In the October 2017 meeting, Gemma explained it thus:

Gemma: I think that there are different types of autonomy. For instance, I can be autonomous in searching articles or I can be autonomous in carrying out a project, but maybe as a whole, if I want to learn about something and doing [sic] everything on my own, I'm not very autonomous at all. Maybe in learning languages, yes, because I've seen how teachers teach languages to me, but I would follow the pattern that they have

been showing me. So it's not really autonomous because I have not developed it completely on my own.

As evidenced from the quote, Gemma perceived herself as conditionally autonomous, i.e., she believed her ability to learn autonomously depended on the object of learning and the type of actions she needed to take in the learning process. For example, she believed she could be more autonomous when learning about the topics she was most familiar with, like the English language, or performing specific learning activities, such as searching for articles. She contrasted this with being autonomous “as a whole”, i.e., being able to learn something completely on her own and applying an approach that is her own invention. This is portrayed in the following statement from the quote:” [...] but I would follow the pattern that they have been showing me. So it's not really autonomous because I have not developed it completely on my own.“ In summary, Gemma’s belief that she was not autonomous was connected to her working theory (Denzin, 1989) of what constitutes autonomous learning, which for her meant complete independence and originality in the learning process, even to the extent of needing to invent one’s own methodology for learning.

### **6.3.2. Self-Perceived Lack of Ability to Make Decisions Independently of a Teacher**

The self-evaluation responses from the pre- and post-intervention online questionnaires revealed the specific areas of autonomous learning that Gemma and Maria felt that they lacked and needed and/or wanted to improve. The perception that they needed to be more independent of the teacher in order to learn autonomously was predominant in their answers. This specifically referred to the ability to make decisions when learning on one’s own and independently of teacher input. For example, in October 2017, in the pre-intervention questionnaire, Gemma identified “learning independently of teacher/course while using technology” and “deciding what is important to learn” as the areas she perceived that she

lacked skills in. In June 2018, in the post-intervention questionnaire, she selected “Making decisions independently of tutor” as an area she needed to improve. Similarly, Maria selected “Making decisions about my learning process independently of my tutor” both in the pre-intervention and post-intervention questionnaire.

Maria’s learning goals in the intervention indicated that independent decision-making was an area of insecurity for her. This was a part of an intervention task in which Maria and Gemma were asked to give input on their learning goals, i.e., what they wanted to achieve in the intervention as regards their autonomous learning skills. In the fourth bullet point in Figure 7 below, one of Maria’s goals was to feel more comfortable and confident when making decisions about her learning (i.e., not to be discouraged by the absence of a teacher’s validation/rejection of her ideas). In the intervention, the learning goals were customized to Maria’s learner needs and resulted from previous discussions she had with the researcher about her autonomous learning ability. These self-perceived gaps in autonomous learning were summarized and turned into goals for the intervention by the researcher in October 2017. As seen below, Maria validated these goals in writing (in blue), also in October 2017.

### **Figure 7.**

#### *Maria’s Learning Goals in the Intervention (October 2017)*

Maria’s learning goals:

- To be able to influence my motivation to complete specific tasks (i.e. learn how to find relevance in them)
- To be able to curb procrastination and stick to my to-do lists better
- To feel more positive about the challenges I face when I learn with **or without** technology
- To feel more comfortable and confident when making decisions about my learning (i.e. not to be discouraged by the absence of teacher's validation/rejection of my ideas)
- **To learn about many more technological tools that can help me in my learning and future teaching**

Your feedback, please :) : **I think that you did a very well summary of what I want to improve!**

In the online meeting of February 2018, Maria, Gemma, and the researcher revisited and discussed this specific goal “to feel more comfortable and confident when making decisions without teacher validation”. She maintained that this was still her goal for improvement. (Interestingly, Gemma challenged Maria’s self-perception, insisting that her impression was that Maria was already confident in making decisions on her own, at least from what she had seen in her classroom behaviour.)

These findings were also corroborated in the follow-up study (at the in-service teaching stage). Gemma and Maria were shown the findings from the pre-service stage, which reflected the researcher’s interpretation that as pre-service teachers, they had perceived and believed they lacked autonomous learning skills, including the ability to make their own decisions independently of teacher input. Both Gemma and Maria validated these findings and confirmed that as pre-service teachers, they indeed had perceived themselves as not very autonomous. For example, in Gemma’s case, it was, in her words, because she struggled to make autonomous decisions, especially in telecollaboration activities where she needed to collaborate with her peers online as a part of the TILT course:

Gemma: [...] We *had to be autonomous* [emphasis added] with, with other things like, uh, collaborating with the other university students, for example, but this was kind of teamwork and if I, I don't know, I never liked to type in that, but like, if *I was not autonomous myself* [emphasis added], maybe another person would be and would help guide the whole group towards right direction. Um, we also had to create different things like, um, infographics, and pages and stuff, *which were autonomy* [emphasis added]. Um, I don't know. But I don't know if I would have been able to, hmm, *decide this kind of things* [sic] [emphasis added]. (December 2020).

As seen from the words emphasised in the above quote, two and a half years after the intervention, Gemma confirmed that: 1) as pre-service students, during a course that involved telecollaboration with students from the USA, they were required to engage in autonomous learning activities, and 2) at that time she did not feel sufficiently autonomous to make decisions in her telecollaboration group. This further corroborates the interpretation of the participants' perceived lack of ability to be autonomous learners during their in-service teacher stage.

### **6.3.3. Insecurity about Ability to Perform up to Standard in the Flipped Classroom**

Another dominant area of uncertainty for Gemma and Maria was uncertainty about being able to successfully complete the autonomous learning required in the flipped classroom component of the TILT course. This was a common discussion topic in the online meetings during the intervention. Both Gemma and Maria agreed that the “study at home” component of flipped classrooms entailed autonomous learning. Moreover, the flipped classroom proved to be one of their main reference points when discussing autonomous learning (which could be explained by a number of reasons, e.g., it was ongoing at the time of the intervention, it was the only project at university whose explicit aim was to promote autonomy, it required more autonomy than other courses they have taken). It was evident that their shared understanding was that meeting the flipped classroom expectations required possessing autonomous learning skills, which, as it could be seen from previous sub-sections in this chapter, provoked uncertainty in both Gemma and Maria. For example, when asked how she felt about the level of autonomy required in the flipped classroom, Gemma claimed it made her lack of autonomous learning skills more apparent:

Gemma: Um, it makes me realise that I'm not autonomous because sometimes I find difficulties when reading some of it, or that I would like to share it with some other

students or do it together or stuff like that, because I feel insecure about my understanding of the article [...] (October 2017)

In the quote above, “it” refers to the autonomous learning practice Gemma and other pre-service teachers were required to engage in through the flipped classroom. This included completing readings and self-studying other material such as blog posts and videos at home and preparing to discuss them, share their insights, and engage in problem-solving activities with other students in class. The purpose of this flipped instruction was to empower students to take control of their own learning (Lai & Hwang, 2016). However, as seen in the quote above, Gemma revealed it made her uncertain about her autonomous learning skills as she struggled to perform the task completely on her own, as reflected in her statement, “I would like to share it with some other students or do it together or stuff like that”.

The main source of uncertainty for Gemma and Maria seemed to be that they perceived themselves as unable to meet the standards that they believed the teacher set for them. They reiterated that their teacher Diana assigned them the role of “experts” in the TILT course, which meant that she wanted them to take ownership of their learning as much as realistically possible, e.g., they needed to take agency and claim the knowledge they autonomously gained through self-study of the course material by sharing and discussing it in-class with other students. Since they did not feel confident about their ability to understand and interpret these materials “correctly”, they were not happy with this “expert” role assigned to them.

The two quotes below are from two separate online meetings and show how both Gemma and Maria objected to being called “experts” in an area they felt uncertain about:

Maria: She [the teacher] makes us read and, and I don't know, watch videos and, and give [sic] us materials to learn and then when we come back to class and ask her

questions, she says, “Oh no, you are the experts”. I, I’m not. Okay, I can't be the expert because, um, I haven't been, um, taught this. (October 2017)

Gemma: That's something I'm not very sure about because when Diana [the teacher] says it, it puts a lot of pressure on me because it's like, OK, I'm the expert now and have to tell the others about this reading that not I didn't understand [...] OK, well, and maybe, maybe with kids it works because they're like: “ok, and now I am an expert”. But I am not a kid, and I'm, I'm not fooled... I am not fooled by that. I know what an expert is, and I'm not one. But, you know, I don't know. (October 2017)

The two excerpts above demonstrate that both Gemma and Maria failed to identify with the role of “experts”. Their statements signal a certain level of frustration with the teacher’s insistence that they were completely able to autonomously process the course materials and that their understanding and interpretation of the material content would be valid since they were indeed the “experts” in the TILT course. Gemma overtly protested, saying, “I am not fooled by that”.

This strategy was the teacher’s way of empowering the pre-service teachers to confidently make conclusions when studying autonomously, independently of the teacher’s or /more competent peer’s input. However, both Maria and Gemma seemed to reject the possibility that they were competent enough to make valid conclusions autonomously. The two quotes indicate that Maria’s reason for rejecting the “expert” status was that she had not been taught the content of the materials before being asked to study it autonomously (which is the sequence that she was more familiar and comfortable with), whereas Gemma’s reason was that she felt she needed more support while working on the course materials, at least in the form of peer scaffolding.

#### **6.3.4. Uncertainty about Responsibility for Developing Autonomous Learning Skills**

As elaborated on in the autonomous learning section of the literature review chapter, responsibility and ownership in the learning process are often seen as key indicators of autonomous learning. It is assumed that in autonomous learning, the learner should take full responsibility and ownership of the learning process (e.g., Holec, 1981). It is also assumed that in autonomous learning, the student should be empowered and enabled to take this responsibility, as well as be emancipated from the traditional roles in the education system where the teacher has most of the control and responsibility in the learning process. This is often referred to as the political dimension of autonomous learning (Benson, 1997). This is because, in addition to inner devices necessary for autonomous learning—such as skills, abilities, and motivation—the external socio-political factors also affect the extent to which students can engage in autonomous learning.

The theme of uncertainty about responsibility for developing autonomous learning skills concerns participant perceptions and beliefs about this political dimension of autonomous learning in the context of their university education and Catalan educational system. These beliefs and perceptions emerged in the online meetings, the pre- and post-intervention questionnaires, and self-reflection sheets administered in the follow-up phase of the study.

Overall, at the pre-service stage, Gemma and Maria demonstrated uncertainty about whose responsibility it was to foster autonomous learning. They seemed to place this responsibility both on the education system and themselves as learners. Both findings will be presented in the following paragraphs.



*Blaming the Education System for “Failing To Teach” Them Autonomous Learning*

During the intervention, Gemma and Maria often criticized the education system and their university for not teaching them how to learn autonomously. For example, in October 2017, Gemma stated that “I don't think that the educational system trains us very well to be autonomous learners, if that makes sense” (October 2017).

By this, Gemma meant that the educational system, in general, did not focus on enabling students to learn autonomously through teaching them strategies for autonomous learning or providing enough opportunities to practice and experience autonomous learning. From this, it seems Gemma believed that autonomous learning was not on the agenda of the educational system, and thus, this had a direct effect on her ability to learn autonomously as a pre-service teacher belonging to that education system.

Her reference to the educational system not training them to be autonomous learners seemed to encompass all the stages of formal education she had passed through up to that moment. At the time of this statement, Gemma was a final-year university student studying to become a teacher, which means she had experienced at least 14 years of formal schooling, including kindergarten, primary and secondary school, A levels, and 3.5 years of university schooling. Her statement implied that this lack of explicit instruction and practice had been a constant throughout her education. In another online meeting, she said:

Gemma: “I don't even need to be autonomous because everything is given to me like as [sic] I need to take it. I don't know if the material that is being given even at the university is more autonomous than in school. (October 2017)

It is evident that Gemma questioned whether there was any real difference between her primary and secondary education and the university-level education when it came to being trained to learn autonomously. (For comparison only, according to the Spanish Education

System report from 2009 by Pérez et al., the Catalan and Spanish official curricula included some considerations related to autonomous learning, such as promotion of self-knowledge and personal autonomy as necessary learning objectives of formal schooling. However, learner autonomy was not explicitly included in necessary learning objectives, except in the case of diversity groups.)

It is important to highlight that while neither Gemma nor Maria rejected their own responsibility in developing autonomous learning skills (this is addressed in more detail in the next sub-section), they believed it was the responsibility of the education system to initiate the process, i.e., first assigning this responsibility to the students so that they could enact it. For example, in an online meeting, Gemma said:

Gemma: I think that the system needs to tell us that we are responsible. But...Because it's something, it's extra work, and... it doesn't grow naturally from somebody. [...] So the system needs to show us how important this is and then give the responsibility to each student. (October 2017)

By stating the above, Gemma drew a line between what was her responsibility and what was the responsibility of the education system. Her attitude seemed to be that autonomous learning is important and should be fostered by the education system by explicitly delegating more responsibility to students and teaching them that autonomous learning is important.

The above quote also illustrates a perception that was consistently reiterated by both Gemma and Maria during the intervention, which is that they perceived autonomous learning as something that is not inherent to the students in their educational context. For them, it seemed logical that autonomous learning skills would be taught as a separate subject or be included in extracurricular activities rather than be integrated into the main subjects. For

context, at the time of this online interview, at Gemma and Maria's university, there was no course or any educational activity that taught them autonomous learning as a separate subject or extracurricular activity. More than once, Maria described teaching autonomous learning as something that should not be integrated into the standard subjects but instead should form a special course. For example, in an online meeting, she said:

Maria: [...] And that we don't have a lot of, uh, possibilities to, to do autonomous learning. If, for example, if you want to do a, a special course maybe, you, you do it, but not at the university. Um, and not, I don't know, in primary school.

Maria's reference to "a special course" implies she would not expect that the school curriculum would integrate autonomous learning skills into regular school subjects, either at the primary or secondary and higher education levels. From this and the previously presented quotes, it is evident that Gemma and Maria shared the perception that they were unlikely to find opportunities to develop autonomous learning skills in the existing university curriculum and learning activities they were taking part in.

### ***Assuming their own responsibility for the development of autonomous learning***

As mentioned before, Gemma and Maria also acknowledged their own responsibility in taking ownership of their learning process and becoming more autonomous learners. This was most evident from the data produced in online meetings. For example, during the intervention, Gemma often referred to the ability to identify and summarize important ideas in a text as a particular autonomous learning skill that she lacked. She identified it as an important autonomous learning skill because it was required in the flipped classroom, which, as said before, was one of her main references of what autonomous learning means and looks like in practice. However, she did not blame the education system for this perceived

shortcoming. Instead, she compared herself in this aspect to her peers and concluded it was her responsibility for being unable to summarize articles. In one online meeting, she said:

Gemma: In school, I think they don't promote autonomy at all. But I've seen how my colleagues are able to excerpt important ideas and how it's important to or how it is essential or crucial to in order to learn on your own. And while they can do it, I do, do it but not very well, I select many things. [...] *I think that's something I should already be able to do, that I need to... now that I'm already in my fourth year of my degree, now I think that's something I should already be able to do* [emphasis added]. [...] Maybe in the past I should have worked more on that.

In the quote above, a few points stand out. First, Gemma's reiteration of her general perception that formal schooling in Catalonia did not promote autonomous learning is obvious. Second, she identified the ability to extract important ideas as an essential component of learning on one's own (and one that she was deficient in), along with an implication that she had gained some knowledge of autonomous learning during her time in the TILT course. Third, she acknowledged that it was her responsibility to have already mastered this skill since she was already near the end of her university education. Finally, Gemma believed she was in a disadvantageous position compared to the rest of the class because, contrary to herself, her peers were able to autonomously glean main ideas from articles, or at least she perceived that to be the case. However, she did not provide any reasoning as to how her peers came to develop this skill (while she did not), considering it was not taught by the education system (as she had already explained). Furthermore, she provided no information on when and what she could have done concretely to develop the skill of summarizing articles. In 2020, three years after she stated this, Gemma recalled this difficulty and reiterated that she should have done some "background training," e.g., practice

reading more articles to help her complete these tasks. However, she was not certain about it, as per her statement, “I think that would have helped me be more autonomous. Um, I don’t know.”

Maria also had uncertainty about her responsibilities in the autonomous learning required in the TILT course. However, unlike Gemma, she did not perceive she was in a different position than her peers. When asked if she thought her classmates also felt uncertain about their autonomous learning responsibilities, she confirmed so by saying, “ Yes. Because we spoke about this and we're all confused because, um, maybe it's because we are not used to this type of learning [...]” (October 2017).

There was one specific area of autonomous learning that Maria identified she felt responsible for: the need to motivate herself to study when she had been assigned or required to learn about a topic on her own. During the intervention, she often spoke about the ability to self-motivate as an essential prerequisite for autonomous learning. In the online questionnaire, she stated that she needed to work on assuming responsibility for generating and maintaining her own interest in learning as well as raising her awareness on what motivated her to learn and what hindered her motivation to learn. This was also reflected in her learning goals for the intervention, where she validated “to be able to influence my motivation to complete specific tasks (i.e., learn how to find relevance in them)” as an important learning goal for her, as shown in [Figure 7](#).

Finally, it is worth briefly mentioning that when talking about their views of whose responsibility it is to promote autonomous learning, Gemma and Maria often referred to autonomy promotion as “not always realistic” in their educational context. This revealed their understanding of the complexity around incorporating more self-directed activities in the curricula against the reality of teaching they witnessed both as students and as observation

apprentices in their practicum (See 7.3.3 Perceptions and beliefs of control shift when implemented in real-life practice for further elaboration). For now, it suffices to say that their uncertainty of who is primarily responsible for their autonomous learning skills may signal an understanding of the delicacy of the issue rather than a lack of understanding it.

#### **6.4. Summary of Findings**

Below is a summary of the findings for the uncertainty supatheme, as related to the first research question (what are the two study participants' beliefs and perceptions of autonomous learning during their final university year as pre-service teachers?):

- At the pre-service teaching stage, at first, Gemma and Maria believed autonomous learning meant learning completely independently, i.e., without any teacher involvement or external help. Their working definitions of autonomous learning implied that they believed autonomous learners needed to do everything on their own.
- Their working definition of autonomous learning evolved during the intervention whereby they started to perceive the complexity of autonomous learning beyond “learning on one’s own”.
- They were uncertain about their understanding of autonomy, as reflected in their avoidance to commit to their definitions of autonomous learning. When their working definitions of autonomous learning evolved, they still believed they did not know enough about autonomous learning.
- Gemma and Maria did not perceive themselves as “autonomous learners” in general. They believed they lacked the ability to perform independent decision-making in autonomous learning and expressed uncertainty about their ability to successfully perform in the flipped classroom component of the TILT course.

This perception was linked to their simplistic working definitions of autonomous learning.

- Gemma and Maria believed the education system, their university, and themselves shared responsibility for their development of autonomous learning skills. They perceived autonomous learning as something that was not inherent to the students, that could be taught as a separate subject or be included in extracurricular activities rather than be integrated into the main subjects. Their perception was that the “system” should have done more to promote autonomous learning in them.
- Gemma’s and Maria’s perceptions of responsibility in autonomous learning revealed their ability to detect the complexity around introducing autonomy-promoting activities in the curricula against the often less than favourable circumstances they witnessed as pre-service teachers.

## Chapter 7: Pre-Service Stage: Teacher Guidance, Feedback, and Control Shift

### 7.1. Teacher Guidance

#### 7.1.1. Supratheme Overview

The second most frequent supratheme in the data was *teacher guidance*, which was identified 47 times. In this study, teacher guidance is used in reference to teacher-provided instructions, directions, information, and scaffolding employed to facilitate students' completion of (autonomous) learning activities.

The data included under this supratheme pertains to Gemma's and Maria's beliefs and perceptions of the (absence versus presence of) teacher guidance provided to them in the following contexts: 1) in the classes they observed during their practicum, 2) as regards the use of or development of their autonomous learning during their final year at university, and 3) its role in autonomous learning in general.

Teacher guidance—which technically belongs to a broader subject of teacher role described in the teacher role in the autonomous learning section of the literature review chapter—is a central topic in the literature on autonomous learning (Little, 2007). Teacher guidance is commonly discussed through a binary lens of two alternative modes: teacher presence or teacher absence, whereby the focus is on questions such as how much teacher guidance there should be in autonomous learning and what constitutes such guidance. As seen from the previous supratheme, uncertainty, even Gemma's and Maria's preliminary working definitions of autonomous learning incorporated the notion of teacher absence vs presence, which corroborates the notion that teacher guidance is intuitively and closely related to autonomous learning.



Three main themes emerged at the pre-service teaching stage regarding Gemma' and Maria' beliefs and perceptions of teacher guidance in autonomous learning. These three main themes—which are elaborated in the sub-sections below—are as follows:

- Being accustomed to teacher guidance.
- Critical reflection on the absence of teacher guidance in autonomous learning.
- Prioritisation of intended learning outcomes over self-directed learning.

### **7. 1. 2. Being Accustomed to Teacher Guidance**

The theme, *being accustomed to teacher guidance*, comprises the participants' belief and perception that the students from their educational context, including themselves, were generally accustomed to teacher guidance. This theme emerged from the following sources: participants' statements given in the online meetings, their validation of those statements in the follow-up phase of the study, their answers to the pre- and post-intervention questionnaires, and self-reflection materials produced during their practicum such as self-reflective blog posts.

Overall, the data revealed that as pre-service teachers, Gemma and Maria believed they were accustomed to receiving more teacher guidance than what they perceived to have received in the TILT course and that students from their educational context, in general, were more used to teacher-guided learning than partially or entirely self-directed learning. In addition, they perceived a seeming contrast between the Education Faculty's general “administrative policy to promote autonomous learning” and the actual practice in which they were not trained to learn in a more self-directed way. Maria summarized this as, “Um, I think that we are very, um, used to have [sic] a teacher who tell [sic] us what do we have to do”, where she seemingly refers to the standard practice she had experienced in her formal education as a student.

However, further probing in the follow-up study when Maria was showed this statement and asked to recall these statements given about limited teacher guidance as a pre-service teacher revealed that she may have, in fact, referred to the internal policies of the Education Faculty she attended at the time. In February 2021, Maria stated, “Yeah. Yeah. We were complaining alone because they were telling us that we should do a lot of hours of autonomous learning, but no one taught us how to do autonomous learning.” —here, “they” probably refers to the Education Faculty in general and their policy to promote autonomous learning in almost all of the programmes from the first year onwards. The pre-service teachers attending the Education Faculty—including Gemma and Maria—are explicitly told that promotion of autonomy should be a component they include in their own practicum interventions. Maria’s statement highlights a contrast between the voiced policy perceived by Maria as “to do a lot of hours of autonomous learning” and the actual practice perceived by Maria as “no one taught us how to do autonomous learning”, and also reveals that this was a subject of disgruntlement among her classmates.

Connected to this perception of being accustomed to teacher guidance are the following three themes, discussed in the ensuing paragraphs:

- The contradiction between Gemma’s and Maria’s perceptions and objective teacher guidance in the TILT course.
- Behavioural conformity as a result of being accustomed to teacher guidance.
- Agency as a reaction to the absence of teacher guidance.

### ***Contradiction Between Perceived and Objective Teacher Guidance in the TILT Course***

The transcripts of online meetings revealed Gemma’s and Maria’s perception that teacher guidance was partially absent from the TILT course and that this was different from the instructional approach they were accustomed to. The TILT course entailed a shift from

teacher-directed to self-directed learning in order to foster autonomous learning skills (see description of the course requirements in the section on the [TILT course](#)). Gemma and Maria both seemed to perceive that the TILT course was “different” from the courses they were used to in the amount of teacher supervision they were provided with. For example, at the beginning of the intervention, Maria described the perceived absence of teacher guidance in the TILT course using the following statement:

Maria: And I think that now in this year in Diana’s [teacher’s] subject, we are doing some, what? Yes, autonomous learning, but because she doesn’t explain anything in class. She makes us read and, and I don't know, watch videos and, and give us materials to learn and then when we come back to class and ask her questions, she says, “Oh no, you are the experts. I, I'm not.” (October 2017)

In her quote, Maria was referring to the flipped classroom approach in which the students studied the materials at home in a self-directed manner and later discussed them in class. From the above quote, it can be concluded that Maria perceived that the teacher guidance in the self-study component in the TILT course was limited and that it was a deliberately employed strategy by the teacher to foster autonomous learning.

Gemma manifested a similar belief that students needed teacher guidance for successful learning, especially in the form of clear instruction on what to do in a task. Confusion with the perceived lack of teacher guidance caused by this information gap was a recurrent motif in the online meetings. The specific guidance that Gemma perceived as missing were: clearer instruction on what to do in the tasks they needed to do at home in the flipped classroom, guidance on points to focus on when self-studying course material, and initial ideas that would serve as a starting point in their self-study. Maria’s perception was that

the teacher should provide a starting point for doing activities in autonomous learning. In an online meeting, she said:

Maria: So maybe she [teacher] could, um, um, explain us how, like the, the basic, the basics, or maybe give us some characteristics or some ideas, or like guide us because I have the feeling that it's like: 'do, what do you think, you are an expert. You have read this and you are an expert, so you can do what you want.' (October 2017)

The above quote illustrates her perception that the teacher gave the students full freedom to “do what they want” in the TILT course. In this specific section, she was referring to the telecollaboration activities and the level of autonomy expected from them as telecollaboration participants. She identified “the basics”, “characteristics”, and “ideas” as the types of guidance that she would have considered appropriate guidance in the telecollaboration tasks. These refer to teachers providing any information that would set them up for success in their tasks.

However, from the TILT course description, the course website, as well as personal conversations with the course teacher, it is evident that the pre-service teachers were provided with the “basics”, “characteristics”, and “ideas” and even detailed instructions for their self-study tasks. For example, every activity they were asked to do was explicitly explained on the webpage and always available. Furthermore, all upcoming assignments were explained at the end of every in-class session, and a PowerPoint file was then made available for the pre-service teachers after every class as additional guidance.

That said, it is essential to underscore that ‘extra’ work was required to access this guidance (i.e., the pre-service teachers needed to go to the website, go into the student area and read them carefully). In many cases, this meant that the instruction was not transmitted directly from the teacher to the students, but rather via online/digital materials—which, as it

turns out, few students reviewed according to the course teacher. This may be why Gemma and Maria perceived that they received little instruction—it was not delivered to them in a way they were accustomed to, which was closer to a teacher directly telling them what to do. Indeed, both participants perceived the instructions in the TILT course as a deviation from the instructional strategy they were used to. This emerged in the online meetings and was corroborated in the pre- and post- intervention questionnaires where they stated that they did not feel confident about and needed to improve their ability to generally enjoy learning independently of teacher/course.

Specifically, in the course description, the [course website](#) states that “we have tried to give as detailed instructions as possible to help you follow the activities (links directly in the day-to-day schedules). It is important that you read them carefully and completely. Likewise, we can also see that the general expectations were also described, as seen in the excerpt below:

You will be evaluated on how regularly, critically and thoroughly you engage with these materials. You are expected to be willing to contribute, apply critical thinking and motivate thought-provoking discussion between you and your partners (locally and internationally).

There were also step-by-step instructions for each telecollaborative meeting. Here is an example of a meeting early in the course:

3rd online meeting.

Before the meeting, you should read your assigned text ([link to text and names](#)).

For this meeting, you will combine your information to come to a group understanding of the main points of the CEFR. Note: There is post-meeting individual work to be done before the next class ([link to instructions](#)).

Meeting instructions:

1) Each person takes a short round (3-5 minutes) to explain the main points, key terms (and definitions if needed), and at least one applied example of their assigned text.

*(Note—these same instructions were given in the link to the texts above).*

2) During the explanations, other group members should not talk but should note any questions or doubts.

3) After the round, try to clarify doubts you have noted (no longer than 15 minutes total).

4) The group should make a list of minimum four, maximum six TOP KEY POINTS for language teachers that come from the CEFR (all sections included).

5) Add the list to the padlet (be sure and give your group name).

The rest of the meeting should be dedicated to your project draft. In particular, consider how you can use the CEFR to decide on your learning goals and ensure that the project promotes communication through different modalities.

Don't forget to choose your next leader and scribe for the next meeting. The scribe should add the minutes and evidence to the group folder.

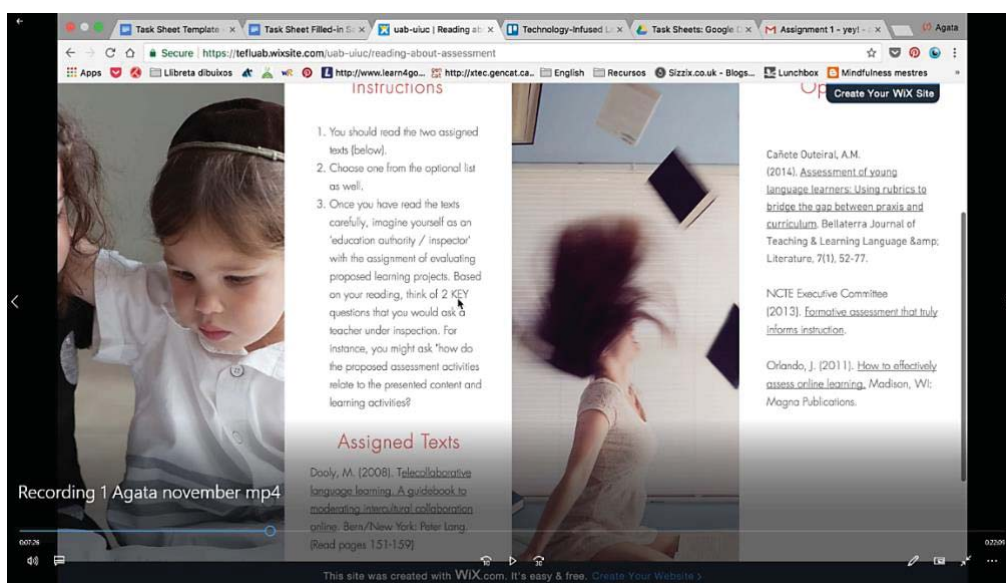
The above was co-written by the two collaborating teachers of the TILT course (the Catalan teacher, Diana, and her USA counterpart). Indeed, the website contained detailed instructions for the tasks, which contradicted their perception that teacher guidance in the form of clear and detailed instructions and initial ideas for completing the tasks was absent

from the course. However, it needs to be highlighted that although specific, the instructions given by teachers in the telecollaborative tasks did not always assign tasks and roles to individual students as this was students' responsibility to foster their autonomy. Therefore, their perception that the teacher

What follows is another example of such analysis. Figure 8 shows the minute 00:07:26 of the 22-minute-long screencast video recorded by Gemma while working on a task in the TILT course that required them to study the provided articles on the topic of Assessment in education.

### Figure 8.

*Working on Flipped Classroom Tasks at Home—Gemma's Self-Recorded Screencast Video*



In Figure 8, it can be seen that Gemma was reading the instructions for that specific task as posted on the course website. The instructions included the list of tasks to be done at home as a part of the flipped classroom instruction (seen at the central column of the screen), the list of assigned reading material (seen below the task list) and a list of optional reading material to be selected from and read by the pre-service teachers (seen on the right-side panel of the screen). In the Instructions column, the following text can be seen (verbatim):

Instructions:

You should read the two texts (below).

Choose one from the optional list as well.

Once you have read the texts carefully, imagine yourself as an ‘education authority/inspector’ with the assignment of evaluating proposed learning projects.

Based on your reading, think of 2 KEY questions that you would ask a teacher under inspection. For instance, you might ask ‘how do the proposed assessment activities relate to the presented content and learning activities?’

In the TILT course, these teacher-provided instructions for this specific task were implemented in November 2017. The mismatch between the amount of detail in the teacher-provided instruction and the perceived absence of teacher guidance is evident. Specifically, Gemma and Maria both perceived their teacher should provide more detailed instructions and provide a starting point for autonomous task completion (e.g., in the form of “the basics”, “characteristics”, and “ideas”, as Maria put it). However, the task instructions seen in Figure 8 contradict this perception. The way the task instructions were worded and outlined suggests the teacher did provide careful scaffolding to the pre-service teachers that would help ensure they were set for success in completing this task. This was achieved by providing step-by-step instructions that listed the essential expectations for task completion while leaving the task open-ended enough to foster autonomous decision-making. For example, as seen in the instructions, the pre-service teachers were required to choose a third article to read autonomously. By doing this, the teachers—i.e., the more knowledgeable other—also maintained their presence in the pre-service teacher’s autonomous learning, provided clear guidance, and facilitated the activation of the pre-service teachers’ Zone of Proximal Development (Vygotsky, 1978). All these features have been described as essential in



encouraging students to learn autonomously as the students are unlikely to possess the necessary skills to fully self-direct their own learning (L. Lee, 2016; Little, 2007). Hence, in summary, this section indicates the contradiction between Maria's and Gemma's perceptions of the teacher guidance compared to the actual guidance in autonomous learning required in the TILT course.

### ***Behavioural Conformity Resulting from Being Accustomed to Teacher Guidance***

The data showed evidence that Gemma's and Maria's being accustomed to teacher guidance led them to strategically comply with any teacher guidance they received in the TILT course, even when the preferred outcome was to overtly divert from it (Ross, 1987).

This was most pronounced in the telecollaboration activities. Namely, Gemma and Maria perceived any teacher-provided instructions as objective criteria to measure the success of their task completion. This evaluative power of the teacher instructions influenced their decision-making in the telecollaboration activities that the Spanish and the US students worked on autonomously as a group. For context, it is essential to explain that an essential prerequisite for telecollaboration was the telecollaborating partners' ability to establish group autonomy, which included making decisions, managing, and organizing their group work autonomously, i.e., without teacher interference. Even when teacher guidance is present, it has been found that during telecollaboration, students still tend to exercise autonomy by diverting from the task work plan as set by the teacher and instead implementing the task in the way they understand it should be implemented (Dooly, 2011). Judging by her accounts delivered in the online meetings, it seemed that Gemma was not comfortable with diverting from teacher guidance and the intended task plan in telecollaboration. In multiple online meetings, she complained about the US telecollaboration partners' refusal to fully adhere to the teacher instructions.

Specifically, Gemma was concerned that failure to follow teacher instructions would lead to a lower mark on the assignment, as shown in one of her statements describing this problem below:

Gemma: Yeah. I mean, one of the things that we have to do for the project *and Diana [their teacher] has told us this a lot of times* [emphasis added], is that our project needs to have an audience. So who, the [sic] what the children do, it needs to be for somebody. And they [the US students] didn't want that because that was more work and that was more and more planning and more, I don't know. I don't know. [...] because it's like, *OK, I need to give my children an audience, Diana is telling me to do that, so I need to do it. I mean, it's, it's, it's part of the assessment criteria, so how am I not going to do that?* [emphasis added] You know? (December 2017)

The above statement reveals Gemma's behavioural conformity with the teacher guidance provided, even if it was comparatively less than the orientation provided in other courses. According to her, she was trying to convince her telecollaboration partners to determine the audience for the children and thus complete the task “properly” by following the teacher’s instructions (“Diana has told us this a lot of times”, “Diana is telling me to do that”). This issue with following teacher instructions resulted in splitting the telecollaboration group into two smaller groups, each of which did a separate project in the end. It seems that Gemma’s perception was that as the teacher’s instructions were reflected in the assessment criteria, they should unequivocally be followed even in self-directed activities. When the US side expressed agency by deciding to divert from the task guidelines and the assessment criteria, she genuinely wondered: “it's part of the assessment criteria, so how am I not going to do that?” At the same time, Gemma's confrontation with other members of the telecollaborative group indicates a certain level of ownership of the learning process, even if

the purpose to ‘rebel’ is to follow the teachers’ instructions on the project outcomes to the letter.

In conclusion, this telecollaboration section implies how Gemma and Maria perceived themselves as accustomed to relying on teacher guidance and provides a possible underlying reason. Adhering to teacher guidance was a proven path towards achieving a favourable result, as encountered in their prior educational experiences. As highly academically successful students, they were worried about meeting the assessment criteria because it might be reflected in their final marks. Indeed, both Gemma and Maria—on multiple occasions (in the online meetings)—overtly stated that they were more concerned with getting a “good mark” in the TILT course than learning how to implement telecollaboration.

#### *Agency as a Reaction to Absence of Teacher Guidance*

Finally, it is important to note that Gemma’s and Maria’s being unaccustomed to the (presumable) absence of teacher guidance was what eventually drove them to be more autonomous and agentive, which was one of the planned outcomes of giving them more control in the TILT course. For example, towards the end of their final university year, in their practicum, they were expected to research on particular topics autonomously, which they both specified as an example of a task where they received less teacher guidance than usual. Gemma was uncertain about her ability to perform well in this task, but at the same time, she did not feel comfortable asking her teacher for help. She revealed that this was because she believed that since the teacher had asked her to autonomously search for appropriate articles on the given topic, she was expected to already know how to search for published papers. Hence, she opted to learn how to do it on her own. The transcription below shows the conversation Gemma had with the researcher when she was first assigned the task:

Gemma: Well, she's, she [the teacher] helps me with choosing the topic and, I don't know, it's not I don't know, maybe because it's just the beginning, *I don't know what is expected from me, but I'll figure it out, so...* [emphasis added]

Researcher: Well, at least the teacher didn't give you clear guidelines, but did assign you a tutor, no?

Gemma: Well, I think that well, because I haven't looked very well, maybe if I looked more carefully, I would find more information, but I don't think I'll find information on how to look for articles, because *I think I'm supposed to already know that by now* [emphasis added]. But I actually don't. But apart from that, my tutor has been very nice and very helpful. and, yes. *But I don't dare to tell her I don't know how to look for articles, you know* [emphasis added] [laughs]. (March 2018)

The exchange above documents the moment when Gemma expressed agency and decided to autonomously bridge the self-perceived knowledge gap. For her, between asking her teacher for help and doing it on her own, the easier way was a relatively harder one: to autonomously learn how to properly conduct research of academic articles. For Gemma, overtly asking the teacher for help meant admitting she did not know something that she understood that she should already have learned by then. The epilogue of this section is that Gemma, in fact, did find out how to research on her own, and she completed her task successfully.

### 7. 1. 3. Prioritising Intended Learning Outcomes over Self-Directed Learning

This theme emerged in the online meetings and the self-reflection materials produced in their pre-service teaching (see [Appendix M](#)). It was found that as pre-service teachers, Gemma and Maria had pedagogic beliefs and perceptions of teacher guidance in autonomous learning (Konig, 2012), which were beliefs and perceptions that applied to beyond themselves as learners and receivers of teacher guidance in the TILT course. These beliefs and perceptions were also related to how they—as intern teachers who had attended almost four years of teacher training and had already had some experience in the classroom and/or teacher planning—viewed and reflected on teacher involvement in autonomous learning in general and the need for teacher guidance in their pre-service teaching practice and classes they observed.

Specifically, data analysis indicated that both Gemma and Maria believed that, in general, students needed teacher guidance and that its absence in self-directed learning can be problematic for students' learning. Accordingly, by their own admission, Gemma and Maria prioritised attaining intended learning outcomes over self-directed learning in the pre-service teaching practices they implemented.

For example, during the intervention, Maria reiterated a belief that autonomous learning should entail a certain amount of teacher guidance. In the October 2017 online meeting, she stated that “you can't learn autonomously without no one [sic] who, uh, I, I don't know, I think that there, it should be a person who, who is guiding you. At least, maybe a leader.”

This statement illustrates Maria's belief that when it came to formal educational learning contexts, students needed some teacher guidance or leadership to help them learn autonomously successfully. From the statement, it can also be inferred that Maria's stance on

this was solid—she rejected the possibility that one could learn autonomously without a person guiding them or leading them. This stance appears to be linked to the previously described belief that Catalan students, including herself, were generally unaccustomed to the teacher guidance that they had encountered in the TILT course (principally textual instructions on the website which the students were expected to consult). Another quote from this same meeting illustrates this connection: “Because we [her classmates and she] spoke about this and we're all confused because, um, maybe it's because we are not used to this type of, of learning.”

When observing more experienced teachers in the classroom and/or designing and performing micro-teaching activities as part of their practicum, Gemma and Maria intentionally avoided implementing activities that were based on limited teacher guidance, such as the flipped classroom method that they had experienced as students. This has been interpreted as a demonstration of their belief that attaining learning outcomes were more important than practising autonomous learning—although it could also be related to their feeling that in a practicum, they needed to clearly demonstrate that they could ‘control’ the learners as they would be evaluated on classroom management. Indeed, it was evident that Gemma and Maria harboured reservations about whether learning outcomes could be attained in self-directed learning, in particular with younger children in primary education where they were carrying out their practicum. At the same time, the practicum entailed both practice and assessment of their teaching skills and knowledge. This may have incentivised them to avoid the risk of losing control in the classroom by implementing more teacher-controlled methods. This was particularly present in two areas that are discussed below.

### *Prioritising Intended Learning Outcomes in Pre-Service Teaching Practice*

In their pre-service teaching practicum, Gemma and Maria reiterated that for them attaining intended (content) learning objectives took precedence over fostering self-directed learning. This belief seems to have been reflected in their pre-service teaching practice. Both participants chose to provide close teacher guidance in the activities they co-designed and co-taught with their peers as a part of their practicum, rather than looser guidelines that might promote more opportunities for student autonomy. Their reasoning for this was that they were concerned about their students' ability to attain the intended learning objectives without teacher guidance.

This is interesting in light of one of the aims of the TILT course, which was to encourage experiential modelling (Hoven, 2006), whereby the pre-service teachers would implement the autonomy-promoting methods they were exposed to as students into their own teaching. At the pre-service teaching stage, when it came to limiting teacher guidance—strictly judging by Gemma's and Maria's accounts—one could conclude that experiential modelling did not have the intended impact. When asked about whether they took autonomous learning as a goal into account when designing the microteaching lessons for their practicum and telecollaborative projects, Gemma and Maria reiterated their prioritization of the intended learning outcomes. For example, in the December 2017 online meeting, Maria said:

Maria: You know, because we are doing something *to learn English, the American learn Spanish* [emphasis added], so we think that maybe it's necessary *the teacher there to guide them [sic], to help them* [emphasis added]. So, we are not doing flipped classroom. For example, there are moments that they have to work in groups and

maybe more autonomously, but there's always a teacher there to help them and guide them, so... (December 2017)

In the example above, Maria was stating her reasoning behind not choosing an approach that fostered greater autonomy and which might be more similar to what she had experienced as a student. Plausibly, she made reference to flipped classrooms as there was a shared understanding that this type of teaching and learning approach entailed self-directed learning. In the TILT course, the Spanish students were telecollaborating with the US students to design lesson plans for students studying English and Spanish, respectively. According to the quote above, Maria and her telecollaboration group considered that the flipped classroom approach was not adequate for their lesson plans—the reason being that students needed teacher guidance in order to properly learn a foreign language. It seems that in this context, Maria prioritized learning objectives (of the target language) over self-directed learning.

Both Gemma and Maria seemed to claim there was a lack of acculturation to the partial or complete absence of teacher guidance. They related it in part to an education system in which students generally were not accustomed to self-directed learning, at least in terms of the way in which they perceived the concept. Notably, neither Maria nor Gemma explicitly stated or speculated regarding the underlying reasons for this perception that Catalan students were not accustomed to self-directed learning. However, inferences were identified, for instance, in Gemma's writing in the self-reflection materials produced in her practicum. In one of her blog posts created as post-teaching self-reflection, she questioned the suitability of the flipped classroom method in the context of Catalan primary schools, considering that the official policies frowned upon giving homework to very young learners. This was documented in the highlighted paragraph of Figure 9, which reads:



Furthermore, some of the trends might not be in line with the school's ideals. Let's take the flipped classroom method as an example. It requires the pupils to do out of school work, which is strongly disapproved in many schools where policies defend not giving homework to pupils until they are in the upper cycle.

**Figure 9.**

*Excerpt from Gemma's Practicum Self-Reflection Blog*

In addition, we need to be realistic about the school's possibilities. Very often, the available material is quite limited. Laptops eventually stop working, batteries run down, internet connection is very often weak or even non-existent... And teachers must keep it into account and have alternatives at all times. There are a multitude of tools at teachers' disposal, but not having the suitable material to use them might thwart all efforts to incorporate them. In addition, the fact many teachers feel they lack some knowledge on the use of these tools does not help either.

Furthermore, some of the trends might not be in line with the school's ideals. Let's take the flipped-classroom method as an example. It requires the pupils to do out-of-school work, which is strongly disapproved in many schools whose policies defend not giving homework to pupils until they are in the upper cycle.

In contrast, teachers of all subjects can benefit from the use of some tools. In a context where technology is present in all spheres of our lives, it is not surprising to see how it has also come to offer good assets and alternatives to all the academic circles.

And the same applies to languages: all subjects provide solid ground for language learning. All teachers are language teachers in the sense that learning can't take place without communication and interaction. These interactions are excellent opportunities for language development.

**References**

Gonzalez, J. (2014). How to Teach an Inductive Learning Lesson. Cult of Pedagogy. [website]. Retrieved from <https://www.cultofpedagogy.com/inductive-learning/>

This statement demonstrates Gemma's awareness of the institutional limitations that teachers were facing in Catalonia and how they may affect the deployment of more self-directed learning, such as the flipped classroom method—which in turn could be the underlying cause of why Catalan university students were not accustomed to the absence of teacher guidance, as per Gemma's and Maria's perceptions.

***Prioritising Intended Learning Outcomes in Classroom Teaching Observation***

Gemma and Maria also revealed the prioritization of intended (content) learning outcomes attainment over self-directed learning practice in the classroom teaching observations during their practicum. In other words, as preservice teachers, the participants appear to feel that it is more important that the learners acquire knowledge about the intended content than about "learning to learn" or similar less tangible objectives.

This theme was particularly prominent in the data relevant to Gemma. For example, she revealed her disapproval of the observed teacher's restriction of teaching guidance in a class called the "language place". This class was different from the standard primary school classes because its purpose was for children to be creative and practise English conversation in a less structured and more autonomous environment. In the sessions, the in-service teacher handed out the materials to the students and asked them to create posters and talk in English while doing so without providing any specific instructions, directions, or expected outcomes. Gemma did not approve of the limited teacher guidance as she believed it was not conducive to the overall learning process, i.e., attaining the intended learning objectives. In the June 2018 online meeting, she highlighted the need for more teacher guidance and structure in such assignments:

Gemma: I would put I would set like, you know, requirements, you know, you need to have the title, you need to have the author of the posters, You need to have description of what's in the poster if it's a person, a person, if it's a video game a video, what's going on? You need to add, I don't know. Another piece of information um then it's OK. (June 2018)

The above quote clearly identifies Gemma's preferred approach that she found more optimal than absence or limited teacher guidance, at least for this specific class. The statement is also a demonstration of Gemma's ability to critically analyze teacher methodology with regards to how suitable she perceives the material and instructions are for the given audience and attainment of specific (content) learning goals. In this example, Gemma did not discard the autonomous learning activity per se, but she rather expressed her concern about whether it was meaningful and effective in the way it had been designed and implemented, i.e., whether

it led to the attainment of learning objectives in the specific scenario. This was evident in the exchange shown below:

00:19:08

Researcher: OK, so do you think these activities are a waste of time?

00:19:13

Gemma: I think this one, because it's not very well directed, I think so.

00:19:17

Researcher: So there is no positive outcome that could be drawn from this one?

00:19:23

Gemma: I mean, because also if they, if at least the design was nice and [unclear] that would be very nice. But I don't think they [the students] are, they just put pictures everywhere and that's it. And I think children come to language space to do posters and, you know, draw, put pictures na-na-na, that's it. *I don't think they learn the language* [emphasis added]. (June 2018)

The above excerpt shows that Gemma clearly held a strong opinion about this less teacher-directed and more self-directed teaching approach. It is evident from her qualified agreement with the researcher that it was a “waste of time”, which she expanded on by stating it did not have any positive outcome. Her use of the slightly mocking “na-na-na” illustrates the perceived level of less structured implementation of this activity wherein the students drew whatever they wanted with no rules to follow. For her, since there were no general rules nor specifications in the task, the outcome was both bad poster design and dubious learning objective attainment when it came to practising English conversations.

To understand why Gemma did not agree with the observed teaching approach, one must first understand that Gemma strongly believed in communicative language teaching (CLT) as the right method for students to learn a foreign language. More than once, she mentioned that, for her, language learning happened through meaningful interaction with other students and authentic language exchange. It seems that her perceptions of the activities she had observed as a pre-service teacher—which she assessed as having little to no teacher guidance—consequently limited the opportunity for meaningful and interactive communication in English (as a foreign language). According to Gemma, for such an activity to work, there must be some teacher guidance as otherwise, the students will not communicate in English—which is not only the means but also the goals of CLT (Savignon, 1987).

This belief that teacher guidance leads to meaningful activities was manifested consistently in the data. For example, in one online meeting from June 2018, Gemma said:

Gemma: So she mainly used Canva for kids to design posters and stuff and it was so that they would write some things in English but they ended up just putting many pictures and putting like a title or something and that's it. I think the idea was nice *but it should be more directed because otherwise kids do whatever they want and then they talk about video games or things like that. And the video games are in Spanish, there's no English whatsoever* [emphasis added]. (June 2018)

The emphasised fragment illustrates Gemma's belief that teacher guidance was essential to avoid less targeted activities that did not lead to learning or improvement of communicative competence in English. "Kids doing whatever they want" was seen as a suboptimal scenario, based on the observation that the learner did not tend to speak about any topic that was related to English (e.g., they preferred speaking about Spanish video games), nor did they use English to speak about the topic of the poster. Additionally, Gemma provided

her ideas about how she would have designed the activity. She would have been stricter about the requirements regarding what information should be on the posters and what other contextual information was required for completing the activity successfully. It is important to highlight that she did not reject the idea of students making autonomous decisions, but she called for some basic requirements to be set in order to make autonomous learning activities more meaningful.

Gemma's responses to the pre- and post-intervention questionnaire corroborate the interpretation that she associated the absence of teacher guidance in autonomous learning with a lack of attainment of the learning outcomes. In her opinion, the teacher should be present in students' learning activities in order to ensure the activities are properly organized, implemented, and directed befittingly. Her vision of the teacher's role is reflected in the response below, which confirms her preference for providing students opportunities to practice English conversation skills in a meaningful way that leads to learning:

Gemma: [...] it should be the teacher who arranges the telecollaboration activities and the purpose of it, and the same goes for the reading materials, which are very specific for the subject and need to be the same for all pupils, in order to *engage in rich discussions* [emphasis added]. (Post-intervention questionnaire, June 2018)

Gemma's post-teaching self-reflection blog post and Prezi presentation created in practicum also corroborated the finding that as a pre-service teacher preparing to become a teacher one day, she considered teacher guidance essential for making sure purposeful conversation took place among students. She and her co-teacher designed a telecollaboration teaching unit in which primary level students were to meet students from another Catalan school via Skype and perform activities such as showing their favourite toy or object to the students on the other side of the telecollaboration exchange. The telecollaboration activities

Gemma and her co-teacher designed were not “real” telecollaboration as it was simpler, more teacher-directed and fit within the description of “Show & Tell”. As such, this was not a common telecollaboration design (Guth & Helm, 2010), but it did fit within the parameters of the ‘Collaborat-o-meter’ presented as potential outlines for initial telecollaboration in the TILT class.<sup>2</sup>

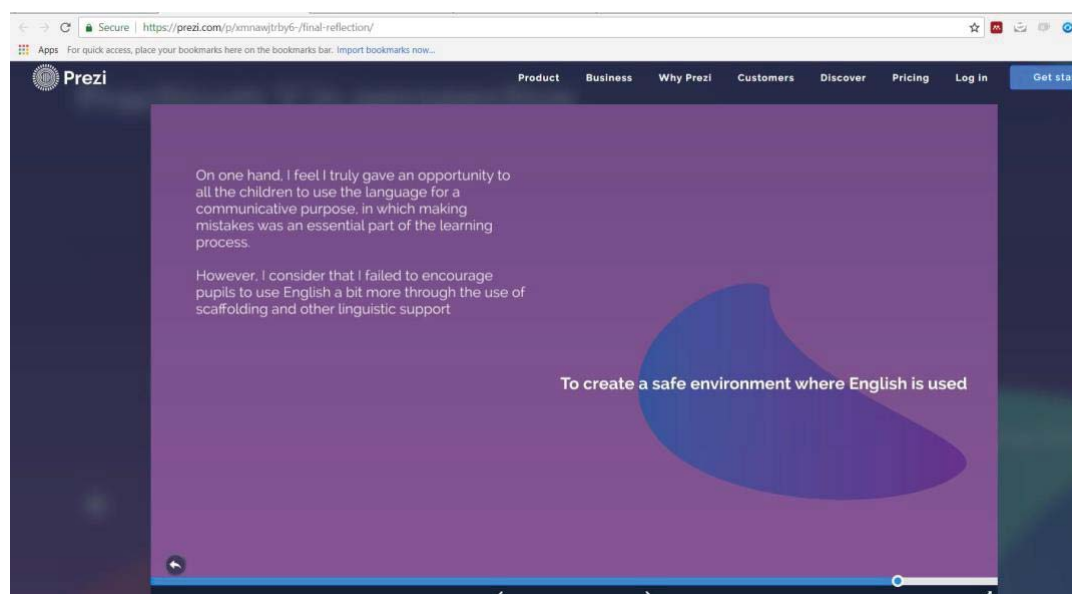
In Figure 10, it can be seen that she wrote, “However, I considered that I failed to encourage pupils to use English a bit more through the use of scaffolding and other linguistic support.” Therefore, this provides another example of her prioritisation of teacher guidance as a vehicle for attaining intended learning objectives.

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<sup>2</sup> This schemata goes from lowest to highest level of complexity in telecollaboration. Lowest: Show & Tell (information exchange): Probably one of the more common types of telecollaborative exchanges, this usually involves introductions, information about schools, communities, countries, hobbies, etc. There is language practice but collaborative learning is minimal. Middle: Zig-zag (parts exchange): This type of activity may involve group work in the local classes so that the learners can prepare something (information, key features of the output, etc.) to share with the other class. Each partner is responsible for part of the project output. Highest: Cogwheels (interdependence): This is the hardest type of project to design and implement but it is the most rewarding. It involves complete interdependence between the online partners. TILT students were encouraged to begin at the lowest level and as they gained confidence in their abilities to work upward on the scale of complexity.

**Figure 10.**

*Excerpt from Gemma's Prezi presentation*



During the follow-up study, Gemma validated all the aforementioned findings. In the self-reflection sheet, she was asked to reflect on the following statement from the pre-service teaching period:

Gemma: Well, I would like to help students be more proactive. [in relation to autonomous learning]

So, in this case, and mean, I think I focus more as a teacher of primary school students, and I think that what I would like to improve is to show my students how things that they are learning are relevant for them. (October 2017)

In December 2020, she followed this up by stating, “I do agree. Thinking about my students from last year (6th grade), they are comfortable being fed activities to complete and do not make an effort to try to understand why they do them.” In saying so, Gemma connected her pre-service teaching beliefs and perceptions about teacher guidance with her experience as a novice in-service teacher. She confirmed that what she observed as a pre-service teacher also applied in the context of her students at the in-service teaching level. This perception of

children needing teacher guidance and direction for learning to happen was present during the entire intervention and was later transported into her in-service teaching, as we will see in Chapters 8 and 9. A bit contradictorily, in this instance, as the teacher responsible for the learners' development of autonomy, Gemma does not mention that she should be the one providing them with the appropriate guidance for this to come about.

#### **7. 1. 4. Summary of Findings**

Below is a summary of the findings for the supratHEME of teacher guidance, as related to the first research question (what are the two study participants' beliefs and perceptions of autonomous learning during their final university year as pre-service teachers?):

- Gemma and Maria believed they were accustomed to having teacher guidance in their learning and that they should receive more teacher guidance in the autonomous learning activities they were participating in. This was linked to their perception that they were not trained to learn in a more self-directed way. They preferred to comply with teacher guidance and instructions when working with their telecollaboration partners.
- Gemma and Maria believed that students needed teacher guidance in autonomous learning in general, especially in the form of clear instruction on what to do in a task, on points to focus on when self-studying course material, and initial ideas that would serve as a starting point in their self-study. Nonetheless, they were able to agentively bridge the perceived absence of teacher guidance and execute their tasks successfully, which was, for example, one of the planned outcomes of giving them more control in the TILT course.
- Gemma and Maria perceived they received insufficient instruction in the TILT course. This was contradictory to the actual guidance provided in reality, as the



teacher provided clear and detailed guidance in the form of instructions and scaffolding for their autonomous learning activities. Their perception likely stemmed from the “extra effort” they needed to invest in order to access the teacher instructions and scaffolding on the course website.

- Gemma and Maria believed that restricting teacher guidance could interfere with attaining learning objectives in their practicum students. This was linked to their prioritisation of attaining intended learning outcomes over promoting self-directed learning in their pre-service teaching practice and the classes they observed. Gemma was especially concerned with how self-directed learning may not be compatible with communicative language teaching (CLT), which she believed was the right method for students to learn a foreign language.

## **7. 2. Teacher Feedback**

### **7. 2. 1. Supratheme Overview**

The third most frequent supratheme in the data was *teacher feedback*, which was identified 24 times in the pre-service teacher stage. In this study, this term refers to teacher-provided verbal validation and assessment of performance on tasks done. In this particular case, it is used to refer to Gemma and Maria’s performance in the TILT course on tasks done via self-directed study in the flipped classroom component of the course. The accompanying data analysed pertains to Gemma’s and Maria’s beliefs and perceptions of teacher feedback provided to them during the pre-service teaching stage, as well as their general beliefs and perceptions of the role of teacher feedback in autonomous learning.

Like teacher guidance, teacher feedback also belongs to the domain of teacher role in autonomous learning and is seen as an important factor in the development of learner autonomy (Benson, 2007; Kim, 2014; L. Lee, 2016; Snodin, 2013). The shift from teacher-

provided feedback to more self-reliant forms of providing feedback, such as self-assessment and peer-assessment, has been seen by some as useful practice in fostering autonomy (Kim, 2014; Mynard & Troudi, 2014). Accordingly, this supratHEME focuses on the participants' beliefs and perceptions of the absence versus presence of teacher corrective feedback and concrete information on their performance in the self-directed study activities they were engaged in.

There are two themes, described as follows within the supratHEME of teacher feedback:

1. Contradiction between perceived and objective teacher feedback in the TILT course.
2. Perception of peer-assessment and self-assessment as less effective than teacher feedback.

### **7.2.2. Contradiction between Perceived and Objective Teacher Feedback in the TILT Course**

The findings in this theme were obtained from the online meetings, the online meetings at the follow-up stage of the study, and the pre- and post- intervention questionnaires. For instance, already in the pre-intervention questionnaire, Gemma stated her stance about the importance she thought feedback had in learning in general:

Gemma: [I would like to be assessed] In any way that could provide me with useful feedback that could allow me to keep improving. I think that all assessment provides useful information (although some feedback contains certain kinds of information that suits best the task/objectives). (October 2017, pre-intervention questionnaire)

More specifically, similar to teacher guidance, Gemma and Maria indicated that they needed teacher (or expert) feedback in autonomous learning. Both Maria and Gemma emphasised the importance of this feedback for their learning. For example, in the November 2017 meeting, Maria stated that “Hmm. [You need a] Teacher who says to you: “um, you

have done this good.” For example, if we have to have a teaching sequence. [...]”. Likewise, when Gemma was asked why she thought she needed teacher feedback and whether she thought she could fail the course without it, she said:

Gemma: I hope not. But I mean, who knows? We know nothing. And what we were reading and recording our opinions on the articles and everything. And I don't know. I think that she could have told us, OK, that's the way to go, or um, you need to go deeper on these or...she didn't give us any feedback on anything, I think, no? (February 2018).

These findings were validated later at the follow-up stage in the online interviews where Gemma and Maria confirmed that they perceived teacher feedback as necessary in their autonomous learning at the pre-service teaching stage. However, they perceived that sometimes the feedback they received in the self-study component of their courses as insufficient, likely because it was not always delivered in the manner they were accustomed to. Firstly, when they were engaged in self-directed learning, e.g., in the flipped classroom or student interaction in telecollaboration, the teacher was not always physically or virtually present or involved in their study activities; thus, teacher feedback was not “immediately available” (Canals et al., 2020). Secondly, on other occasions, Gemma and Maria perceived that when the teacher provided feedback, it was open-ended and not binary (correct/incorrect), whereby they seemed to prefer the latter, as exemplified by Maria’s statement:

Maria: [...] I don't know, maybe you're, you're not an expert on doing teaching, say. So maybe you *need* someone who says, “okay. Um, you have done it well, but here, um, there's something that you can improve or here, you should use another word to say, blah, blah, blah because this word is not.... I don't know.” (November 2017)

The word “need” is emphasised as Maria emphasised it in her pronunciation. Here, she described the kind of information she perceived as necessary in the learning process. It is clear that Maria considered the teachers as the authority when it came to feedback provision due to their assumed superior knowledge of the content being dealt with (in the TILT course, Maria was a pre-service teacher with limited teaching experience while her teacher was an experienced teacher educator). It is interesting to also note that Maria was specifically referring to corrective feedback that identified the items that were not “good” and needed improving as what was needed for learning. In the quote, she did mention positive reinforcement once— “(Um, you have done it well [...])”—but it was evident that her focus was on the corrective feedback.

However, this perception of insufficient teacher feedback contradicted the objective reality as the teacher did provide feedback to all the student input. For example, she always ended the classes (the in-class component of the flipped classroom) with a roundup of her stance on the issues being presented (although she did not impose her opinion as correct but rather encouraged the pre-service teachers to decide for themselves, which may have been interpreted by Gemma and Maria as “insufficient feedback”, as said before). As it has been already pointed out, the flipped classroom method emphasised participation, engagement, and self-directed learning as desired outcomes in addition to reaching the “correct” conclusions. This meant that more often than not, the learning objectives were for the pre-service teachers to autonomously synthesize highly complex information enough to be able to ‘tease out’ the details with the teachers and peers in class discussion later. This means that the pre-service teachers needed to come to the class with an already formed general understanding of complex topics (e.g., pedagogical approaches) that do not readily have correct/incorrect answers. It is in the class discussions that they received ample feedback (both from the teacher

and peers) regarding whether they had *interpreted* correctly or incorrectly the information they had been given. (They were then asked to apply this in their project designs, which is where more formal assessment actually took place.) In conclusion, it can be inferred that it is likely because the corrective feedback they received was sometimes delayed—due to the instructional design employed in the TILT course and since the teacher did not impose her opinion as the only correct answer—that Gemma and Maria felt that they did not receive sufficient feedback. This may indicate a lack of readiness to undertake the responsibility of making independent decisions for themselves in the autonomous learning process and when dealing with some temporary ambiguity, which is a similar pattern to the one described in the teacher guidance section.

It was abundantly evident that Gemma's and Maria's perceived need for more teacher corrective feedback in the TILT course largely came from their concern with the possibility of being wrong and not being made aware of it. In the online meetings, Maria described feeling confused when teacher validation was not immediately available:

Maria: And I feel a little bit confused because I can, in, I can, when I read something, maybe I can think, "okay, hmm, here it is said that in A" and my classmates says, "no, no, no, no. It's not A, it's B". And who was right? Diana [the teacher] is not saying, "you, you're right."

In the above passage, Maria highlighted the potential disagreement between her and her peers during the in-class discussion where, as mentioned previously, they came with already formed general notions about the topic being dealt with. To her mind, when the teacher's "final verdict" of which student has interpreted the course materials correctly was not immediately available, she felt confused. This sometimes led to her agentively seeking

what she needed, i.e., the feedback from the teacher in the TILT course, as reflected in the passage below:

Maria: And so one day in, in class, we did a definition about, uh, I don't know, I don't remember, a definition. And, I asked her, "uh, Diana, as a class we did [sic] a definition" and Diana said to us: "um, it's okay for you, everyone likes this definition?" And I ask her: "Diana, do *you* [emphasis added] like this definition [unclear 00:38:13] for, for saying, okay, this definition is okay, but she says, "Oh no, no, I don't have to say this." Like, *so that means that it's okay? That it's not okay?* [emphasis added] (October 2017)

Maria finished the above account with a rhetorical question (emphasised above), indicating that she perceived closure was needed in the form of concrete information on what the teacher, i.e., the person with evaluative power, assessed as an appropriate definition of the discussed term.

### **7. 2. 3. Perception of Peer-Assessment and Self-Assessment as Less Effective than Teacher Feedback**

The theme of teacher feedback as needed in autonomous learning emerged in relation to two things: 1) perceived absence from the TILT course, and 2) in relation to the occasions where the teacher (both in the TILT course and other courses) asked Gemma and Maria to self-assess their deliverables or engage in peer-assessment in order to promote self-directed learning and assumption of greater responsibility for their learning. Thus, this theme refers to Gemma's and Maria's beliefs and perceptions of peer- and self-assessments as alternative forms of assessment in their self-directed learning.

Overall, it was found that Gemma and Maria perceived that self- and peer-feedback were pedagogically less effective than teacher feedback, which, as we saw earlier, they found

to be essentially valuable in autonomous learning. This emerged from the online meetings, online follow-up meetings, and pre- and post-intervention questionnaires.

Before giving evidence and further describing this finding, it is important to explain that both self-assessment and peer-assessment are considered important tools in autonomous learning. Self-assessment is a form of self-monitoring and provides instant feedback to the learner as to their performance when it is done with self-awareness and knowledge on how to do it properly. Ideally, autonomous learners should be able to self-assess their learning and not rely solely on teacher feedback. However, for it to be done properly and for issues to be avoided, training and a great amount of self-reflection are required (Gardner, 2000). This means there is a role for the teacher even in self-assessment and that the learner's involvement in the process may vary significantly depending on the case. Similarly, peer feedback is believed to be a beneficial tool in developing autonomous learning skills. It is often discussed as an added form of assessment (accompanying teacher feedback) that provides valuable information to the learner about their progress (Falchikov, 2004). In the TILT and some other final-year courses, peer-assessment and self-assessment were fostered as essential tools in autonomous learning.

Gemma raised a concern with the way her practicum teacher handled the evaluation of their micro-teaching lesson plans. Her perception was that the teacher did not provide them with detailed feedback on their lesson plans before they implemented them in the classroom. Gemma's perception was that it was done to promote autonomous learning by encouraging them to take responsibility and self-evaluate their learning lesson. However, Gemma also objected to this as she perceived this methodology as being the prioritization of autonomous learning over helping the students ensure their teaching plans were solid. This is illustrated in the excerpt from Gemma's conversation with the researcher below:

Gemma: And actually we never got feedback on our teaching unit before implementing it, before implementing. And because she wanted to give us more freedom and to make us ... [pause]

00:10:45

Researcher: More autonomous maybe?

00:10:48

Gemma: Yeh, in the seminars, she was there but she wanted us to do it ourselves, something. And it didn't really work because we have, had never done this this way. (June 2018)

In the above exchange, Gemma was critically reflecting on the teacher's decision to encourage the pre-service teachers to self-assess their teaching plans instead of providing concrete feedback. Gemma explicitly claimed that that strategy was not effective ("it did not work") because they, the pre-service teachers, did not know how to self-assess their plans as they had neither done it before nor had they worked on their teaching plans in a more self-directed manner. However, what is interesting to note is that despite this perception, by her own admission, Gemma actually experienced no difficulty with implementing the teaching plan into her micro-teaching activity, and the absence of teacher feedback did not seem to affect her success in pre-service teaching.

This same idea regarding the necessity of teacher feedback can also be seen from Maria, as evidenced in the exchange below:

Maria: It's because you are not an expert, so maybe you can, um, be wrong.



And how do you know if you are wrong? Yes, maybe you can go to a book, read the book and then see what's ... *But I think that it's really difficult to you assess [sic] your own learning* [emphasis added].

[00:15:00]

Researcher: Okay. Do you think that you should be assessing your learning?

[00:15:08]

Maria: Um, I think that I should be conscious about what I'm learning.

And like that I'm doing something, um, useful. But I don't know. Um, *when can I say, hmm, that what I'm saying or what I'm learning is okay or not?* [emphasis added]

(November 2017)

This exchange reveals that Maria was focused on her attainment of learning objectives in the TILT course. Her prioritisation of teacher feedback over self-assessment was influenced by her belief that she should be aware if she was learning or not, but not necessarily evaluating her own achievement in the learning process. She perceived teacher feedback as more suitable to communicate to the student whether they were reaching the intended and relevant learning objectives. In contrast, Maria clearly questioned the potential of self-assessment to communicate accurate information on whether learning was happening as a result of study activities.

Likewise, the participants also perceived peer-assessment as an insufficient assessment tool when implemented as an alternative to teacher feedback in the TILT course. This was confirmed in the online meetings, where Gemma reiterated that she specifically believed teacher-provided feedback was apt for measuring the attainment of objectives. Both Gemma and Maria perceived it necessary that the outcomes of their autonomous study be validated as

attained or not attained. They also believed it necessary that any results achieved via self-study be evaluated as correct or not correct. They believed a teacher's evaluative power and accuracy was superior to self-assessment and peer feedback—hence, teacher feedback should not be completely replaced with peer or self-assessment. As mentioned earlier, for Maria and Gemma, teacher feedback entailed accuracy and usefulness as it was provided by the persons they considered experts. This can be seen upon examination of another excerpt from an online meeting in which Maria discussed peer feedback as a feedback type they were encouraged to receive and give in autonomous learning. In it, Maria explained why she thought peer feedback could never substitute teacher/expert feedback:

So, the teacher has to do the final, like, the, the expert. [...] because *sometimes your classmates, try, try to, to say the things like if they were teachers* [emphasis added]  
 [...] like “I know everything and this is wrong, wrong, wrong,” ...no. (November 2017)

Here, she contrasted teacher feedback—which she considered as expert feedback—against peer feedback, which for her had less validity than teacher feedback. In the autonomous learning that she experienced in the TILT course, she seemed to perceive peer evaluation as carrying too much risk of being based on erroneous judgement as the peers are not experts on the content. This is especially evidenced in her categorical rejection of it reflected in the conclusion of her statement with a short “...no.”

It is important to point out that neither Maria and Gemma rejected peer feedback and self-assessment as not useful overall —rather, they believed teacher feedback was superior in accuracy and pedagogic value and thus should accompany self-evaluation and peer feedback when they are used. It is reflected in Maria's and Gemma's statements below given in the same online meeting in February of 2018:

Maria: So maybe only one feedback from all that for me it's not enough. So, I know that, I don't know a lot of things and I can investigate to know even more. And I could be an expert. But in a course a teacher has to mark it, I think that. Well, at least me, I need some, some guidance, no, not some guidance, some *feedback* to know if my expert point of view is good or not.

Gemma: We know nothing. And what we were reading and recording our opinions on the articles and everything. And I don't know. I think that she could have told us, OK, that's the way to go, or um, you need to go deeper on these or...she didn't give us any feedback on anything, I think, no?

Here, Maria stated that she could not rely solely on her self-assessment in the TILT course, even if she were the expert on the topic. She was referring to the self-directed study of the course materials at home as part of the flipped classroom method. She overtly emphasised the need for formal teacher feedback (*italic emphasis her own*) as a way to validate her point of view. Likewise, in Gemma's quote, she confirms Maria's previous statement that more teacher feedback was needed in the TILT course. What particularly stood out the most was her first sentence: "We know nothing" (= "we are not experts"). Like Maria, she was referring to the self-study of the course materials and the perception that the teacher did not give a clear answer if their ideas and interpretation of the articles they read were correct or not (which, as we saw earlier, contradicted the reality).

In sum, the parallels between their perception of self-assessment and peer-assessment can be inferred from the fact that Gemma and Maria did not perceive either themselves or their peers as experts on the TILT course material or autonomous learning in general (see section [6.3. Uncertainty about own autonomous learning ability](#) for further details).

Furthermore, it is also interesting to mention that when triangulating these findings with the

participants' responses to the pre- and post-intervention questionnaires, it was found that neither of them perceived the ability to constructively use others' feedback in their learning as an area they thought they needed to improve, which aligns with their beliefs and perceptions of peer feedback expressed in online meetings.

#### **7.2.4. Summary of Findings**

Below is a summary of the findings for the supratHEME of teacher feedback, as related to the first research question (what are the two study participants' beliefs and perceptions of autonomous learning during their final university year as pre-service teachers?):

- Gemma's and Maria's perception of insufficient corrective feedback contradicted the objective teacher feedback they received in the TILT course, likely because that feedback was not immediately available and did not always impose one answer as the only correct one.
- Gemma and Maria believed that they needed teacher (or expert) corrective feedback in autonomous learning to validate the results of their self-study as correct or not correct. Nonetheless, when the feedback was not immediately available, they were still able to complete their tasks successfully and agentively (on their own initiative) ask for feedback when they perceived it was needed.
- Gemma and Maria believed that teachers are superior knowledge holders and are thus more able to verify their learning than other students (via peer-feedback) or themselves (via self-assessment). Gemma and Maria perceived teacher feedback as superior to peer-assessment and self-assessment.
- The above beliefs were linked to their concern with learning and belief that self-assessment and peer evaluation carry too much risk of being based on erroneous judgement since students are not subject matter experts.

## 7.3 Control Shift

### 7.3.1. Supratheme Overview

The findings in the supratheme *control shift* pertain to Gemma's and Maria's beliefs and perceptions related to shifting control from teacher to student. Here, control shift refers to deliberate action on the teacher's part to give or transfer control over the learning process from teacher to student—as an integral process or outcome in autonomous learning and a way to promote autonomy by strategically fostering their ability to critically think about the tasks they are given or the learning objectives, e.g., in a classroom task (Reinders, 2020; Wang & Ryan, 2020). Control shift also refers to students making decisions on aspects of their learning that traditionally belong to the teacher, such as deciding on the content that is to be learned and the design of the activity.

In the case of Gemma and Maria, at the pre-service stage, control shift referred to their beliefs and perceptions about the amount of control they received as pre-service teachers taking part in activities that promoted autonomous learning and general perceptions beliefs about the control shift in autonomous learning. The following themes are described under this supratheme:

- Positive attitudes towards control shift in general
- Perceptions and beliefs of control shift when implemented in real-life practice

### 7.3.2. Positive Attitudes Towards Control Shift In General

Overall, it was found that Gemma and Maria had a generally positive attitude towards control shift in autonomous learning. This emerged from the online meetings, online follow-up meetings, and the pre- and post-intervention questionnaires. Specifically, they believed that students should generally work together with teachers and be included in decision making in general. This general belief is, for example, reflected in Gemma's response noted in the pre-

intervention questionnaire in October 2017, where she stated, “I don't think there is something where students should have little control over. At the end of the day, it is them, their needs and potentials that education is aimed to [sic].” When asked to specify which areas students should have control over and to what extent, Gemma did not single out any area and instead elaborated as follows:

Gemma: Yeah, I, so I'm not very sure about these questions because I think that students should have at least a little bit of control over everything in their learning because it's for them. They are the protagonists, so they should at least, together with the teacher who knows how to do this, decide. And not only on the things that I ticked, but also in everything, and even, even if the teacher ends up deciding at least there needs to be a conversation.

This illustrates Gemma's general belief that students should be given a certain degree of decision-making authority in the classroom regardless of the topic being decided. However, it also highlights the theme that was present in Gemma's and Maria's beliefs about teacher guidance and feedback, which is that one's competence played an important role in the amount of control that was to be given to them. By saying that the teacher was the one who knew “how to do this”, she referred to the fact that generally, teachers were more trained than pre-service teachers in all matters related to teaching methodology and learning. From this, it can be inferred that Gemma's belief was that while students should share control with their teachers, it is the teacher that should ultimately have more control than students and make the decisions that fundamentally affect the course and learning experience.

This belief also emerged in the responses given to pre- and post-intervention questionnaires. Both Maria and Gemma indicated that the teacher should have control over the aspects where teacher expertise was required, such as the assessment methods used in a

course and teaching methodology or approach implemented (e.g., flipped classroom).

However, when it came to the specific areas of control, there was a difference between the participants. For example, Gemma selected the following learning objectives in the pre-intervention questionnaire: classroom activities and learning content. In the post-intervention questionnaire, she selected technological tools used both in classroom and telecollaboration, reading materials and other resources (videos, etc.), and task design as areas where students should have control. In contrast, Maria selected fewer areas—technological tools and task design.

### **7.3.3. Perceptions and Beliefs of Control Shift when Implemented in Real-Life Practice**

A contradiction was found between Gemma's and Maria's beliefs and perceptions when it came to them taking over control from their teacher as opposed to the more general beliefs and perceptions they stated earlier. Although they clearly believed that students should have some control over their learning, their attitude towards the possibility of themselves taking over some control as pre-service teachers were less positive and more uncertain.

For example, in Gemma's case, her general beliefs and perceptions were revealed not to apply when she considered a scenario in which she, as a pre-service student, assumed more control in her learning. This was because she did not consider herself autonomous enough to take on that level of control (see [section 6.3. Uncertainty about their own autonomous ability](#)). In the October 2017 online meeting, when she was asked to expand on her pre-intervention questionnaire response, she drew a line between students in general and herself as a student when she stated, "I think [students should have control over] almost everything but then for me, because I'm not very autonomous, I don't know how to do things."

This statement was one of the many reiterations of Gemma's belief that she was not "very autonomous overall". In it, she linked general autonomous learning skills with being

able to take control (“know how to do things”) — thus, one can reasonably infer she meant to say that since she was not very autonomous, she would struggle to take control over her learning. This finding was validated at the follow-up stage of the study, in the December 2020 online interview when Gemma confirmed that she indeed believed that she was not autonomous enough as a learner to take more control. It also appears to be reflected in her general assessment of her own pupils in the same interview: “[They are comfortable being fed activities to complete.]”

In addition, it was also found that their beliefs and perceptions related to taking over control in learning were connected to their theories and beliefs about what is “realistic” in their institutional context. For instance, during her phase as a preservice teacher, Gemma pointed out that in order for her to take more control as a learner in the TILT course, she would first need to equip herself with more knowledge and practice on the topics that the course material was about. However, she considered this to be unrealistic within the intended timeframe of the course. In an online meeting, when she was asked why she felt she could not take more control over her learning in the TILT course, she responded that the TILT the tight schedule did not allow them sufficient time to acquire the content knowledge outlined in the course syllabus. The pace of the course did not facilitate the students to take control because there was neither time nor opportunities for further practice and implementation of what they had learned autonomously:

00:19:29

Gemma: Um, I think I at least should have some practice on the topic, I don't know, in whichever way, but just reading it, it's surely not enough. And, I don't know, I should, I think we should do some discussions and, ah, I don't know, do more stuff. Reading is not enough for me, for example, getting some examples or, erm, looking on the web



of, for example, if we're talking about, I don't know, communicative language teaching or something, So we could see some examples of how it's applied in the classroom, do more things related to the topic, at least.

[...]

00:20:19

Gemma: But, of course, it's every week a new topic, so it's not easy, and that would require a lot of work. (October 2017)

In the above excerpt, the first part contains Gemma's elaboration on why she perceived that she could not acquire the necessary content knowledge to be able to take more control over her learning via flipped classroom activities. The second part of the excerpt reflects her perception that it was not realistic to expect the students to be able to take more control over their learning in the TILT course was because its accelerated timeline did not leave space for the control shift process to take place since, to her mind, the students should first possess sufficient content knowledge. This demonstrates her perception about how students may come to take more control in their learning—she perceived it to happen gradually by first following the mastery of content knowledge.

Likewise, Maria's perception seemed to be that there was simply not enough time for them to take over more control in the TILT course due to its accelerated timeline. She also felt that they would be risking attaining learning objectives if they were to be given more control, as seen in the excerpt below:

Maria: And if we don't have enough time to, to do all this process [take more control in the TILT course], I think that we are not learning and we are only, um, sending

tasks or reading text and then doing ... But maybe if we had a little bit more time to do it more, um, slowly, I think that it would be better for everyone, but we don't have that time. (October 2017)

For example, Maria perceived it more realistic to take small steps in giving more control to students. One method she suggested was to have the teacher control what is to be done (the task) but raise awareness of the different ways to complete the task and encourage the students to select their preferred way. As seen in the quote below, she sees this as a way to enact control shift in the TILT course without necessarily jeopardizing attainment of the intended learning objectives:

Maria: [...]. Um, I was thinking here, so, here it was, um, it was a point that it could be seen, uh, from two different ways. There's one, uh, Diana's tasks. So Diana, she could say there's, here there's a task, but you have different ways to, to do this task instead of only one. And the other is to, she's making us do a project, but, but there's like a, an outline and we have to follow this outline. If we have another, if you want to do it in another way, we can, we to be more flexible. (October 2017)

Similarly, Gemma held an opinion on what a realistic division of control between the teacher and students should be like. For instance, she suggested that students could have partial control over choosing appropriate activities after the lesson topic has already been decided on by the teacher. In addition, she cautioned against accepting students' decisions without first considering if they are realistic —i.e., whether they fit the course timeline, the intended learning objectives and the instructional design applied —as seen in the excerpt below:

I think that... we are working on a project students could provide some ideas for the teachers for example we're going to work on houses around the world and so students

could suggest activities to do like building mockups or something. I think students should be able to suggest ideas and then discuss ok, is this viable or is this completely far fetched and we should be more realistic? (October 2017)

However, it could be seen that Gemma believed the teacher should have complete control over the more strategic decisions such as choice of course materials and organization and management of the syllabus and programme so that it runs smooth:

For instance, it should be the teacher who arranges the telecollaboration activities and the purpose of it, and the same goes for the reading materials, which are very specific for the subject and need to be the same for all pupils, in order to engage in rich discussions. (Online questionnaire, October 2017)

In the follow-up study, Gemma verified that as a pre-service teacher, she indeed believed the teacher should handle organisation and management of the class while potentially including the students in conversation:

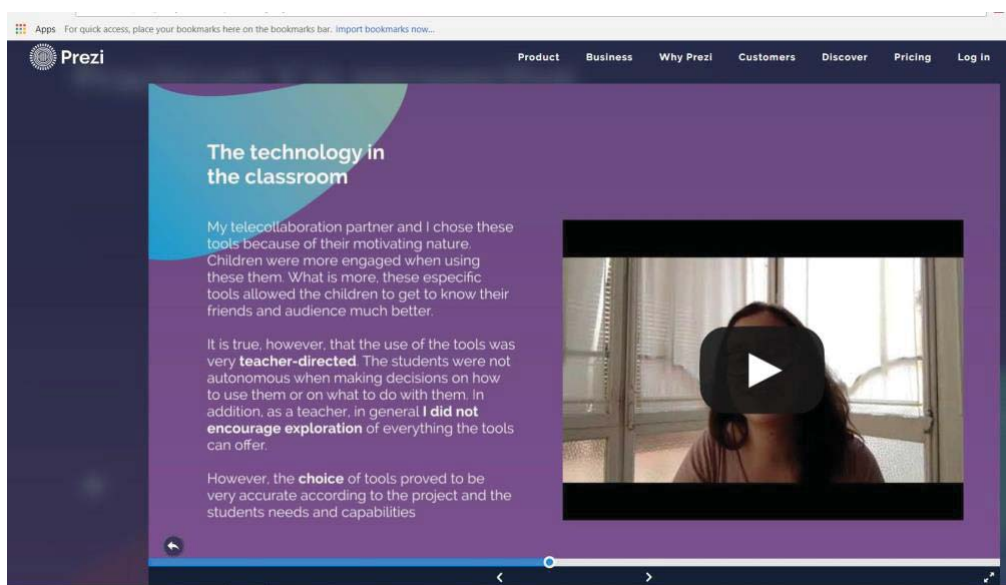
I do agree with my previous statement. I think that children should become aware and have some control over everything regarding their learning process to become autonomous learners. However, in order to facilitate the organisation and management of the class, there are things the teacher should do herself, but which can be done in class altogether or be previously discussed with the pupils. (December 2020)

Therefore, it can be seen that Gemma and Maria agreed that giving greater control to students should be done strategically—in a way that supports the development of their autonomy and promotes the inclusion of students' needs and preferences while preserving the intended instructional design and teacher-made decisions about the practical aspects of the course. They also perceived it as “more realistic” to have the teacher control the aspects that were related to the organisation and management of the course and leave decisions that do not

impact the course dynamics, direction, or the schedule to students to prevent “chaos” in the classroom/course. Finally, it is important to note that as pre-service teachers, neither Gemma nor Maria believed the students they taught in their teaching internship were autonomous enough to take over more control if given to them. As a result, they did not implement activities that required autonomy from students, as demonstrated in Figure 11 below.

### Figure 11.

*Excerpt from Gemma’s Self-reflection Prezi Presentation*



This presentation was created after implementing her teaching unit in practicum. In it, reflecting on how her teaching unit went, she pointed out:

It is true, however, that the use of the tools was very *teacher-directed*. The students were not autonomous when making decisions on how to use them or on what to do with them. In addition, as a teacher, in general, *I did not encourage exploration* of everything the tools can offer (June 2018)

The emphasised fragments were originally highlighted by Gemma in the Prezi presentation. They indicate Gemma’s self-awareness and taking responsibility for not

consciously fostering the control shift via autonomous decision-making and exploration of digital tools in the activities she taught.

Interestingly, however, Gemma and her co-teacher did initially opt to implement telecollaboration in the teaching units, partially because they wanted to replicate their own learning experience in the TILT course and because they wanted to foster autonomy in learners (Gemma explicitly indicated this in her self-reflection blog posts written post-teaching). In the online meetings, she described that they consciously decided to arrange the telecollaboration activities as fully teacher-directed as they did not think the students—being very young learners in primary school—would be able to self-direct and take over the control given to them. This was in line with the guidelines and suggestions given to them in the course on telecollaboration to start small (“Zig-zag” collaboration).

Her perceptions on control shift following the internship teaching experience are best summarized in the following statement she gave in the post-intervention questionnaire in June 2018, where she stated, “I think that students have an optimistic (or relaxed) view of the learning [sic]. Thus, if complete freedom is given to them, they will most likely use it against themselves.”

Maria did not complete the entire internship teaching subject as she paused her studies before the academic year ended in 2018. Despite this, she described her lesson plans and said that she and her co-teacher did not implement flipped classrooms, telecollaboration, or any other method that would entail giving more control to students more than usual because they were concerned they would not be able to manage the control and attain the planned learning objectives. Both Gemma and Maria confirmed at the follow-up stage that as pre-service teachers, they did not believe it was realistic to give their students the amount of control they received as students in the TILT course. This was again in line with the teacher’s guidelines

that they need to adapt the amount of self-directed learning to the specific circumstances and context.

#### **7.3.4. Summary of Findings**

Below is a summary of the findings for the supratHEME, control shift, as related to the first research question (what are the two study participants' beliefs and perceptions of autonomous learning during their final university year as pre-service teachers?):

- Overall, Gemma and Maria had a positive attitude towards shifting control from teacher to student in autonomous learning. They believed that students should generally work together with teachers and be included in decision making in general.
- Gemma and Maria had theories and beliefs about what is “realistic” in their institutional context when it came to control shifts. Gemma and Maria believed that it was unrealistic to give more control to them as students in the TILT course due to lack of time.
- Gemma and Maria had opinions about which aspects of learning were more suitable to be teacher controlled than student controlled. They believed the teacher should have control over the aspects where teacher expertise was required, such as assessment methods, teaching methodology, and classroom management. Gemma and Maria believed that giving greater control to students should be done gradually and strategically.
- Despite their positive attitude towards shifting control onto students, their attitudes towards the possibility of themselves taking over some control as pre-service teachers were less positive, and they were less certain about it.

- Likewise, Gemma and Maria did not believe their practicum students were capable of taking over more control over their learning at the time of the study. As a result, they did not implement activities that required autonomy from students.

## **Chapter 8: In-service stage: Uncertainty**

### **8.1. Supratheme Overview**

At the follow-up phase of the study, Gemma and Maria were novice in-service teachers with less than three years of experience. As explained beforehand, their beliefs, perceptions, and actions at this stage came from the two online meetings administered from December 2020 to February 2021 and the self-reflection sheet they completed (see [Chapter 3: Methodology](#) and [Appendices F and G](#)). As described earlier in [Chapter 6](#), uncertainty was used as a supratheme for insecurity, hesitation, and perceived lack of knowledge about the concepts related to autonomous learning. Comparatively, this supratheme emerged more frequently in the pre-service stage than in the in-service teaching stage, although the following subthemes that were identified were similar to the ones in the pre-service teaching period:

- Autonomous learning working definitions and connection to teaching practice
- Uncertainty about autonomous learning ability and its implication on teaching
- Responsibility for fostering autonomous learning

### **8.2. Autonomous Learning Working Definitions and Connection to Teaching Practice**

At the in-service teaching stage, the working definitions of autonomous learning found in Gemma and Maria were notably similar to the working definitions found at the later stages of the pre-service teaching level. In these later stages, Gemma and Maria still believed autonomous learning entailed doing everything on one's own and asking for help if needed (which were described as working theories that evolved during the pre-service teacher stage). For example, in the example below, when describing how she learned coding entirely on her own, Gemma's uncertainty about whether she was really autonomous stems from the fact that she did not decide on everything in this learning process:



Gemma: [...] So I think that's, um, some traits of an autonomous learner. But you know, the contents were already decided. I was not able to tell what I wanted to tackle first or then address second. Um, so I think it was a little bit auto- autonomous.

(December 2020)

The example reveals that similar to her beliefs as a pre-service teacher, as an in-service teacher, Gemma would have considered her learning more autonomous if she had designed the entire learning path herself. Again, she assesses herself as partially autonomous, which is seen in the contrast she makes when she states, “But you know, the contents were already decided. I was not able to tell what I wanted to tackle first or then address second.” This matches what she said in October 2017: “So it's not really autonomous because I have not developed it completely on my own.” However, it was simultaneously evident that as a novice teacher Gemma also believed that asking for help was also a marker of autonomous learning. She explicitly said so in the December 2020 meeting:

Gemma: I think the definition [of autonomous learning] is still kind of the same. It's being able to, um, work on your own, but having the resources to do so. So, um, uh, resorting to, um, whatever tools or whatever, as far as people; you need to, um, be able to make decisions and work, um, towards a goal. (December 2020)

Although this was three years the intervention, and already with some experience of in-service teaching, Gemma and Maria still manifested uncertainty about the concept and definition of autonomous learning. This is uncertainty can be seen illustrated from the epistemic hedges used in the December 2020 online meeting, where Gemma described her students she was teaching as “I, *I'm not sure* [emphasis added] though what an autonomous fourth grader looks like. I'm, *I don't even know that* [emphasis added], you know. *I'm not sure* [emphasis added] what, what to expect.” The students she referred to here may have been her

pre-school students—mostly very young learners aged 4-5—or she may have referred to fourth graders (age 9-10) as she also taught private classes to students of various ages at the time of the study). However, the key point lies in her indication of a lack of clarity on what she could realistically expect from her students regarding their ability to engage in autonomous learning and acknowledged her inability to outline these expectations.

In the case of Maria as a novice in-service teacher, the analysis also revealed the use of such language devices to refer to uncertainty about what autonomous learning looked like in the context of her students. In the February 2021 online meeting, Maria and the researcher discussed Maria's practical theory of autonomous learning as manifested by the ability to self-organize and learn in the absence of teacher guidance. The excerpt below shows that although Maria was able to provide a detail-rich description of this practical theory of autonomous learning, she simultaneously expressed uncertainty about the autonomous learning concept and sought reassurance from the researcher as to the truth-value of her statements:

Maria: Yeah. *I, I don't know, I don't know* [emphasis added] what, I don't consider it autonomous learning because I feel that they cannot *maybe* [emphasis added] organize their time as they want. [...] Maybe it's because I, I'm saying you have this time to do this, but not, not a, a long activity. Now you are going to do this activity and then they do it. And *maybe I think* [emphasis added] about autonomous learning as something that I could give a complete day and say: “you have, you, you need to do these things, organize yourself as you want. Uh, um, get everything you need to do it. Ask me if you want”, um, like more flexible instead of: “just now, do this activity”. Of course you have to look for information. You have to do things, but I don't feel it like autonomous learning. *Does it count?*[emphasis added]

First, it is worthwhile to note the employment of the tentative “I don’t know” at the beginning of the statement. Second, the highlighted use of “I think” is deliberative, indicating opinion, and it is preceded by a hedge “maybe” to soften this subsequent description of autonomous learning in practice. Here, Maria highlighted a contrast between what learning looked like in her classroom and what she considered to be autonomous learning. According to Maria, her class was not practising autonomous learning because they were not provided with the opportunity to fully self-organize their study time (which was a reiteration of the working definition she used to describe autonomous learning at the pre-service teaching stage in February 2018). Despite her use of hedges, her practical theory of autonomous learning as an in-service teacher can be observed to include specific classroom behaviour such as organizing oneself as one sees fit, being able to get everything one needs to learn on one’s own, asking the teacher for help if needed, and similar concepts. Her question of “Does it count?” can be seen as being asked to seek reassurance about her practical theory of autonomous learning or also as a strategy to soften her statement and neutralize it in case she was wrong. It can also be interpreted as avoidance of potential contradiction with any definition of autonomous learning held by the researcher, whom she presumably perceived as more authoritative on the subject.

Given this was the case, the researcher had sought to verify—in that same online meeting—a finding from the pre-service teaching stage regarding Maria’s conceptualization of autonomous learning as being fully independent of teacher guidance. Upon verifying that Maria indeed held that belief as a pre-service teacher, the researcher remarked that some scholars considered autonomy to be manifested as a balance of interdependence and dependence rather than full independence. Maria seemed to interpret this to be a more correct

definition of autonomous learning and an indication that her practical theory of autonomous learning was wrong, as shown in the following exchange:

[00:30:49]

Researcher: [...] So, so, does it mean that if your students had less guidance from you, they - you would consider that to be more autonomous?

[00:31:02]

Maria: Hmm, maybe. Yes. But *that's wrong* [emphasis added] because *you said that it is* [emphasis added] [laughs]. (February 2021)

Here, Maria's ambiguous statement started with hesitation ("maybe") and continued with a confirmation of the researcher's interpretation of belief that she would consider her students more autonomous if they had less guidance from her ("yes"), and ended with the invalidation of this statement due to perceived mismatch with the researcher's definition of autonomous learning. Hence, this passage illustrates Maria's uncertainty about the concept of autonomous learning and her practical theory of it held at the in-service teaching stage. In summary, this theme indicates that both Gemma and Maria signalled an avoidance to commit to their practical theory of autonomous learning via the use of hedges during their in-service phase as well.

### **8.3. Uncertainty About Autonomous Learning Ability and its Implication in Teaching**

The theme of *uncertainty about autonomous learning ability and its implication on teaching* pertains to the participants' self-assessed insufficient autonomous learning ability and ability to promote autonomous learning in their students, as well as its implication on Gemma's and Maria's in-service teaching. The primary data where these self-beliefs emerged were the two online meetings at the follow-up stage and the self-reflection sheets.

At the in-service teacher stage, three years after the first online meeting, Gemma and Maria expressed similar uncertainty about their *own* ability to *learn autonomously* as they had demonstrated at the pre-service teaching stage. For example, Gemma still thought her ability to learn autonomously depended on the subject of learning. For example, she gave an account of how she was able to learn about interior design autonomously (“nobody taught me that”) because it was a subject that was of particular interest to her. As an in-service teacher, Gemma still struggled with seeing herself as an autonomous learner, and it seemed to affect how she saw and treated her students. Gemma herself highlighted this connection when she said:

Gemma: I think, I think my own self-concept affect [sic] how, um, [unclear 00:25:37] I think my own self-concept affects how I treat others. And I don't think I am very [sic] autonomous person in general. [...]. So maybe that affects how I also teach children. (December 2020)

As described in a previous section of this chapter (See section [6.3 Uncertainty about own autonomous learning ability](#)), Gemma did not perceive herself as an autonomous learner when she was a pre-service teacher. The same perception also emerged as a theme at the in-service teaching stage. As an in-service teacher, she was able to critically reflect on the connection between this persistent self-belief and her beliefs and perceptions about her own students. She seemed to acknowledge the possibility of projecting her self-beliefs on her students, which was reflected in the above quote: “I think my own self-concept affects how I treat others.”

Another interrelation that emerged between the different stages of Gemma's teacher development was the connection between Gemma's self-beliefs, her beliefs about her students, and her decision making (as a teacher) in terms of fostering autonomous learning in her students. This can be summarized in the following quote:

Gemma: I think that maybe children are also unautonomous [sic], just like me or and I think is, I, I activity there now because I was giving them tasks and they were not, some of them were not able to complete them. (December 2020)

In other words, her being unequipped to have children be autonomous combined with the children's inability to be autonomous made it difficult for Gemma to implement activities that would require autonomous learning from her students. This insecurity and uncertainty may have to do with the fact that in 2020 Gemma was still a new teacher and had little experience in teaching. It has been recorded that new teachers in Catalonia have very limited autonomy to experiment with innovative teaching methods such as autonomous learning, which may also contribute to uncertainty around her ability to promote autonomous learning. This was reflected in the following statement:

Gemma: I must admit that I am very new to this and sometimes I am not very flexible, because I am afraid of doing things I am not very familiar with. I know how and why I do what I do, so switching it up can make me feel unsure. (December 2020)

In saying, "I am very new to this", Gemma could have been referring to implementing more innovative methods such as activities that would require students to engage in autonomous learning or she may have been referring to the more general status of being a teacher. In either case, the statement reveals she feels most comfortable continuing with her usual teaching methodology, as asking the students to be more autonomous would likely push her out of her comfort zone. However, at this point, one should be reminded that Gemma's self-evaluation of her own ability to promote autonomous learning is mainly informed by her own working definitions of what autonomous learning would look like in the context of her students.

#### **8. 4. Responsibility for Fostering Autonomous Learning (Internalised Adjustment to Institutional Context)**

At the in-service teaching stage, the participants' beliefs of responsibility for fostering autonomous learning is best reflected in their self-reported internalised adjustment to an institutional context. Here, internalised adjustment refers to the situation in which "the individual [teacher] complies with the constraints and believes that the constraints of the situation are the best" (Lacey, 1977, p. 72, as cited in Ross, 1987). Gemma's and Maria's beliefs and perceptions about responsibility for fostering autonomous learning in their students at the in-service teaching stage were most frequently reflected in their discussions of *specific social strategies* they used in *reaction to the constraints of the institutional contexts* where they were teaching (Ross, 1987). At the in-service teaching stage, both Gemma and Maria indicated they had experienced an *internalised adjustment to the institutional context* where they worked as novice in-service teachers. These adjustments were reflected in the ways they accepted the school practices related to the promotion of autonomous learning, which they did so not only out of strategic compliance but also as justified due to their particular contexts. Neither Gemma nor Maria seemed to feel it was their responsibility to purposefully and consciously foster autonomous learning in their students. At the time of the follow-up study, they each taught in a public primary school that they described as "traditional" (in their own words) since their schools' curricula did not integrate the conscious promotion of autonomous learning in the existing subjects, as they specified in the 2020/2021 online meetings.

For Maria, this did not seem to be contradictory to her prior conception of responsibility regarding the teaching of autonomous learning. Similar to her belief expressed at the pre-service teaching stage, Maria saw teaching autonomous learning as something that would be an extracurricular activity rather than integrated within existing subjects and thus

required from her; however, she now qualified this with institutional constraints such as time limitations. She explicitly distinguished between content-centred subjects and a potential learning skills-centred subject that would be designated to fostering autonomy:

Maria: I have to be honest. Um, we don't have time. I mean, we have to be teaching a lot of content and we have to do lots of things. And when it's not content, it's a specific, not probably like special day that's I'm inventing, some [unclear 00:24:36]. So now we have to prepare a writing on “da, da, da, da”. Um, uh, we don't, we don't focus on, on doing anything else. Um, they're a lot of teachers we, we've been talking about doing extra activities to make them, um, do more activities on, I don't know, for example, uh, values or emotions, or, uh, studying techniques, or even autonomous learning, but not called like this. (February 2021)

This illustrates Maria's internalised adjustment to the institutional constraints of her school. The particular constraint to teaching autonomy was the perceived lack of time (and that perception seems to have been shared by most teachers) to dedicate to a special subject that would focus on teaching autonomous learning skills. In the quote, Maria explained that her schools' current practice was not to promote learner autonomy in their skills-centred activities but instead, design them as teacher-directed activities where students would need to follow specific instructions. It is also interesting to note in Maria's quote there is evidence of an ongoing discussion among the teachers in Maria's school that focused on the potential inclusion of autonomous learning skills in extracurricular activities, even if it is not explicitly under that name.

Furthermore, the participants' compliance to institutional constraints regarding promoting autonomous learning seemed, to some extent, to be connected to a lack of role models among their more experienced colleagues who could inspire them to incorporate the



promotion of autonomous learning into their responsibilities as teachers. Gemma recalled her observation of a more experienced colleague in the first days of her in-service teaching:

Gemma: And, um, when I worked with some of them, I was teaching art and craft but I was doing it in English with the, the teacher and all the tasks were like, “okay, this is the artist, she did this, this, this and you have to do this”. And then the kids would, would take the paper, a pencil and start drawing. It was not experimenting. It was not ... It was, I think it was quite traditional. And I cannot judge because maybe I would have done the same, but I don’t think other teachers were, um, very promoting autonomous either. (December, 2020)

Here, Gemma described how the more experienced teacher she observed in the classroom implemented teacher-directed as opposed to student-directed activities in the art and craft course she taught to young learners. Gemma postulated that this was a common practice among the teachers in her school and that the rest of the teachers did not promote autonomy in general. It seems reasonable to connect this perception to the one from 2018 when Gemma and Maria, both still pre-service teachers, claimed that “the system” did not teach them to learn autonomously. This was confirmed by Maria in the online follow-up meeting in 2021, where she stated, “Yeah. We were complaining alone because they were telling us that we should do a lot of hours of autonomous learning, but no one taught us how to do autonomous learning.” In 2020/2021, they were on the opposite side of this perception and could have an insider view of how and why autonomous learning was not included in the school curriculum.

In the follow-up study, Gemma and Maria were found to show indications that they may have started to question their *internalised adjustment* to the institutional context. In the discussions led during the online meetings, the researcher showed Gemma and Maria a

selection of their quotes about autonomous learning from their pre-service teaching period, including those where they spoke about their intentions to foster autonomy when they became teachers. In addition, the self-reflection sheets—which included verbatim quotes from the pre-service teaching stage—were used as cues to prompt their memory. The two participants were asked to recall their beliefs and perceptions from the pre-service teaching stage and reflect on how these were reflected in their current practices. In her self-reflection sheet, Gemma thanked the researcher for prompting her to think about this topic and reconsider her current practices:

I think that my own education and seeing how other teachers teach has had a big impact (often negative) on the way I teach. I am realising this as I am writing, so thank you for encouraging me to reconsider (Gemma's self-reflection sheet, December 2020)

This excerpt was seen as the moment where Gemma's private reservations about the institutionalized practices may have started to form, or better said, re-emerge as she recalled the beliefs and perceptions she held as a pre-service teacher about her role in fostering autonomy in students as a future teacher. It is important to note that in October 2018, Gemma explicitly stated that one of her reasons for participating in the autonomous learning intervention was to learn about autonomy so she could help her students be more autonomous. In the follow-up study, Gemma seemed to have been reminded of her "original cause" when it came to autonomous learning. This specific instance was seen as evidence that the adjustment reflected in their earlier statements may have been less internalised than it seemed and that it had been more strategic than an actual transformation of their beliefs and perceptions as teachers.

In Maria's case, raising the question of her teacher responsibilities related to autonomous learning had encouraged her to reconsider her practices related to the promotion of autonomous learning as an in-service teacher and to continue reflecting on the topic. In the online meeting of 2021, she explicitly stated that the discussion she was having with the researcher had led her to interrogate the practice she observed thus far in her workplace:

Maria: [...] we don't do it [foster autonomous learning], which is a pity, because now that I'm talking to you, I, I feel that it's, it's, it's something that maybe we see that is a waste of time, but it's not because if you know how to do it properly, then it can help you in the future. But yeah, we don't, we don't do it. (February 2021)

The above quote clearly shows how Maria's reservations about the status quo in autonomous learning promotion (re)-emerged during the online meeting. Also present is a reiteration of the perception she voiced as a pre-service teacher that autonomous learning skills are useful life skills, and as such, should be taught and learned.

### **8. 5. Summary of Findings**

Below is a summary of the findings for the supratHEME of uncertainty, as related to the research questions two (What are the two study participants' beliefs and perceptions of autonomous learning as novice in-service teachers?) and three (Do these beliefs and perceptions change and if so can any underlying factors for change be identified?)

- As novice teachers, the participants' working definitions of autonomous learning were similar to the ones that evolved at the pre-service teaching level. Overall, they still believed autonomous learning is doing everything on one's own but also being able to ask for help if needed. This is interpreted as a belief that changed during the pre-service teaching period but did not change in the transition from pre- to in-service teaching.

- Gemma and Maria still manifested uncertainty about the concept and definition of autonomous learning. As novice teachers, they believed they did not know enough about autonomous learning and what it looked like in the context of their students. Likewise, their belief in their own autonomous learning ability was still low. These were interpreted as beliefs that did not change in the transition from pre- to in-service teaching.
- Gemma and Maria were unsure about their abilities to promote autonomous learning with their students, and they believed their students were not able to learn autonomously. These are interpreted as beliefs that did not change in the transition from pre- to in-service teaching.
- Gemma and Maria indicated they had experienced an internalised adjustment to the institutional context where they taught, in which autonomy promotion was not on the agenda, according to them. Related to that, neither Gemma nor Maria considered it their responsibility to foster autonomous learning in their students.
- During the follow-up study, Gemma and Maria may have started to question their internalised adjustment to the institutional context and their beliefs and practices related to autonomous learning they had held thus far. These were interpreted as beliefs that potentially signal a change during the in-service teaching stage.

## **Chapter 9: In-service stage: Teacher guidance, feedback, control shift**

### **9 .1. Teacher Guidance**

#### **9 .1. 1. Perception of Students Needing Teacher Guidance**

The themes revealed under the supratherme of teacher guidance were, to some extent, analogous to the ones identified at the pre-service teaching stage. Specifically, both participants still held the perception that students from their educational context (Catalonia) were used to and needed teacher guidance, even in autonomous learning activities. They considered student age to be a significant factor conditioning the provision of teacher guidance in autonomous learning. In the online meeting in December of 2020, Gemma stated, “And in primary school just, I think they’re very, very used to having guidelines and in secondary school, they can be a bit more autonomous. But in primary school, like everything is explained, everything was material.” Here, she contrasted the abilities of primary (she was teaching students aged 4-5) and secondary school students to engage in self-directed learning as an explanation of why she struggled to implement activities that would foster learner autonomy in her class. This belief that young students were less ready to engage in autonomous learning because they required teacher guidance was found both in the online meeting and the self-reflection sheet at the in-service teaching stage. Given that this was her first real in-service teaching job, her statement about an interrelationship between age and autonomous learning abilities was likely a reflection of her experience with very young students.

Likewise, Maria held an almost identical stance as an in-service teacher, as she also worked in the primary education sector, although her students were older than Gemma’s (aged 11-12). In the online meeting conducted in the follow-up study, she reiterated that her students depended on her guidance and instruction when completing tasks required from them. This

suggested that she saw her young students as inherently non-autonomous and completely dependent on her guidance and instructions, as seen in the excerpt below:

Maria: Yeah, I, I feel like with younger children, it's, uh, sorry, that's not possible because they need, uh, constant guidance and I think that they are not autonomous because they wait for every single instruction. Okay, like write your name. Okay, now, um, do this problem or solve this... (February 2021)

This indicated that Gemma's and Maria's beliefs and perceptions—that students from their educational context were not used to learning without teacher guidance—were not simply “transferred” from the self-beliefs from the pre-service teaching stage. Rather, it seems that Gemma and Maria had verified these beliefs and perceptions from the pre-service teaching period at the in-service teaching stage, based on what they had observed in the behaviour of their students. These findings also indicate that similar to the pre-service teaching stage findings, at the in-service teaching stage Gemma and Maria focused on ensuring that learning objectives are attained in their teaching of their young students. Both sets of data (online meetings and the self-reflection sheets) revealed that as novice teachers, Gemma and Maria prioritised learning as an outcome (meeting learning objectives) to learning as a process (practising autonomous learning).

For instance, Gemma's account of her in-service teaching experience revealed that she believed that while preschool students could *engage* in autonomous study activities, she questioned the *outcomes* of these activities, i.e. whether learning could happen when preschool children undertake autonomous study, as seen in the following statement:

Gemma: I don't think I did a very good job at that. You don't think they ... Because in primary school ages and even less in preschool, you just ... Well, in preschool you can give them materials and they can explore and experiment *and I guess that can be*

*autonomous just because they're working on their own but I don't think that they know how to learn* [emphasis added]. (December 2020)

This excerpt is a part of Gemma's reply to the question of whether she thought she promoted autonomous learning in her class. It is evident that Gemma did not equate the activity of "working on their own" (albeit with teacher guidance) to autonomous learning. She clearly differentiated between *being autonomous* (working on one's own) and *autonomous learning*, which is the result of autonomous study. Indeed, Gemma's answer to the self-reflection sheet corroborated that she perceived that absence of teacher guidance would not lead to learning. Maria's reflection statement revealed a similar belief—that attaining learning outcomes would be less likely if she was to limit her teacher guidance—as could be seen when she said, "They [her students] need me to guide them; otherwise, they won't learn anything."

Finally, it is necessary to examine these findings in light of whether there has been any change from the pre-service teaching stage. As pre-service teachers, Gemma and Maria believed the students from their educational context—including themselves—were accustomed to being fully teacher-guided in their learning needed, were not trained to engage in self-directed learning and thus needed teacher guidance in order to attain learning objectives. These beliefs were reflected in the practicum teaching practices they employed during their internships. At first sight, it seems like these pre-service teacher beliefs persisted in the transition into the in-service teaching stage—however, they were expressed in two completely different contexts. For example, as novice teachers with real-life teaching experience, Gemma and Maria could now formulate with more precision why their students needed teacher guidance—their stances involved less generalisation. Instead of maintaining that students in Catalonia were not trained to learn autonomously, they observed that their

specific students were too young for self-directed learning, which is a perception that may change in the future with professional development and increased teaching experience.

Furthermore, one may infer that if their students were older (e.g., at the age Gemma and Maria themselves were when they claimed they were not trained to learn autonomously), they may see them as more ready for autonomous learning.

### **9. 1. 2. Summary of Findings**

- Gemma's and Maria's beliefs and perceptions of teacher guidance in autonomous learning were similar to those they held as pre-service teachers. They still believed students from their educational context were used to and needed teacher guidance, even in autonomous learning activities.
- Gemma and Maria believed student age conditioned their students when it came to their ability to learn without their teacher guidance.
- Gemma and Maria believed teacher guidance was needed with their specific students to ensure the attainment of learning outcomes. These are interpreted as beliefs that did not change in the transition from pre- to in-service teaching.
- These are interpreted as beliefs that—strictly speaking—did not change in the transition from pre- to in-service teaching but instead were expressed from a new and different perspective that benefited from new knowledge and experience gained as in-service teachers. As such, these updated beliefs were perceived to be conducive to change and reshaping alongside their development as teachers.



## 9.2. Teacher Feedback

### 9.2.2. Perception of Students Needing Teacher Feedback

At the in-service teaching level, this supratHEME referred to the support that the participants provided to their students as feedback and their beliefs and perceptions about teacher-provided input of student-generated ideas in autonomous learning.

The parallels between the findings at the pre-service stage and the in-service stage are important to explore. In general, as final-year pre-service teachers, Gemma and Maria expressed that they and their peers needed teacher feedback to validate their ideas as correct or incorrect. The participants faced the same issue at the in-service teaching level, albeit from a shifted perspective. Now, they were the teachers whose students requested feedback from them. At the in-service teaching level, teacher feedback as necessary validation of students' autonomous work emerged as a relevant theme in the participants' perceptions and beliefs. In their online meetings and self-reflection sheets, both of them identified this perceived dependence on teacher feedback as one of the chief reasons why they still had not implemented (and were unlikely to do so in the near future) more self-directed learning activities.

Their accounts of their students expecting information on whether their performance in tasks was correct or wrong were remarkably similar to those they had given as students during their pre-service teaching stage. For example, Maria pointed out that her students were much more interested in the *outcome* of the activity they were engaged in than the *process* of learning (which entails aspects beyond simply being right or wrong). This can be seen from the following excerpts where Maria expressed the extent to which her students were dependent on her feedback:

## Example 1

Maria: The only thing that I, hmm, think that I've been doing with my students, um, they are very focused on, on the, the, the final result instead of, um, when, for example, we are correcting something, they say "oh, Maria but this is wrong. Um, did I put this, this, this word?" [Maria then says]: "This word is also good." [Then the students say]: "No, this, this word is not good." (February 2021)

## Example 2

Maria: Um, but again, I think that it's because we, we do things this way, I mean a new world where we could create, um, anything we want, it could be different, but they are used to ask for even here in, in, in sixth grade, they are always looking for me to say, is it correct [sic]

I mean, it's correct. Yeah, uh, like "Maria, is this okay? Do you feel that this is okay?" "Yeah, but what about you? Okay. If you feel that it's correct, keep going, continue, it doesn't matter." "It's like they are every time looking for our "yes". (February 2021)

In the first example, when she provided feedback to her students, they would linger on the items they "got wrong". Even if Maria clarified that more than one item could be correct, they insisted their answer must be either correct or incorrect (in other words, little tolerance for ambiguity). The second example reveals a similar perception of classroom dynamics revolving around teacher feedback. In it, Maria described how she perceived her students were accustomed to and always expected her to provide corrective feedback that qualified their output as either correct or incorrect. Maria explained how she had tried to encourage them to work without focusing so much on the accuracy, but that it was of little use since they expected teacher confirmation of their actions and the steps they were making in the classroom. Her statement, "even here in the sixth grade", may signal an implicit expectation

that as sixth-graders (aged 11-12 in the Spanish education system), her students should be more self-reliant. This, however, would then contradict Maria's perception described in the previous section on teacher guidance in which it was described that she saw her sixth graders as young learners who were less able to engage in autonomous learning due to their age.

It is also important to highlight that a certain amount of frustration could be detected when Maria related both examples, especially in the second one. "It's like they are every time looking for our "yes"." She also appeared to be resigned to the status quo, as illustrated in her statement that the described situation was not optimal but could not be changed: "Um, but again, I think that it's because we, we do things this way, I mean a new world where we could create, um, anything we want, it could be different, [...]." As summarised in these two examples, this student dependence on teacher feedback was one of the issues that prevented her from fostering autonomous learning with her students.

At this point, a parallel must be made between the above described in-service teacher perceptions and Maria's student (pre-service teacher) perception about the absence of teacher feedback. In section 7.2.2. Contradiction between perceived and objective feedback, it was described how Maria, as a pre-service teacher, sometimes felt frustrated with the absence of teacher feedback in the TILT course (which aimed to promote autonomy in students). This comparison is best highlighted by contrasting her statements from 2018 and 2021, as seen in table 8 below.

**Table 8.**

*Comparison between Maria's Statements in 2018 and 2021 on the Topic of Teacher Feedback in Autonomous Learning*

Maria as a pre-service teacher (2018)	Maria as an in-service teacher (2021)
<p>Maria: And so one day in, in class, we did a definition about, uh, I don't know, I don't remember, a definition. And, I asked her, "uh, Diana, as a class we did [sic] a definition" and Diana said to us: "um, it's okay for you, everyone likes this definition?" And I ask her: "Diana, do <b>you</b> like this definition[unclear 00:38:13] for, for saying, okay, this definition is okay, but she says, "Oh no, no, I don't have to say this." Like, So that means that it, it's okay? That it's not okay?</p>	<p>Maria: Um, but again, I think that it's because we, we do things this way, I mean a new world where we could create, um, anything we want, it could be different, but they are used to ask for even here in, in, in sixth grade, they are always looking for me to say, is it correct [sic]</p> <p>I mean, it's correct. Yeah, uh, like "Maria, is this okay? Do you feel that this is okay?" "Yeah, but what about you? Okay. If you feel that it's correct, keep going, continue, it doesn't matter." It's like they are every time looking for our "yes".</p>

Table 8 illustrates similar classroom dynamics involving teacher feedback. Both situations involve a teacher who consciously attempts to promote self-assessment and self-reliance in their students by avoiding evaluating their statement as correct or incorrect. Both involve uncertain students that express frustration with this absence of corrective feedback. In other words, both examples illustrate a similar scenario; however, the difference between the two is that in the first example from 2018, Maria was a student, and in the example from 2021, she was the teacher in this scenario. That said, no evidence showed that Maria herself recognised this parallel.

In Gemma's case, while she also perceived the absence of teacher feedback as problematic with her students, her perception was based on different reasoning than Maria's. Namely, while Maria perceived the absence of her feedback problematic because she observed that her students were too focused on accuracy and less so on the learning process and practising autonomy, Gemma's primary reasoning was her concern with the lack of

feedback affecting the attainment of learning objectives. This difference is illustrated in the comparison shown in table 9 below.

**Table 9.**

*Comparison between Participants' Perceptions Regarding the Role of Teacher Feedback as Mentioned in the Online Meetings in the Follow-Up Study*

Gemma as an in-service teacher (December 2020)	Maria as an in-service teacher (February 2021)
<p>Gemma: Yeah, so, um, but later on, I started doing their, their work activities, um, and activities in which they had to do more than one thing, so they had to kind of organise themselves, see where they could start, maybe brainstorm first and they just jumped into the task and, you know, it was full of mistakes, it was and very basic things that at least I expected them to do correctly.</p>	<p>But, but yeah, because they're like always trying to, just for the number and just for the result. And what I've been trying to do is just, okay, it doesn't matter if now you fail or how you do in a bad way. Just learn from this and like, keep going. So a different way of seeing them and like the, the final result.</p>

Both quotes are their respective accounts of their students' reactions to attempts to engage them in more self-directed activities. Maria's quote is from when her students were only interested in whether the final result they produced when solving mathematical problems was correct or not. Gemma's quote is an excerpt from her account about when she tried to implement an activity that required more autonomy than usual from her students, and she refrained from giving them feedback throughout the process. The activity entailed some independent decision-making and self-direction from the students, such as prioritising tasks and determining a work plan before task execution without teacher guidance or feedback. The quote reveals that Gemma was not satisfied with the final result obtained by the students because it was substandard to what she had expected that they would achieve on their own.

She described the students' lack of planning and preparation before task execution as the reason for this—which is one of the abilities associated with readiness to take on autonomous learning. In conclusion, although based on different reasons, it was evident that both Gemma's and Maria's perception was that their students required their feedback and teacher-in the classroom. It was also evident that this perception affected their teaching practices, so that they decided not to prompt students to engage in self-directed learning and not to limit their feedback and guidance with their students.

In summary, similar to the supratHEME of teacher guidance, at first sight, the parallelisms described seem to indicate that the participants' in-service beliefs and perceptions regarding teacher feedback to be similar to their pre-service teacher beliefs and perceptions. On the other hand, the changes in how they dealt with situations similar to their pre-service teacher experiences indicated a shift in their perspectives, seemingly prioritizing learning as a process over learning as an outcome. This was evidenced in their attempts to encourage their students to depend less on their corrective feedback and validation of their input.

### **9.2.2. Summary of Findings**

- At the in-service teaching stage, Gemma and Maria were the teachers whose students requested feedback from them, which to some extent dissuaded them from pursuing autonomy in their students and shifting control onto them.
- Maria perceived her students as dependent on her corrective feedback and more interested in their learning outcome than the process itself. In contrast, Gemma perceived that her students depended on her feedback as they were not ready to engage in autonomous learning (e.g., they did not plan and prepare the task execution before starting to work).

- Gemma and Maria found themselves in a “flipped scenario” in which they perceived that students unreasonably demanded they give them clarification if their work was correct or not, which was what they did as pre-service students and complained about the teacher who was “reluctant to provide the concrete clarification”.
- These are interpreted as beliefs that, strictly speaking, did not change in the transition from pre- to in-service teaching. Instead, the beliefs were expressed from a new, different perspective that benefited from new knowledge and experience gained as in-service teachers. Therefore, these beliefs could be seen as receptive to change and growth alongside their development as teachers.

### **9.3. Control Shift**

The findings in this supratHEME relate to the participant’s beliefs and perceptions related to shifting control from them as in-service teachers to their students (see [section 7.3 for further details](#)). Likewise, there are two themes explored under this supratHEME:

1. Contradiction between positive attitudes towards control shift and teacher practice.
2. Indication of future change.

#### **9.3.1. Contradiction between Positive Attitudes towards Control Shift and Teacher Practice**

With regards to the supratHEME of control shift in the in-service stage, a pattern similar to the ones involving the supratHEMES of teacher feedback and teacher guidance was observed. The participants generally believed that some control should be given to students to encourage autonomy but were reluctant overall to give it to their own students. One reason identified was that they perceived their students as not yet ready to take over some of the control and

decision-making power in the class aspects that are traditionally considered the teacher's domain. Gemma agreed with her pre-service belief that students should have some control over their learning process in school, as can be seen in her self-reflection sheet where she wrote, "I agree. I think that giving them control helps them become aware of their learning and is motivating. However, it is also true that they need the teacher support to guide them." However, when asked to reflect on how much control she gave to her students in the classroom, she revealed that her perception was that she did not give much control to her students overall. She stayed in her comfort zone and employed a compensation strategy (basing her decisions on her knowledge of the students' interests, implying that she made the decisions that they would have made themselves) in the face of her reluctance to shift some of the control to her students. This can be seen in the excerpt below:

It's hard to tell. I don't think I've done that [given control to students] much, because I feel like everything is going to get out of control. However, I do take into account their motivations and interests (like using "superzings" toys in coding lessons, using puppets and dinosaurs they love in English...) but it's not like they made a conscious choice. I decided for them.

A similar pattern was found in Maria's case. She also had similar beliefs that students should generally have some control over their learning and classroom experience, although her teaching approach did not include encouraging students to do so. She connected autonomous learning ability with student age as to why she decided to provide them with graded instruction (rather than encourage them to take control and self-direct their learning). This could be seen in the online meeting of February 2021, where she explained that she believed her students were unable to make independent decisions in their learning:



Maria: When they are younger, as they are not able to process a lot of, well, not able yeah, but a lot of different instructions, like a lot of in- instructions you as a teacher decide to go, like, step-by-step and really do it very slowly. So I don't feel they, uh, have any flexibility to do anything on their own, at least in the schools I've been [sic].  
(February 2021)

Likewise, Gemma also identified her students' young age as an obstacle to the promotion of autonomy by giving them control. She revealed that she believed that students making autonomous decisions entailed a higher level of cognitive processing than what they were able to attain at their age. In her self-reflection notes, this was a recurrent theme, as evidenced in the two selected excerpts below:

#### Excerpt 1

At the moment I am teaching very young children. At this point, acquiring routines and peer-interaction skills is the goal, so reflecting on their own learning can be somehow difficult. I think it should be a slow but steady process in which students gain progressively more control.

#### Excerpt 2

At the moment I don't know if I do it much. I try to explain to my 3,4 and 5-year-olds why we do things. I ask them questions and I try to have them reflect on why we do things but it's hard. Their reasoning is still very immature. They always say "Porque sí" o "Porque no" without explaining themselves.

(Gemma's self-reflection sheet, December 2020)

These excerpts testify that the participants were affected by their perceptions and beliefs about their young students' cognitive abilities. They both perceived their students as

having limited ability to process information and engage in metacognition, which they saw as essential for self-directed learning. Hence, they consciously chose not to foster autonomous learning with those students, at least for the time being.

### **9.3.2. Indication of Future Change**

It is important to emphasise that these teaching practices were tied to the specific career moments and contexts they were teaching in at the time of the study. In the in-service teaching stage data, there were multiple indications that as they gained more teaching experience and confidence in their teaching skills, the participants may enable a more significant control shift and generally foster more autonomous learning in the future. Firstly, it was evident that their teaching practices did not always match their general beliefs and perceptions (which were overall positive) about autonomous learning for various practical reasons. Nevertheless, they both clearly believed that fostering autonomous learning skills with students, in general, was beneficial, with this belief present in both stages. Secondly, the insights from the shared self-reflections showed high self-awareness and the ability to recognise how their beliefs prevented them from implementing autonomous learning activities into their teaching practice.

This was evidenced in the following four excerpts, where certain phrases—such as “now that I am talking to you...”, “I am realising this as I am writing”, “I hope it changes soon”—indicated that prompting the participants to reflect on their current teaching beliefs and practices may have helped raise their awareness in recognising their role, experience level, and the different factors affecting their beliefs and practices related to the promotion of autonomy. Furthermore, these excerpts also contain indications that their beliefs and practices were flexible and that they may be willing to reconsider and take a more agentive role in the promotion of autonomy in the future:

## Excerpt 1

Gemma: I think so. However, I must admit that I am very new to this and sometimes I am not very flexible, because I am afraid of doing things I am not very familiar with. I know how and why I do what I do, so switching it up can make me feel unsure.

(Gemma`s self-reflection sheet, December 2020)

## Excerpt 2

Gemma: I don`t think I am letting children gain control over many things. Maybe I underestimate what children can do. I hope this changes soon. (Gemma`s self-reflection sheet, December 2020)

## Excerpt 3

Gemma: It is not always easy. Last year, in the upper grades of primary education they were used to being told what to do, so I didn`t even consider asking them “What do you want to learn?”. Maybe having done so would have been a good idea. I think that my own education and seeing how other teachers teach has had a big impact (often negative) on the way I teach. I am realising this as I am writing, so thank you for encouraging me to reconsider, Jelena. (Gemma`s self-reflection sheet, December 2020)

## Excerpt 4

Maria: Um, but we, like, yeah, yeah, we, we would, we would like to do this, but then we cannot do it. I mean, in, in real life, we, we do it, which is a pity, because now that I`m talking to you, I, I feel that it`s, it`s, it`s something that maybe we see that is a waste of time, but it`s not because if you know how to do it properly, then it can help

you in the future. But yeah, we don't, we don't do it. (Maria, online meeting, February 2021)

Lastly, it was found that Gemma and Maria shared the belief that the control shift from them as teachers to their students should happen gradually, step by step. At the time of the study, they were novice teachers with roughly a year and a half worth of experience in in-service teaching. Even with the institutional constraints they strategically compiled with, it could be concluded that they were still not confident enough to implement innovative teaching methods with their students. This conclusion gains even more validity if one considers that Gemma and Maria were already taking some actions towards promoting autonomy, albeit unbeknownst to them. This was evident from their descriptions of their teaching practices. For example, Gemma sometimes encouraged her students to suggest possible topics for a lapbook, asked them about their desired outcomes at the onset of activity, and prompted them to self-assess their learning outcomes. Maria attempted to encourage her students to self-regulate their need to seek validation and corrective feedback from the teacher and instead see their learning as a process, which is also a part of learning autonomously.

### **9.3.3. Summary of Findings**

- Gemma and Maria still believed that, in general, students should be encouraged to assume control over their learning. However, they were generally reluctant to give it to their own students as they doubted their competency to self-direct their learning. These are interpreted as beliefs that did not change in the transition from pre- to in-service teaching.
- Both Gemma and Maria perceived themselves as not promoting autonomous learning with their students.

- Both Maria and Gemma perceived their students as not yet ready to take control of their learning. They also believed their age limited their ability to engage in autonomous learning.
- There were multiple indications of potential transformation in the future. Reflection and comparison against what they believed and intended as pre-service teachers may have prompted the participants to reconsider their current beliefs. They also believed that the control shift should happen gradually and were already taking small steps towards giving more control to students, even if they were unaware of them.

## Chapter 10: Discussion and Synthesis of Findings

### 10. 1. Overview

The purpose of the study was to investigate the participants' beliefs and perceptions of autonomous learning at their pre-service and in-service (novice) teaching stages. In addition, this study sought to identify any changes that took place in either of these stages and/or in transition between them. As stated earlier, the findings described in this study and discussed in this chapter are found in both cases, i.e., those beliefs and perceptions that both Gemma and Maria seemed to share. These findings complement and add to the existing literature on pre-service and novice teachers' autonomous learning perceptions and beliefs. Furthermore, in this chapter, the findings are synthesized and discussed in the context of how they answered the following three research questions:

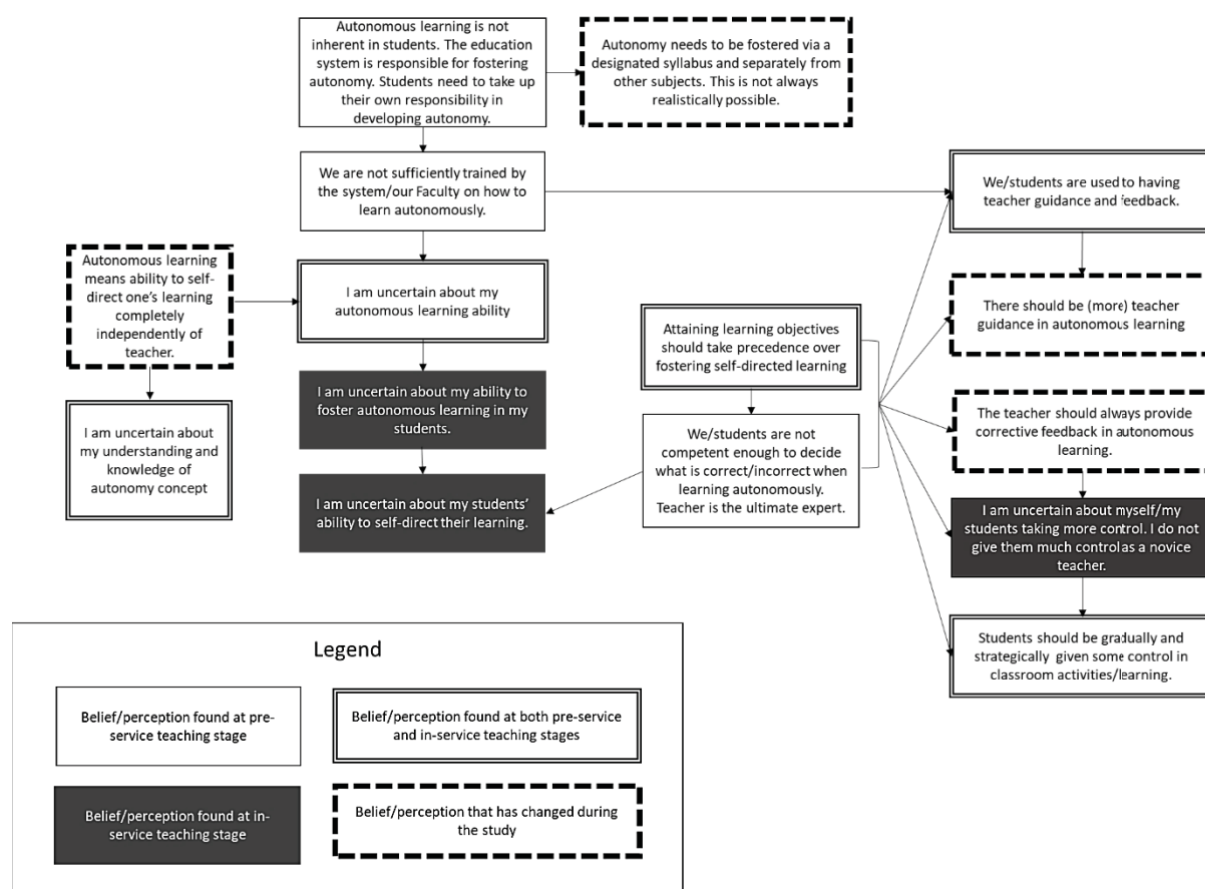
1. What are the two study participants' beliefs and perceptions of autonomous learning as pre-service teachers during their final university year?
2. What are the two study participants' beliefs and perceptions of autonomous learning as novice in-service teachers?
3. Do these beliefs and perceptions change, and if so, can any underlying factors for change be identified?

There were additional research questions that helped to answer the main questions, which were as follows:

1. How do the two study participants promote autonomous learning as novice in-service teachers?
2. How do the two study participants' beliefs and perceptions of autonomous learning affect their promotion of autonomous learning as novice in-service teachers?

These key (changing) beliefs and perceptions—the connections between them—can be visualized in Figure 12 below. This matrix is used to help guide the discussion of the key findings (represented as boxes). As the legend shows, the matrix visually distinguishes between the following types of beliefs and perceptions: 1) those found only at the pre-service teaching stage; 2) those found only at the in-service teaching stage; 3) those found to be unchanged in both stages; 4) those that changed either during the intervention or at the in-service stage. The arrows indicate connections between these beliefs and perceptions, either within one stage or between stages (pre-service beliefs and perceptions affecting in-service beliefs and perceptions).

It is also important to reiterate that the beliefs and perceptions described in the findings chapters (Chapters 6–9) and presented in the Matrix emerged from Gemma’s and Maria’s verbal statements, which included self-reports of their teaching practice. It has previously been established that research indicates that beliefs can be measured through what participants say or do (Beeson, 2013; Fang, 1996; Gao, 2014; Pajares, 1992). Therefore, the participants’ self-reports of teaching practices were considered valid indicators of their actual practices congruent with their beliefs (Charlesworth et al., 1993; DeFord, 1985). Therefore, the insight into Gemma’s and Maria’s self-reported teaching practices as novice teachers can also serve to reveal their novice teacher beliefs, which complements the information conveyed in their discourse.

**Figure 12.***Matrix of Key Beliefs and Perceptions Found in Participants*

Before the individual discussion of key findings, it is vital to highlight the overall trends and patterns. Firstly, it was found that some autonomy-related beliefs and perceptions held by the participants stayed consistent between the stages, as indicated by the double border in Figure 12. This finding is consistent with the studies that found that due to their relative inexperience and proximity to the pre-service teaching period, novice teachers' beliefs and perceptions can be the same as or similar to those formed at or even prior to the pre-service teaching stage (e.g., Erkmen, 2014; Richardson, 1996; Yuzulia, 2020).

Secondly, it was observed that Gemma and Maria already held (preconceived) teacher beliefs at the pre-service teaching level about autonomous learning. This corroborated existing



theories that pre-service teachers can form teacher beliefs before gaining real-life classroom teaching (Bruner, 1996; Borg, 2004; Ross, 1987).

Lastly, there was evidence that some of the participants' beliefs and perceptions changed either during the intervention or in the transition between stages. Again, this is consistent with the studies that belief change is a (desirable) phenomenon accompanying learning and professional development (cf. Aelterman et al., 2016; Castellanos Jaimes, 2013; Pajares, 1992; Peacock, 2001; Richardson, 1996).

In the following two sections, the main findings that reveal the participants' beliefs and perceptions are summarized and discussed with how they contribute to answering the three main research questions. Finally, the discussion of the findings for the second and third research questions are presented together to help highlight any potential changes observed at the in-service teaching stage.

## **10. 2. RQ1: Beliefs and Perceptions as Pre-service Teachers**

The first research questions concerned the participants' beliefs and perceptions of autonomous learning as pre-service teachers during their final university year.

### **10. 2. 1. Uncertainty**

#### ***Working Definitions of Autonomous Learning***

In order to discuss Gemma's and Maria's beliefs and perceptions of autonomous learning, i.e., the "highly personal ways" in which they understood the autonomous learning that took place in the studied context (Kagan, 1990, p. 423), one must first describe how they made sense of the concept of autonomous learning. In the first month of the intervention, Gemma and Maria understood autonomous learning as *complete independence from and absence of teacher input* demonstrated by learners' abilities to select appropriate learning resources, set goals, devise and stick to personalised work plans, or even design an original

method of learning without external guidance. In short, to carry out the entire learning process entirely independently. As described in the literature review chapter, it has been argued that teacher beliefs start to be formed early on in one's education, even before experiencing teacher training (Smith & Craig, 2013; Bruner, 1996; Borg, 2004; Ross, 1987). Thus, their working definitions during the pre-service teaching period or earlier could also be connected to some implicit or intuitive knowledge about the nature of autonomy in general, based on popular connotations such as individual freedom and independence (Little, 1999).

The fact that university students and teachers-to-be interpret autonomy as learning alone and having the ability to learn independently of a teacher is hardly surprising since much of the specialist literature views autonomy as a predominantly individualist notion (Holec, 1981; Nunan, 1995). Indeed, the participants' working theory of the autonomous learner as an omnipotent learner expressed at the beginning of the intervention could be seen as simplistic and naive, which, as Wall (2016) argued, is not uncommon in pre-service teachers. However, not all pre-service teachers have such utopic interpretations of autonomy. In some other studies that investigated pre-service teachers' working definitions of autonomous learning, the pre-service teachers understood autonomous learning as a process rather than a final aim to attain, and they did not define it as a fixed trait of the individual. For example, in Balçıkanlı (2010), the pre-service teachers perceived autonomous learning to mean learning scenarios where students are generally fully involved in personalised instruction and given more voice in language learning. Similarly, Klerk et al. (2012) found that the pre-service teachers perceived the exercise of autonomy as the assumption of their own shared responsibility in learning and embracement of professional development opportunities *from others*.

It was also found that the participants were uncertain about these working definitions of autonomous learning. They showed awareness of their potential misinterpretation of the term. They frequently distanced themselves from their working definitions of autonomous learning by implicitly and explicitly claiming uncertainty around the sufficiency and correctness of their understandings by using hedge words (Aijmer, 1997). This finding corroborates Ajayi's (2009) study, which revealed that most pre-service teachers were quite uncertain about the concept of autonomous learning as they had neither previous experience with it nor had it been a topic of their interest or reflection. Similarly, Camilleri's study (1999) showed that Maltese pre-service teachers did not consider themselves capable of answering what constituted the definition and practice of autonomous learning as they had no clear understanding of the concept. Notably, once they completed mini-projects in which they were required to learn and present to others about autonomous learning, they self-assessed their understanding of autonomy as higher than before and recognised its value for their future teaching practice (Camilleri, 1999). Therefore, a possible pedagogical strategy could be to employ explicit instruction and raise awareness of both empirically and conceptually autonomous learning.

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### ***Uncertainty about Own Autonomous Learning Ability***

As pre-service teachers, the participants did not perceive themselves as “autonomous learners” in general. They believed they lacked the ability to perform independent decision-making in autonomous learning and expressed uncertainty about their ability to successfully perform in the flipped classroom component of the TILT course. Their perception was that the education system did not train them properly to be autonomous learners. Conversely, in the literature on the topic, it has been noted that students tend to overestimate or positively rate

their autonomous learning skills (e.g., Clift et al., 1994; Hua et al., 2019). Furthermore, contrary to the results from this study, Öztürk (2019) found that pre-service teachers' exposure to a program designed to improve their autonomous learning positively affected their beliefs about their autonomous learning skills and abilities.

The participants' self-beliefs did not necessarily correspond to their actual autonomous learning ability, especially given that they were profiled as tending to engage in autonomous learning projects out of school and able to successfully complete autonomous learning tasks in school (see [section 4.3.1. Participants and sampling](#)). In addition, it is essential to note that their self-beliefs were tied to their working definitions of autonomous learning. Their quite demanding self-definitions of what constitutes an autonomous learner—of which some criteria were unattainable for any pre-service teacher—could explain the discrepancy between their self-beliefs and their actual ability. This explanation is congruent with Henri et al.'s (2018) hypothesis that university students with consistent self-perceptions of low self-efficacy were always “moving the goalposts”. That is to say, as the students advanced and mastered increasingly difficult autonomous learning skills, their standards of autonomous learning increased in parallel, so their self-efficacy remained the same.

This aspect is important to highlight because increased awareness of self-efficacy—i.e., beliefs of one's ability to successfully perform something such as learn autonomously—is an essential determinant in one's self-determination and sense of autonomy (Deci & Ryan, 1985). This implies that to develop their autonomous learning skills further, it is perhaps insufficient for students to continue to simply learn about and engage in autonomous learning. Instead, they should also be supported to increase their [self-efficacy beliefs](#) since these beliefs can shape their professional development, teaching practices, and perception of what teachers and their students can do (Castellanos Jaimes, 2013).

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### ***Uncertainty about Responsibility in Autonomous Learning***

The participants were uncertain about who was responsible for the development of their autonomous learning skills. They seemed to believe the education system, their university, and themselves shared this responsibility. They perceived autonomous learning as something that was not inherent to the students. As such, they felt that it could be taught as a separate subject or be included in extracurricular activities rather than be integrated into the main subjects. That said, their perception was also that the “system” should have done more to promote autonomous learning in them. This differs from some previous studies on the topic where it was reported that university students either held their teachers fully responsible for the outcomes of their learning (Ayish & Deveci, 2019) or claimed awareness of their responsibility but showed they were not willing to take it in practice (Abdel Razeq, 2014; Ayish & Deveci, 2019). It also contradicts Putra and Iswara’s (2019) findings that pre-service teachers preferred to delegate the responsibility for their learning to their teachers fully.

Interestingly, the participants’ perceptions of responsibility in autonomous learning revealed their ability to detect the complexity around introducing autonomy-promoting activities in the curricula against the often less than favourable circumstances they witnessed in their internship (Borg, 2004). These conditions included the teachers’ busy schedules, socio-political events that sometimes disrupted the flow of educational programmes, and the challenge of providing proper teacher support in the self-directed learning of a large number of students in class. Other studies have reported similar awareness found in pre-service teachers of the institutional responsibility and simultaneous limitations in promoting autonomy. For example, Balçıkanlı (2010) found that teachers faced difficulty facilitating student access to digital resources in autonomous language learning. Likewise, Vázquez

(2020) observed the contrast between pre-service teachers' enthusiasm to promote autonomy in their future students with the simultaneous apprehension of the limitations that could come from parents' interference, the educational institution, and the lack of support for their strive to promote autonomous learning as an educational goal.

However, it should not be forgotten that at the pre-service teaching stage, the participants' perception that it often is not "realistic" to promote autonomy in their education system needs to be seen in the context of their working definition of autonomous learning. At the start of the intervention (when they spoke about responsibility), their definitions referred to absolute independence and tended towards individualism. In their conceptualisations, autonomy needed to be a separate subject with a separate syllabus. Taken together, it then becomes more apparent why Gemma and Maria would think the promotion of autonomy was unrealistic or the system had not done a good job in this aspect.

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### **10. 2. 2. Teacher Guidance**

The findings indicate that Gemma and Maria recognised the importance of the teacher role in autonomous learning as they explicitly remarked on the need for teacher guidance in the autonomous learning activities they were participating in as pre-service teachers. This was in line with Ajayi (2009), where pre-service teachers recognised the importance of the teacher role to provide guidance "through the right path" (p. 19). This concept seemed connected with their belief that the students at their university, including themselves, were used to having more teacher guidance than they were receiving. They also believed that this difficulty in acculturating to autonomous learning resulted from the "system" not having done its share of work in autonomy promotion during their formal education. This finding aligns with the wide recognition of the importance of the teacher role in the facilitation and development of

autonomous learning, be it in-class or out of classroom learning (c.f. Collentine, 2013; Kim, 2014; L. Lee, 2016; Little, 2007; Mangenot & Nissen, 2006; Sadaghian & Marandi, 2021; Snodin, 2013).

Specifically, as pre-service teachers, Gemma and Maria emphasised that teachers' guidance was needed in their flipped classroom self-study to help them form initial ideas and establish a starting point for their autonomous work, specifically via clear instructions and practical information on the materials and resources to use, etc. This perception was present even when they could agentively bridge the perceived absence of teacher guidance and execute their tasks successfully. This corroborates other reports that when teacher guidance was purposefully limited to foster autonomous learning, students perceived the decreased amount of teacher guidance as insufficient for successful task completion. For example, Lai et al. (2015) documented that the university students who engaged in out-of-classroom autonomous learning felt they needed more teacher guidance to help them find appropriate online resources, despite teacher perceptions of sufficient guidance and assessments of students' autonomous learning ability as comparatively high.

There was a similar contradiction in the case of Gemma and Maria. Their perception of insufficient teacher guidance did not match the nature and amount of guidance and instruction provided by the teacher in the TILT course. The teacher did give specific and detailed guidelines for each flipped classroom task and telecollaboration meeting and comprehensive overall descriptions, guidelines, and rules necessary for the course completion. However, specific information or material to support and foster their autonomy was not part of the instructions. Their perception likely stemmed from the "extra effort" they needed to invest in accessing teacher instructions and scaffolding on the course website. Therefore, it may have been a sign of lack of readiness to take on the self-management responsibilities

required in telecollaboration, including the willingness to proactively seek clarification when needed and exploit the teacher as a resource rather than expect them to fully “lead” their task.

This is inconsistent with some other studies that showed that university students adopted self-instruction more readily, e.g., in Smith and Craig (2013). In this study, the Japanese university students who engaged in self-directed learning in a special course aimed at promoting their autonomy understood their teachers’ role as someone “who can show me new software and websites, then help us with parts we don’t understand”; and “who teaches us new ways to study (on the computer) which are helpful” (p. 261). Similarly, Khalymon and Shevchenko (2017) found that the Ukrainian pre-service teachers—although in theory motivated and willing to assume responsibility in autonomous learning—in practice were less ready to take on a more autonomous role as their learning self-efficacy, i.e., their beliefs about self-efficacy were low. This could also apply to Gemma and Maria, whose self-beliefs related to their autonomous learning ability affected several other beliefs and perceptions found in this study. This could also be an important factor in their perceptions of their teacher role and the amount of teacher guidance they expected.

Gemma and Maria believed that the absence of teacher guidance could prevent attaining learning objectives. As such, they (especially Gemma) prioritised the attainment of intended learning outcomes over promoting self-directed learning in their pre-service teaching practice and the classes they observed. This was per their understanding that students learn a foreign language best when immersed in communicative practice instead of autonomous study. This observation was incongruent with other studies, e.g., Ajayi (2009) found that pre-service teachers associated student interaction with autonomous learning and considered the development of autonomous learning as the result of increased communication between learners.



Interestingly, we saw how Gemma and Maria seemed to “practice what they preached” by choosing not to implement self-directed activities and instead design their practicum lessons as fully teacher-guided lessons. This was the case even in Gemma’s implementation of telecollaboration, which is commonly seen as conducive for the promotion of autonomy. Although at first sight, this seems to contradict their positive attitudes about and claimed intentions to promote autonomy in their teaching, it is not so when the terms and limitations of the pre-service practicum internship are taken into account as a major factor in their practicum teaching approaches. Pre-service teaching is usually done under senior teacher supervision, with fixed criteria to be met in order to be assessed favourably. In addition, the actual teaching does not last very long, and the pre-service teachers are still inexperienced in the classroom (for many, it is the first teaching experience in their life). This means Gemma and Maria likely had limited time and few possibilities to plan more autonomous activities.

Opting for teacher-directed instruction might have also been a safer choice to demonstrate that they, as future teachers, were ready and able to assume control of their assigned classes. Other studies have found that pre-service teachers’ stated pedagogic beliefs did not match their in-class performance (Fajardo, 2013; Roberts et al., 2016). In addition to external constraints such as time management, socio-cultural norms and habits, curriculum, this may also be due to a lack of domain-specific knowledge and mastery in pedagogic theory (Purnomo et al., 2016; Wadanambi & Leung, 2019).

A common strategy then is to simplify in practice what has been learnt in theory (White & Chant, 2014). In Gemma's case, she may have uncomplicated the telecollaboration model she applied as a pre-service teacher from autonomy-promoting to teacher-directed simply because she was implementing what she learned in the TILT course. To her, this entailed being flexible and adapting autonomous learning requirements to the circumstances at

hand and the level of the students participating in telecollaboration. Maria decided not to implement flipped classroom instruction in her practicum teaching for a similar reason. They both perceived their students too young and accustomed to self-directed learning.

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### **10. 2. 3. Teacher Feedback**

At the pre-service teaching stage, Gemma and Maria believed that students, including themselves, are used to and need the teacher's corrective feedback to ensure learning objectives are attained and validate the results of their self-study. Other studies echo this belief. For instance, Reinders and White (2016) argued that successful autonomous learning in self-access centres failed due to a lack of tutor scaffolding and feedback provision (which few tutors were aware of). Mangenot and Nissen (2006) found a similar discrepancy between tutor awareness and learner needs related to providing feedback in autonomous learning. L. Lee (2016) described how the students saw tutor feedback as beneficial for their comprehension of studying material and a vital source of affective support (in online settings). In another study, students suggested a feature that ensured direct feedback when asked to report suggestions to improve an online platform used to foster their autonomous learning (Fuchs et al., 2012).

Indeed, teacher feedback is one of the prerequisites of autonomy development as learners need help understanding their progress and an external perspective to complement their self-evaluation and develop the metacognitive ability needed to analyse their own study (Hay & Mathers, 2012; Pujolà, 2001). The participants' recognition and focus in the critical analysis of the teacher feedback provided indicates their ability to recognise such crucial issues in autonomous learning.

As with teacher guidance, the participants' perception of the lack of corrective feedback in the TILT course contradicted the objective teacher feedback they received. This

was likely because that feedback was not always immediately available, and the teacher did not always impose one answer as the only correct option. This perception of a need for immediate teacher feedback could be a common part of flipped classroom experience, as this finding corroborates the student perceptions reported in Lee's and Martin's study (2020). They anticipated that their students would likely not proactively seek clarification or assistance if immediate feedback was removed in a flipped-classroom approach, which would hinder their autonomous learning. Indeed, immediate feedback—i.e., teacher's reaction to students input that is provided synchronously with learner's performance—can arguably be more beneficial for learning than delayed feedback (Quinn & Nakata, 2017). This finding was corroborated by Canals et al. (2020), which found that adding elements of immediacy to feedback led to student perceptions that it was easier to understand and engage with feedback.

Nonetheless, Gemma and Maria could still complete their tasks successfully despite the absence of immediate feedback by agentively asking for feedback when they perceived it was needed. Interestingly, they deemed the instructor-led explanatory videos—accessible at any time to scaffold their self-study—as insufficient support. This finding contrasts with another study of instructor-led videos in a flipped classroom where students felt supported and confident and could attain the learning objectives (Jeong et al., 2018). Therefore, this opens a question regarding the materials used in self-study flipped classrooms regarding how customized they should be for the students. This is an important question in light of the argument that, in a flipped classroom, learning may not necessarily happen during self-study but later in in-class activities and discussions when students make the necessary connections between the results of their self-study and what they learn in class (Dooly & Sadler, 2015). Therefore, investing time and effort in creating customized learning materials may still be an

effective practice in creating a more supportive environment in the self-study component of a flipped classroom.

Lastly, the participants' perception of insufficient teacher feedback could be because the teacher did not position her delayed feedback as "the only correct answer" in the in-class discussions. As the participants believed that teachers are superior knowledge holders, they felt teachers were better able to verify their learning than peer feedback or self-assessment. This was because they believed that self-assessment and peer evaluation carried too much risk of being based on erroneous judgement since students are not subject matter experts. This student preference to be explicitly told if they are right or wrong by someone who is a subject matter expert (the teacher) was also found in several other studies (e.g. Breeze, 2002; Fives & Buehl, 2008; McKinnon & Perara, 2015; Roberts et al., 2016; Sumsion, 1994).

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#### **10.2.4. Control Shift**

It was heartening to find that as pre-service teachers, Gemma and Maria had a generally positive attitude towards shifting control from teacher to student in autonomous learning, even if they were less certain about their own ability to assume that control. Specifically, they believed that students should work together with teachers and be included in general decision-making across multiple aspects.

However, despite their positive attitude towards shifting control onto students, their attitude towards the possibility of taking over some control as pre-service teachers was less optimistic and more uncertain. Perhaps connected to this was their belief that their practicum students were incapable of taking over more control over their learning at the time of the study. As a result, they did not implement activities that required autonomy from students. This finding corroborates other studies that reveal similar contradictions, such as the one

by Sumsion (1994), where pre-service teachers were positively predisposed towards giving control to students in general but showed a lack of confidence and uncertainty to enact such changes when given more voice and control in their learning process. Similarly, Vázquez (2020) found that although the majority of the respondent pre-service teachers had positive attitudes towards the idea of promoting autonomous learning, they were uncertain about their ability to assume control via autonomous learning and promote autonomy in their students.

According to Gemma and Maria, some aspects of learning were better suited to be teacher-controlled, e.g., where teacher expertise on content and pedagogy was required. They believed the teacher should ultimately have more control than students and make the decisions that fundamentally affect the course and learning experience. This finding aligns with Cubukcu's study (2016) that compared in-service and pre-service teachers' beliefs and attitudes towards autonomous learning. This study revealed that pre-service teachers felt teachers had the prerogative over control and responsibility as the expert, with limitations placed on domains that students could control. In contrast, the same study found that in-service teachers believed responsibility should be shared with students over almost all the learning aspects (e.g. student involvement in decision making over course objectives, topics and content, materials, lesson timing and pace, activities, learning tasks, homework, self-assessment). From this, it could be deduced that perhaps with more teaching experience and confidence in one's teaching abilities, the participants would be better disposed to increasing shared control over more strategic aspects of learning.

Gemma and Maria had theories and beliefs about what is "realistic" in their institutional context regarding control shift. They perceived certain limitations to giving control to the students, such as students' lack of knowledge and practice on the course material. In addition, they felt the tight timeframes and accelerated timelines of some

university courses gave them little time to potentially self-organize and enact control over their learning in those courses. This finding makes sense in light of their belief that taking control in learning should happen gradually and strategically through mastery of content knowledge first. Gemma and Maria seemed to agree that giving greater control to students should be done strategically—in ways that support the development of their autonomy and promotes the inclusion of students' needs and preferences while preserving the intended instructional design and teacher-made decisions about the practical aspects of the course. An explanation could be found in Dooly and Sadler's (2020) study, where the data appeared to indicate that the FIT model (which Gemma and Maria experienced as pre-service teachers) guided these future teachers to a gradual acceptance of their responsibility for learning.

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### **10. 3. RQ2 and RQ3: In-Service Teachers' Beliefs and Perceptions, Changes Observed and Underlying Causes**

This section is dedicated to Gemma's and Maria's beliefs and perceptions as novice in-service teachers, whether they changed or remained the same during the study, alongside the underlying factors beneath any changes. These are discussed under: 10.3.1. Changing working definitions; 10. 3. 2 Teacher guidance, feedback, and control shift; 10.3.3. Promotion of autonomous learning; and 10. 3. 4 . Student age and “learning by doing.”

#### **10. 3. 1. Changing Working Definitions**

The first change was observed in the second online meeting with the tutor-researcher when both Gemma and Maria (independently of each other) complemented and/or retracted some parts of their previously expressed working definition that autonomous learning meant total independence in self-directed learning. This change could be attributed to exposure to the complexity and explicit theories and definitions underlying autonomous learning provided in

the intervention. This finding corroborates other findings of other studies stating that pre-service teachers' more sophisticated beliefs and knowledge can and should result from teacher training and implementation of ad hoc pedagogic interventions (Arzi & White, 2008; Ohst et al., 2015). However, it is not always the case that explicit instruction improves understanding of the complex concept of autonomy. For example, Gardner (2007) reported that contrary to predictions, a semester-long course involving discussion of autonomous learning and students' exposure to self-access learning did not lead to any evolution of the students' working definitions of autonomy. In that study, students provided simplistic working definitions of self-access learning and autonomy at both the onset and the end of the course.

The different outcomes in the case of this study could be because the participants were trained to become autonomy-promoting teachers themselves via courses that required them to engage in higher-level cognitive activities such as strategic lesson planning and reflection on autonomy-related matters. Hence, they were likely more attuned to the complexity of autonomy, which corroborates those studies that show pre-service teachers' working definitions of autonomy evolved when autonomy-promotion interventions were implemented (Galiniene, 1999; Deberli, 2013).

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### **10.3.2. Teacher Guidance, Feedback, and Control Shift**

At the in-service teaching stage, both Gemma and Maria believed their students were used to and depended on teacher guidance and feedback. This finding is in line with that of Borg and Al-Busaidi (2012), where one of the challenges faced in the promotion of student autonomy in the in-service teaching stage was students' overreliance on teachers. It is also in line with Lee's and Martin's (2020) finding—as previously noted—that tutors themselves worried that their students would likely *not proactively* seek clarification or assistance from

them in the absence of immediate feedback. This finding also corroborates other studies where teachers saw their role as essential in autonomous learning (e.g., Yan, 2012) and concluded that teachers' expertise and content knowledge were crucial resources in autonomous learning (Sadaghian & Marandi, 2020).

As described earlier, the situational shift brought the participants a new perspective on their own role and limitations in promoting autonomous learning with their students. As teachers, their stand on encouraging self-assessment and self-guidance in their students was shaped by both the teacher beliefs formed at the pre-service teaching stage and teaching experience they had gained thus far in real-life teaching, which more often than not, was a more favourable condition for belief change (Peacock, 2001; Pajares, 1992; Richardson, 2003; Richardson & Placier, 2001). Ironically, the participants did not appear to be conscious of the discrepancy between their pre-service and in-service perceptions (such as in Maria's case).

Furthermore, given that they were in the second year of their in-service teaching in the follow-up study, it cannot be predicted whether these changes would solidify into more permanent beliefs as their teaching careers progress. Despite this, these results go beyond previous reports that concluded that in-service beliefs (including any misconceptions and generalizations) are likely to either: 1) be generated during their pre-service teacher education (Arzi & White, 2008; Castellanos Jaimes, 2013; Ohst et al., 2015), or 2) originate even earlier, e.g., from the observational apprenticeship undertaken before teacher training (Borg, 2004; Erkmen, 2014; Harwood et al., 2006; Škugor & Sablić, 2018).

We also see little difference in the perceptions of transferring control from teacher to student, often seen as one of the pinnacles of autonomous learning (Dickinson, 1995; Holec, 1981; Little, 2007; Nolen, 1995). At the in-service teaching stage, although Gemma and Maria still believed that some control should be given to students in general, they now perceived that



teachers must be fully in control over all the aspects of their student's learning experience to avoid a chaotic experience. Despite the similarities to their pre-service remarks, to some extent, this still contradicts their claims of positive attitudes towards giving control to students. This finding corroborates previous studies wherein novice teachers were less willing to compromise classroom management control and less flexible in the classroom than their more experienced colleagues (Cubukcu, 2016; Mehprour & Moghaddam, 2018; Tsui, 2003). It also agrees with a previous finding where teachers believed the students were unused to autonomous learning and lacked the abilities to do so (e.g., Reinders & Lazaro, 2011).

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### **10.3.3. Promotion of Autonomous Learning**

Both participants believed that the promotion of autonomous learning in their students was important and beneficial for them. However, they were generally reluctant to foster autonomy with their own students as they doubted their competency to self-direct their learning. Also, they perceived that they did not promote autonomous learning with their students as their students were not yet ready to take over control of their learning. They also believed their age limited their ability to engage in autonomous learning. This is in line with Borg and Al-Busaidi's (2012) study.

An unchanging contradiction was found in both stages of the study between the participants' general belief in the value of autonomy promotion with students and their teaching practices. A possible explanation could be the different challenges of their novice teacher positions. As seen in the Findings chapters (6-9), the realities of their novice in-service teaching were complex, and they seemed to struggle with applying this belief in practice and often needed to adjust to the institutional settings where they worked.

Specifically, it was found that their self-beliefs, beliefs about their students' abilities, and the

institutional context of their teaching were reflected in their in-service teaching and affected their decisions related to fostering autonomous learning with their students. Again, there are parallels here with the findings reported in Borg and Al-Busaidi's (2012) study, in which the few teachers who self-reportedly did not foster autonomous learning in their teaching practices explained that it was an unwilling choice determined by external constraints they faced within the institutional contexts where they taught. This finding also supports those by Jiang et al. (2021), where the magnitude of a novice teacher's disappointment when unable to promote learner autonomy at her new workplace led to a change in her workplace. Ultimately, she decided to seek employment in a school where she was not expected to "babysit" her students, with the freedom to enact her teaching beliefs and foster her students' autonomous learning skills. This is similar to other reasons given by Catalanian novice teachers post-graduation as to why they had not considered applied telecollaboration in their classes (Marjanovic et al., 2021). Although many teachers indicated that it had not occurred to them to implement telecollaboration, many of those who did so reported a complete lack of support for their initiative in their workplace, expressing a sense of "having to do it all alone".

At the in-service teaching stage, one finding was the participants' insecurities about their own abilities to promote autonomous learning in their students. This finding is in line with previous studies that described self-efficacy as a strong predictor of whether teachers would promote autonomy, with low self-efficacy found to affect teaching practice negatively (Dignath-van Ewijk, 2016 as cited in Lawson et al. 2018; Perry et al., 2008; Vázquez, 2020). In addition, the participants' low self-efficacy beliefs displayed little to no change from the pre-service teaching stage. The coexistence of these two findings may not be a coincidence. It has been proposed that teachers' self-awareness and self-reflection on their own (autonomous) learning abilities and processes form part of their teacher autonomy, or, as Smith (2000, 2003)

refers to it, their teacher-learner autonomy. Furthermore, it has been argued that there is a causal link between teachers' autonomy and the development of learner autonomy (Little, 1995). This link is the rationale behind many educational programmes that aim to engage pre-service teachers in autonomous learning so they could develop self-efficacy, which then would assist in the development of autonomy of their own students (Hoven, 2006; Smith & Erdoğan, 2008).

During the TILT course and internship (and potentially other courses not discussed in this study), Gemma and Maria experienced a considerable amount of 'experiential modelling' (Hoven, 2006) to increase their autonomous learning skills, their awareness of it and its importance. These programmes seemed to have positively affected their pre-service teaching practice (e.g., Gemma opted to implement telecollaboration already in her pre-service teaching). This finding is congruent with that by Masats et al. (2019), where pre-service teachers felt that the 'learning by doing' approach was valuable in preparing them to implement similar teaching programmes in their pre-service teaching.

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#### **10.3.4. Student Age and "Learning by Doing"**

As discussed in section 9.3.1. Contradiction between positive attitudes and control shift, the participants perceived their students as unable to successfully carry out autonomous learning due to their young age (Gemma's students being 4-5 and Maria's students being aged 11-12). This perception of student age affecting their ability to practice autonomous learning was also shown at the pre-service teaching stage as they felt the students they taught in their practicum teaching internship were too young to engage in a flipped classroom or more autonomous telecollaboration practices. Therefore, it can be concluded that perception of their own students as being too young seemed to be further reinforced at the stage of their

“apprenticeship of observation” (Borg, 2004), which is why it did not change from the pre-service teaching stage.

This finding is not unique as other studies indicate similar concerns concerning student age. For example, Lee and Martin (2020) found that despite their pre-service teachers’ enthusiasm regarding autonomous learning in flipped classrooms, they were less optimistic regarding their future students in the same context. Some teachers indicated that their future students might be too young to take ownership and responsibility in a flipped classroom, indicating that type of learning. Ajayi (2009) also noted how the pre-service teachers from their study believed younger students were less conducive to autonomous learning as they preferred to have the teacher guide them throughout their learning. Saraç and Tarhan (2020) found that such reinforcement of existing beliefs regarding student abilities in teaching practice can lead to biases that affect how these students are taught. In their study, such unchanging beliefs were shown in how both novice and experienced teachers invested more effort to foster metacognitive and self-regulation skills development in their (slightly) older students compared to their younger pupils.

As a solution, Mont and Masats (2018) recommend students to be given “voice and choice” (p. 112) regardless of their age in telecollaborative activities. They indicate that this may look different in young students, as giving them control may mean simply letting them decide on some aspects of activities designed in advance by teachers. Other studies conducted in the context of the same teacher education programme attended by the study participants found that several programme graduates had implemented telecollaborative projects in primary education based on pedagogical knowledge accrued during the course (Dooly, 2009; Marjanovic et al., 2021).

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## Chapter 11: Conclusion

In this final chapter, an overview of the main contributions made by this study to the learner autonomy field are presented. After a description of the study limitations, the chapter closes with the suggestions for pedagogy and further research drawn from this study.

### 11. 1. Main Contributions of the Study

The conception of this study started with a challenge—how to access and make sense of the two pre-service (and later in-service) teachers' beliefs and perceptions. This was especially challenging given the reputation of beliefs as complex and elusive constructs to explore, even more so when connected to autonomous learning, a concept that seems equally if not more impenetrable according to the experts in the field. The need for studying autonomous learning from these pre-service teachers' point of view was evident, but it was less clear how one could capture their beliefs and perceptions. For example, how was the researcher to recognise the references to autonomous learning if there was no consensus on even in the pertinent literature (Benson, 2007)? Moreover, how would the participants' beliefs about autonomous learning be identified if it was unknown what autonomy was for them?

These anticipated challenges underlay one of the study's main contributions, which was that it provided a framework for identifying episodes that involved autonomous learning in the participants' speech and actions. To this researcher's knowledge, no previous PhD study on autonomy included the step of conducting a pre-study to synthesise the existing literature and deconstruct autonomous learning to facilitate its recognition in the data. Thus, researchers who wish to explore autonomous learning in their contexts can use the conceptual framework that resulted from this pre-study step. It can also be used by educators in need of a guide that helps pinpoint autonomous learning so its related components can be discussed in their classrooms.

The longitudinal approach adopted in this study was another important contribution to the learner autonomy field as it provided a unique insight into the teacher development trajectory of the two participants, from pre-service teachers to novice teachers. Few studies report novice teachers' (changing) beliefs and perceptions in the literature on autonomous learning. Fewer still highlight this transition process and compare the beliefs and perceptions held at the two different stages of teacher development via in-depth triangulation of multiple data types and convergence of various evidence, as was done in this study. This longitudinal approach was valuable in the present study because it enabled identifying changes in the two participants' beliefs, perceptions, and autonomous learning practices, which few studies provided access to. It also helped view these changes comprehensively, as connected to the different variables that affected them.

Next, this study's usefulness also lies in the unique twofold perspective it provides. In this study, we first saw what autonomous learning meant and looked like through the lens of two pre-service teachers. The study then uncovered important beliefs and perceptions that must be considered by the educators and curriculum writers for the teacher training in the studied context. For example, it shed light on certain ambivalence found in the participants' beliefs and perceptions, such as: 1) believing in the importance of autonomous learning and yet perceiving themselves as insufficiently trained and lacking in knowledge regarding it; 2) not perceiving themselves as autonomous despite regularly engaging in autonomous learning and successfully completing the self-study activities in their final year university courses. The study highlighted these gaps in their understanding of autonomous learning, how it informed their other beliefs and practices as pre-service teachers and how it eventually evolved and became more sophisticated. Gemma's and Maria's awareness of the teacher's essential role as an irreplaceable resource, guide, and evaluator in autonomous learning was also a notable

finding at the pre-service stage. Although its findings cannot be generalised as a case study, it is not difficult to imagine that other pre-service teachers in the same or similar contexts experience some of the issues highlighted in the study.

Next, the study laid out how these beliefs and perceptions from the pre-service state played out when Gemma and Maria became teachers. While they maintained their evolved understanding of autonomous learning, there was still evidence of limiting beliefs such as lack of confidence in their ability to promote autonomy and doubt in their young students' ability to self-direct their learning. A mismatch between belief and practice was highlighted, corroborating the existing evidence in the literature of the complicated relationship between novice teachers' beliefs and enactment of those beliefs. Of particular note was the observation of how these two novice teachers found themselves in the "flipped scenario" whereby their students manifested a similar need for teacher guidance and feedback they themselves had expressed as students, which they now perceived differently from a teacher's point of view trying to promote autonomy. Concern for attaining learning objectives was a *leitmotif* in the findings at both stages that shaped their beliefs and perceptions as in-service teachers. Finally, the change of certain beliefs and indications of future change regards to control shift and autonomy promotion were also important findings at the in-service teaching stage.

This study, therefore, is an account of two young teachers who were professionally developing as evidenced by their changing beliefs and an indication of future change (Castellanos Jaimes, 2013; Pajares, 1992; Peacock, 2001; Richardson, 1996). However, this trajectory of change is not always a linear progression (Khoshnevisan, 2017), as it has been reported that teachers can go back to their old, teacher-centred beliefs (e.g. Letwinsky & Cavender, 2018). As such, Gemma and Maria would likely benefit from more support in preserving their teacher self-images and ideals upon transitioning into real-life teaching.

The present research indicated that one of the strongest factors that limited Gemma's and Maria's promotion of autonomy was how they perceived the traditional teaching environment they worked in. As perceived by Gemma and Maria, the overall absence of initiative for supporting autonomy by the teaching staff seems to have played an important role in their decision not to implement autonomous learning activities in their respective classes. The researcher would suggest that this is a realistic description of the situation for many teachers in Catalonia. This study, therefore, provides an insight into the contextual background and the institutional framework that must be taken into account when studying the promotion of autonomous learning in novice teachers, especially where there is a misalignment between beliefs and practices observed.

The four supratemes identified in the data, i.e., uncertainty, teacher guidance, feedback, and control shift, are helpful in determining the directions in which the discussion on autonomous learning should continue in this micro-context. Interestingly, these four supratemes Gemma and Maria most frequently focused on (as the online meetings were open, they were often the ones choosing the topic) highlight the social rather than individualistic nature of autonomous learning. Their focus on teacher involvement and the student need to be assisted without feeling alone corroborate the premise that it is a balance of dependence and interdependence rather than complete independence that lies at the core of the autonomous learning process. In Little's (1991) words, "because we are social beings our independence is always balanced by dependence; our essential condition is one of interdependence." This important proposition seemed to be reflected in the findings of this study in which learner autonomy was seen as "the product of an interactive process in which the teacher gradually enlarges the scope of her learners' autonomy by gradually allowing them more control of the process and content of their learning." (Little, 2007, p. 26).



Finally, this study also has some methodological contributions. First, the Autonomous Learning Intervention—designed as an *ad hoc* solution for collecting the data from multiple sources—proved to be an effective, if time-consuming, gateway to accessing the participants' beliefs from various angles as embedded in their contextual information.

The second methodological contribution was the screencast recording technology used as a tool to capture Gemma's and Maria's self-study data that would have otherwise been inaccessible via self-report. Interestingly, few (if any) PhD studies have used screencast recording software to investigate technology-enhanced autonomous learning, to the researcher's knowledge (an exception perhaps being Pujolà (2002), who used screen recording software to investigate learner strategies while working in a computer-assisted language learning environment aimed, among other things, at promoting autonomy). It remains surprisingly underutilized, especially given that screencast recording is relatively unobtrusive and may be as close as one could get to direct observation of what participants are doing when they study on their own on their computers.

### **11. 2. Limitations of the Study**

First, this case study used a sample of only two participants, with the sampling being purposive to “select unique cases that are especially informative” about autonomous learning (Neuman, 2009, p. 274). This means that the results cannot be generalised, but this is common in case studies whose aim is to focus on in-depth exploration rather than transferability. Validity and reliability were achieved through various methods to compensate for this limitation. These methods included ensuring respondent validation at the in-service teaching stage, focusing on the most recurring themes and those patterns that were present in both pre-service and in-service stages, in addition to balancing the participants' self-reported data with the data obtained from their pre-service and in-service teaching practice.

Another limitation was the scope of this thesis. As the analysis of beliefs and perceptions were in-depth, its scope did not permit including the data on Gemma's and Maria's out of school and informal autonomous learning practices—which was interesting and could have provided an even more holistic insight into their autonomous learning. However, although not structurally analysed, this data was used as contextual information to further explain their beliefs and perceptions or highlight some notable contradictions.

Likewise, due to the study's limited scope, it did not provide an insight into what Gemma and Maria did between their graduation in June 2018 and December 2020 when the researcher followed up with them. This unexplored period could contain useful information that could complement the current findings and depict the uninterrupted trajectory of their progression into teaching. That said, the researcher was in informal contact with Gemma during this period, and in February 2021, Maria talked about her most important experiences since graduation. As a result, the researcher was familiar with the major events from that period and that knowledge was included as background information.

Conducting more interviews and/or using other instruments such as questionnaires, online meetings, and reflection sheets per participant at the in-service stage could have potentially strengthened the findings answering the research questions two and three. These questions focused on beliefs and perceptions at the in-service stage and any changes in them. However, as novice teachers navigating the challenges of their new positions and the COVID-19 related transition to online teaching and other disruptions, Gemma and Maria were not in a position where they could commit to more involved participation in the follow-up study.

### **11. 3. Implications for Pedagogy and Further Research**

Despite the aforementioned limitations, the findings of the study also hold several pedagogical implications. Although it was not the purpose of the study to investigate the

effects of the intervention on Gemma's and Maria's beliefs and practices, some circumferential yet interesting effects were noted. For example, the coaching and encouragement of self-reflection on autonomous learning seemed to help improve Gemma's and Maria's understanding of autonomy at the pre-service teacher level. In addition, creating a self-reflection sheet as a written stimulated recall practice at the in-service teaching stage proved to be an effective device for member checking and eliciting current beliefs, perceptions, and practices. It also did not disrupt the busy daily lives of the two novice teachers as they could do it at their own pace.

Next, it can be argued that in order to avoid generation or solidification of misconceptions, it is of utmost importance to explicitly discuss the concept of autonomous learning with pre-service teachers early on in their teacher education and provide any disambiguation between the related terms and concepts (such as self-regulation, self-direction) wherever possible. Bruner (1996) expostulated that it is normal for pre-service teachers to hold implicit beliefs about autonomous learning—although tacit or subconscious—that can strongly affect their future teaching and should therefore be revealed and critically analysed as soon and as much as possible during teacher education. Given that there appears to be a connection between pre-service teachers' understanding and working definitions of autonomous learning and the tendency to later promote autonomy with their future students (Smith, 2003), this is also a reason for addressing pre-service teachers' working definitions of autonomy.

The promotion of open dialogue and critical reflection can also ensure a greater understanding (and tolerance) regarding the complexity that autonomous learning entails as a concept and practice. These reflections can begin with frank conversations with pre-service teachers about their own working definitions and even struggles with learning to learn

autonomously. As Reinders (2010) points out, what this means for educators is that they should treat their students' autonomy as a perpetual process instead of seeing it as an ultimate goal. To this end, not only should educators treat their student's autonomy as an ongoing process they should also help them become more aware of their own autonomy processes while dispelling any unrealistic expectations they may hold regarding themselves as autonomous learners.

Moreover, the positively changing working definitions of autonomous learning found in Gemma and Maria indicate that it is worth pursuing the development of a sophisticated understanding of autonomous learning in pre-service teachers. Educators should not avoid using autonomy-related terminology and technical jargon when discussing autonomous learning with future teachers. Explicit coaching, purposeful pedagogic interventions, and fostering of students' practical knowledge could be the key tools in helping pre-service teachers understand autonomous learning. Pre-service teachers' practical involvement in autonomous learning activities can help initiate disillusionment of wrong beliefs and unrealistic expectations at the survival stage of teacher development (Fuller & Brown, 1975; Katz, 1972). There are many myths and misconceptions about autonomous learning, which is critical in light of some recent reports of in-service teachers' tendency to subscribe to popular myths even when they contradict research-stated facts (Menz et al., 2021; Rasul et al., 2019; Tangdhanakanond & Archwamety, 2019). Supporting the development of more refined working definitions of autonomy and putting to rest related misconceptions can be taken into account when tailoring curricula. This is essential because what pre-service teachers believe to be true can be a strong prognosis of their future teaching practice (Ashton, 2014; Borg, 2001; Chant, 2009; Cornett, 1987; Nespor, 1987; Pajares, 1992; Peacock, 2001; Whitley et al., 2019; Yook, 2010).

In the case of Gemma and Maria, the new teaching experience brought changes to their existing beliefs; although it must also be noted that at the time of the study, they were in the second year of their in-service teaching, making it difficult to predict whether these beliefs will persevere as their teaching careers progress. This suggests that more studies, which track students over a long period, well past their novice stage, could help develop a deeper understanding and potentially encourage in-service teachers to track the evolution of their own beliefs and observe its effect on their teaching practice.

These findings also showed the complexity of investigating teacher beliefs of novice teachers instead of pre-service teachers, whose beliefs are often rather idealistic and may also run into institutional and classroom constraints. This could be improved by teaching novice teachers how to accommodate and empathise with their students without necessarily succumbing to their preferences for a more structured approach when their intention is to foster their autonomous learning skills. For this to be effective, teacher trainers themselves need to be equipped with knowledge about autonomous learning so they can clarify autonomy elusiveness as much as realistically possible and lest they inadvertently reinforce their students' misconceptions. At the same time, teacher trainers should have realistic expectations of their students' autonomous learning knowledge and skills and be careful not to overestimate those, which Gemma and Maria sometimes felt when they were given the role of "expert" in their own learning.

Another key finding was that Gemma and Maria generally had low autonomous learning self-efficacy, i.e., belief in one's own autonomous learning ability both as students/pre-service teachers and novice teachers. This is important as self-efficacy beliefs could affect their teaching practice negatively and, as such, is often aligned with whether or not teachers will promote autonomy with their own (Dignath-van Ewijk, 2016 as cited in

Lawson et al. 2018; Perry et al., 2008; Vázquez, 2020). This gap may be bridged by investing more effort into raising pre-service teachers' awareness of their autonomous learning skills during their teacher education while developing autonomous learning strategies such as self-regulation, self-direction, and self-evaluation. This could be accomplished by introducing regular self-assessment and self-reflection activities during teacher education. This could prompt the pre-service teachers to think about their autonomous learning skills and acknowledge and celebrate their progress and help students “unlearn” pre-existing beliefs about their own abilities by presenting them with autonomous learning challenges and making sure they are aware of their positive outcomes (Raya, 2020; Thomson et al., 2018). Furthermore, the findings regarding the possible negative impacts of unchanging beliefs about students' abilities indicate the need for such beliefs to be addressed and, if needed, dispelled through explicit teacher training.

Practical experience of how to teach autonomy can also be useful. Gemma and Maria were empirically introduced to the notion of promoting autonomy through the design of self-directed learning materials and lessons adapted to different students' age and existing learning skills. Indeed, other studies done on Gemma's and Maria's older colleagues (in-service teachers who formerly attended the same or similar teacher education as Gemma and Maria) testify that post-graduation, some of them replicated and adapted autonomy promoting methods in the ways they saw fit for their students and circumstances at hand. For instance, Dooly (2009) examined the impact of a teacher training project in pre-service teachers who participated in a teacher training programme that aimed to encourage their use of telecollaborative activities with their students after graduation. Here, it was found that around seven per cent of the novice teachers who were in their first year of teaching had already implemented variants of telecollaborative projects or activities adapted to their young

students' needs and contexts. Similar findings were found in a 2021 study by Marjanovic et al. (2021), which followed up on 151 former UAB pre-service teachers who attended the TILT course up to 16 years after graduation. Taken together, this highlights the importance of deliberate teacher preparation for autonomy promotion that provides opportunities for students to “learn by doing” and teaches them how to use that knowledge effectively depending on the circumstances they find themselves in post-graduation (Canals et al., 2018).

Furthermore, it is worthwhile to invest efforts into preparing pre-service teachers for the challenges faced at the in-service teaching stage. For example, this could be done by pre-determination of different tools and resources to employ when navigating the strategic compliance with the institutional rules and constraints that most (novice) teachers will have to overcome at some point in their career (Glas et al., 2019; Ross, 1987). For instance, there is anecdotal evidence of recently graduated teachers reaching out for support and joining forces to implement innovative projects with their former classmates who may be teaching in a different school, province, or even country (Marjanovic et al., 2021). This speaks of the impact teacher education can have on teachers' in-service practices; not only does it equip them with pedagogic strategies, knowledge, and skills, but it can also provide them with a professional network to rely on for future endeavours. This affordance of teacher education as support following courses such as the TILT course should perhaps be exploited more by creating and maintaining more structured networks of pre-service teachers interested in promoting autonomous learning via (international) collaboration and co-construction of knowledge. These networks could be student support groups and communities of practice that would stay active upon graduation, online repositories of resources on autonomy, or follow-up events. This support can also be implemented vice versa via enabling collaboration (such as collaborative action research) between researchers, pre-service, and novice teachers, as novice

teachers' perspectives could help pre-service teachers prepare better for the realities of in-service teaching (Masats & Guerrero, 2018). Ultimately, like the reflection sheets utilized in this study, such support could remind novice teachers of their original intentions of promoting autonomous learning and potentially initiate a change in their autonomy promotion practices.

Finally, we must consider the potential transformation that may occur through this type of 'shadowing' of teachers once they have left the teacher education programme. In this study, it was found that the participation in the follow-up part of this study at the in-service teaching stage may have inspired Gemma and Maria to critically reconsider their teaching beliefs in a new light and from additional experience. Gemma thanked the researcher for reminding her of her pre-service teacher's intentions to promote autonomy and encouraging her to compare it with her current practice. Maria similarly explicitly stated she "had forgotten about autonomy", and the discussion of her current practices had reminded her of these discussions and reflections. It also led her to reconsider the belief, which she had transferred from the pre-service teaching stage into her novice state, that promoting autonomy is time-consuming and unrealistic because it entails designating a separate subject or extracurricular work with students. These were seen as moments that could potentially kickstart the dispelling of the internalised compliance to the institutional context (Ross, 1987). Indeed, some describe novice teaching as the "survival stage" of teacher development on which a certain dose of self-centredness is required at the expense of foregoing their own original beliefs and teacher ideals (Fuller & Brown, 1975; Katz, 1972). A beneficial practice may be to occasionally 're-connect' the novice teachers with their pre-service teachers' beliefs and intentions by asking them to recall them and critically reflect on how they relate to their current practice so that they might critically weigh if they are detrimental or not in the current practice.



#### 11. 4. Future Research

The implications of this study for research should be mentioned, as well. To better understand how generalisable the beliefs and perceptions found in Gemma's and Maria's case, future studies could address the beliefs and perceptions of larger samples of students from various contexts to obtain more transferable results. Quantitative methods should also be used to complement the qualitative insight obtained from this study.

Further research is needed to determine the long-term retention or change of teacher beliefs about autonomous learning, as well as their effect on teaching practice at and past the stage of a novice teacher. This further research needs to also address not only teacher beliefs about autonomy in learning but also their autonomous learning practices and promotion of this type of learning with their students in order to detect any interplay between these variables, thus enhancing the understanding of the belief-practice link.

Further research is also needed into pre-service teachers out of school and informal autonomous learning practices and beliefs related to them, which are aspects that rarely get addressed in pertinent research but could shed more light on future teachers attitudes towards autonomy. The data indicated that Gemma and Maria were engaged in highly autonomous learning practices outside of their formal education and yet felt they were not autonomous in their learning. Another potentially fruitful venue for exploration could be investigating the presence and awareness of pre-service teachers' latent autonomy potential alongside how they can take advantage of it to be more successful in the autonomous learning required by their formal education.

Finally, more studies need to focus on the design principles behind effective pedagogic interventions that aim to promote knowledge and skills for autonomous learning. Although the teacher training and the *ad hoc* intervention Gemma and Maria attended as pre-service

teachers were essential factors in any progress in their beliefs on autonomy, there is much to indicate additional interventions and programmes may be needed to help future teachers gain more confidence around autonomous learning. In the words of Gemma:

I don't think there is something where students should have little control over. At the end of the day, it is them, their needs and potentials that education is aimed to [...] I think we are all autonomous learners to some degree. [...] I would say that an autonomous learner is able to identify what their learning needs are and find tools to meet these needs. (Gemma, October 2017).

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## Appendices

### Appendix A: Recruitment Email Sent to Potential Participants in September 2017

Invitation from Jelena ● Inbox x

27 Sep ☆ ↶ ⌵

Hi all,

Thank you a lot for having me in your class. As I promised, here is some more information about the autonomous learning support program I mentioned to you today.

**Who am I and what am I doing?**

An important question! :) I am Jelena, a PhD student from Serbia who is passionate about technology in education (I also design elearning courses and run my own blog on elearning). More than anything, I believe in autonomous learning so I have focused my work on finding out how we can learn efficiently by ourselves while using technology.

**Why may autonomy be important for you?**

Both as a student and in everyday life, you learn while using technology. Luckily, there are so many resources available online that allow you to learn what you want at your own pace (autonomously). However, you need to know **how** to do it - not how to use a learning tool, but how to actually achieve the intended learning. And with so many options out there, it is hard to know which tool to use, what strategies are the most suitable ones for you, how to organize yourself, sit down and actually do the work - without a deadline forcing you.

As a future teacher, you may want to encourage your students to be responsible for their own learning and rely less on you. You may also want to facilitate their out-of-class learning by demonstrating and modelling how to learn autonomously with technology.

I do believe some people are inherently more autonomous than others, but what I **know** is that **everyone can become more autonomous learners if they work on it**. I have gone (and am going) through that transformation myself.

**What will I ask you to do?**

I will ask you to complete a super mini personalised training on autonomous learning with technology. I will also need to do 1-2 interviews (can be done via Skype). Additionally, I would also need to monitor your work at times to see how far you have come with learning to learn autonomously (we can agree on the details later).

If you are interested in participating, please sign up using this form:

<https://goo.gl/forms/hNTYfnHIZ8mfGSM2>

Thank you!

Best,

Jelena Marjanovic  
**Jelena Marjanovic**  
eLearning Developer and Consultant  
Blogger at: [Jelena Marjanovic eLearning](#)

## Appendix B: Consent Form for Participating in the Study

### Consent Form

Please read the text below and answer the two questions marked with red asterisks.

Image title

#### Consent to Participate in a Research Study UAB • Barcelona, Spain

Title of Study:	<b><u>A Design-based Research Case Study on Autonomous Technology-enhanced Learning of Pre-service Teachers</u></b>
Investigator:	Jelena Marjanovic

#### Introduction

- You are being asked to be in a PhD research study on autonomous learning.
- You were selected as a possible participant because you expressed interest in improving your autonomous learning skills.
- I ask that you read this form and ask any questions that you may have before agreeing to be in the study.

#### Description of the Study Procedures

If you agree to be in this study, you will be asked to do some or all of the following things: fill in a questionnaire about your learning styles and needs, participate in an interview, take part in an intervention designed to help you learn more autonomously with technology, be observed during your class delivery at the end of the course, fill in a questionnaire about your satisfaction with the intervention and your progress. The duration is to be agreed with the participants.

#### Risks/Discomforts of Being in this Study

- There are no reasonable foreseeable (or expected) risks.

#### Benefits of Being in the Study

- You are expected to benefit from participating in the autonomous learning intervention. It is designed to help you better understand yourself as a learner and acquire strategies that will enable you to learn autonomously with technology, as well as encourage your future students to learn autonomously with technology.

#### Confidentiality

- Your identity will not be disclosed in the PhD thesis. Pseudonyms will be used instead.

#### Right to Refuse or Withdraw

- The decision to participate in this study is entirely up to you. You may refuse to take part in the study *at any time* without affecting your relationship with your teacher, the investigator of this study or UAB.

#### Right to Ask Questions and Report Concerns

- You have the right to ask questions about this research study and to have those questions answered by me before, during or after the research. If you have any further questions about the study, at any time feel free to contact me, at [jelena.jm.marjanovic@gmail.com](mailto:jelena.jm.marjanovic@gmail.com) or by phone: +34631650257.

Do you agree to this form? \*

Yes

No

What is your name and surname? \*

Short-answer text



## Appendix C: Pilot Study Questionnaire

### Learner Needs and Preferences Questionnaire

This questionnaire is designed to help you understand your individual learner needs and preferences in the context of autonomous technology-enhanced learning. It is divided into 4 sections - Self-direction and Self-regulation, Metacognition, Agency and Questionnaire Feedback. The words 'technology' and 'technological' in this questionnaire refer to literally any digital tool regardless of its sophistication and purpose (it does not have to be technology intended exclusively for education). Please, reflect and answer the questions as honestly as you can.

#### SELF-DIRECTION AND SELF-REGULATION

Self-direction refers to planning and implementation of your learning trajectory, whereas self-regulation refers to micro processes that keep that self-directed learning running. As an illustration, you can think of the process of going on a diet. You need to reflect on your current weight and decide on goals, as well as methods and strategies you will implement to achieve these goals (self-direction), but you also need to employ strategies and mechanisms to stick to this diet every day (keep the motivation up, be disciplined, observe the effects and alter your strategical approach accordingly, which belongs more to self-regulation). You need both self-direction and self-regulation to achieve autonomy in learning. The following question will focus on your learner needs related to these two concepts.

Please, tick the areas in which you think you most need/would most like to achieve improvement (you cannot choose all of them, so focus only on the most critical areas):

- Setting your own learning goals
- Designing and sticking to schedules for completing your tasks
- Deciding on optimal time to spend on your tasks
- Planning for technology-enhanced practice outside of your classroom activities
- Valuing and uptaking others' feedback on your learning
- Managing anxiety in learning
- Managing cognitive overload (when you tend to be on too many tasks or do too many things simultaneous...)
- Continuously monitoring and evaluating your own progress
- Revising learning goals
- Deciding what is important to learn
- Deciding when is the right time to learn something
- Deciding how to learn something with help of technology
- Relying less on teacher/colleagues/peers to encourage you to learn
- Assuming responsibility for sparking and maintaining your own interest in learning
- Overcoming motivation obstacles and periods of low motivation
- Feeling positive about using technology for learning
- Feeling comfortable with collaborating with other learners online
- Having positive feelings about using technology for self-assessment
- Feeling positive about challenges you face while learning with technology
- Generally enjoying learning independently of teacher/course while using technology
- Other...

#### METACOGNITION

Metacognition is broadly speaking awareness and understanding of your own thought processes (thinking about thinking). Autonomous learners "know themselves" (e.g. their most effective learning style, what motivates them, their learner needs, etc.). Metacognition also refers to metacognitive strategies (e.g. you watch videos to learn something because you know your learning style is visual). The following question will prompt you to reflect on the areas of metacognition you feel you need improvement in.

Please, tick the areas in which you think you most need/would most like to achieve improvement (you cannot choose all of them, so focus only on the most critical areas):

- Critically reflecting on the content you are learning



- Critically reflecting on your teachers teaching methods
- Critically reflecting on your own learning strategies
- Having awareness of affordances (potential for learning) of specific technological tools
- Being aware of affordances and constraints of different modes in online learning
- Developing and using multiliteracy skills
- Employing various learning strategies
- Being aware of your own learning style(s)
- Being aware of your own learner needs and preferences
- Knowing what motivates you to learn and what hinders your motivation to learn
- Other...

#### AGENCY

Agency refers to you taking initiative to learn something of your own free will because you perceive it as relevant and significant. It is related to intrinsic motivation. In autonomous learning with technology, learners should be seen as agents that design their own learning experience. The following question will focus on your learner needs a regards your agency in learning.

Please, tick the areas in which you think you most need/would most like to achieve improvement (you cannot choose all of them, so focus only on the most critical areas):

- Having wide and easy access to technological resources for learning
- Continuously and actively seeking for new technological resources for learning
- Using technology for learning on your own initiative
- Using technological resources appropriately and effectively
- Creating and editing materials using digital tools (videos, images, written blogs and journals, etc.)
- Recognizing and utilizing the affordances that specific tools have for learning
- Using search engines to learn about different things of interest to you on your own initiative
- Taking initiative in collaboration with others
- Acting as an agent rather than a passive recipient of knowledge
- Being proactive in your learning, whether in a group or as an individual
- Taking specific measures to ensure your own control over your learning
- Making decisions on your learning process independently of your tutor
- Rejecting teaching methods that you consider unsuitable or not beneficial for your learning
- Rejecting methods that center on tutor rather than learner
- Taking risks in your learning
- Being actively engaged in a community of learners where you learn from others
- Volunteering to participate in technology-enhanced learning activities
- Organizing social interaction (both online and offline)
- Being able to balance group and individual work
- Actively seeking support from more competent peers/tutor
- Using optimal communication strategies in technology-enhanced interaction
- Being able to manage affective factors (emotional factors) in online interaction
- Developing a good intercultural competence (sensitivity to intercultural differences)
- Other...

#### Questionnaire Feedback

The following questions will prompt you to provide honest and critical feedback on the questionnaire you have just completed.

How would you rate the comprehensibility of the questions (how well you understood them)? \*

	1	2	3	4	5	
Very bad - incomprehensible	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Excellent - completely comprehensible

How would you rate the comprehensibility of the offered choices (items that you were supposed to tick)? \*

	1	2	3	4	5	
Very bad - incomprehensible	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Excellent - completely comprehensible

How would you rate the usefulness of the section descriptions (Self-direction and Self-regulation, Metacognition and Agency)? \*

	1	2	3	4	5	
Very bad - useless	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Excellent - very useful

Were there any parts you particularly struggled to understand? Which one(s)?

Long-answer text

---

Do you have any other suggestions for improvement of this questionnaire?

Long-answer text

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Thank you very much for your time!

Description (optional)

## Appendix D: Pre-intervention Questionnaire

### Learner Needs and Preferences Questionnaire

This questionnaire is designed to help you understand your individual learner needs and preferences in the context of autonomous technology-enhanced learning. It is divided into 4 sections: Self-direction and Self-regulation, Metacognition, Agency and Current Course Needs. The words 'technology' and 'technological' refer to literally any digital tool regardless of its sophistication and purpose (it does not have to be technology intended exclusively for education). Please, reflect and answer the questions as honestly as you can.

Your name and surname: \*

Long-answer text

#### SELF-DIRECTION AND SELF-REGULATION

Self-direction refers to planning and implementation of your learning trajectory, whereas self-regulation refers to micro processes that keep that self-directed learning running. As an illustration, you can think of the process of going on a diet. You need self-direction to decide what you want to achieve and how you will do it. You also self-regulation to stick to this diet every day (keep the discipline and motivation, change your approach if needed, assess progress, etc.). The following question will focus on your needs related to self-direction and self-regulation in learning.

#### Question

- Setting my own learning goals
- Setting and sticking to schedules for completing my tasks
- Deciding on optimal time to spend on my tasks
- Planning for technology-enhanced practice outside of my classroom activities
- Constructively using others' feedback on my learning
- Managing anxiety in learning
- Managing cognitive overload (when you tend to be on too many tasks or do too many things simultaneous...)
- Continuously monitoring and evaluating my own progress
- Revising learning goals
- Deciding what is important to learn
- Deciding when to learn something
- Deciding how to learn something with the help of technology
- Relying less on teacher/colleagues/peers to encourage me to learn
- Assuming responsibility for generating and maintaining my own interest in learning
- Overcoming motivation obstacles and periods of low motivation
- Feeling positive about using technology for learning
- Feeling comfortable with collaborating with other learners online
- Having positive feelings about using technology for self-assessment
- Feeling positive about challenges I face while learning with technology
- Generally enjoying learning independently of teacher/course while using technology
- Other...

## METACOGNITION

Metacognition is broadly speaking awareness and understanding of your own thought processes (thinking about thinking). Autonomous learners "know themselves" (e.g. their most effective learning style, what motivates them, their learner needs, etc.). Metacognition also refers to metacognitive strategies (e.g. you watch videos to learn something because you know your learning style is visual). The following question will prompt you to reflect on the areas of metacognition you feel you most need improvement in.

I most want and need to improve: (tick only the most critical areas):

- Critically reflecting on the content I am learning
- Critically reflecting on my own learning strategies
- Knowing affordances (potential for learning) of specific technological tools
- Knowing affordances and constraints of different modes in online learning
- Developing and using multiliteracy skills
- Employing various learning strategies
- Knowing my own learning style(s)
- Knowing my own learner needs and preferences
- Knowing what motivates me to learn and what hinders my motivation to learn
- Other...

## AGENCY

Agency refers to you taking initiative to learn something of your own free will because you perceive it as relevant and significant. In autonomous learning with technology, learners should be seen as agents that design their own learning experience. The following question will focus on your learner needs a regards your agency in learning.

I most want and need to improve: (tick only the most critical areas):

- Having wide and easy access to technological resources for learning
- Continuously and actively seeking for new technological resources for learning
- Using technological resources appropriately and effectively
- Creating and editing materials using digital tools (videos, images, written blogs and journals, etc.)
- Using search engines to learn about different things that interest me
- Taking initiative in collaboration with others
- Acting as an agent rather than a passive recipient of knowledge
- Taking specific measures to ensure my control over my own learning
- Making decisions about my learning process independently of my tutor
- Rejecting teaching methods that are unsuitable or not beneficial for my learning
- Rejecting methods that center on tutor rather than learner
- Taking risks in my learning
- Being actively engaged in a community of learners where I learn from others
- Volunteering to participate in technology-enhanced learning activities
- Organizing social interaction (both online and offline)
- Being able to balance group and individual work
- Actively seeking support from more competent peers/tutor
- Using optimal communication strategies in technology-enhanced interaction
- Being able to manage affective factors (emotional factors) in online interaction
- Developing a good intercultural competence (sensitivity to intercultural differences)
- Other...

## CURRENT COURSE NEEDS

The question below refers to the course on technology-infused language learning based on the FIT model that you are currently enrolled on. Please, remember that your identity will not be revealed to anyone but the researcher, so try to give honest and critical feedback on how well your autonomous learner needs are catered for in this course.

I think students should have more control over and decide more on (tick all that apply):

- Learning objectives
- Classroom activities
- Homework
- Telecollaborative activities
- Teaching methodology
- Assessment and evaluation methods
- Technological tools used both in classroom and telecollaboration
- Reading materials and other resources (videos, etc.)
- Task design
- Learning content (what is to be learnt)

Is there anything you think students should have less control over in this course?

Long-answer text

The following questions will refer to the autonomous learning project you are about to take part in.

Description (optional)

What kinds of task would you like to complete in this course (collaborative, structured, practical, abstract, or anything else you can think of)?

Long-answer text

How many hours a week can you dedicate to doing the tasks required in the course?

Short-answer text

How would you like to be assessed in this course?

Long-answer text

Which topics are you most interested in (politics, music, cooking, art or anything else)?

Long-answer text

What social network(s) do you most like using?

Long-answer text

Which tools do you usually use to communicate with people?

Long-answer text

Which platform would you like to use for storing and sharing files during this project (Google Drive, OneDrive, Dropbox, etc.)?

Long-answer text

Name a few technological tools that you find interesting and useful for learning.

Long-answer text

Thank you very much for your time!

## Appendix E: Post-intervention Questionnaire

Section 1 of 2

### Post-intervention Questionnaire

This questionnaire is designed to help you understand your individual learner needs and preferences in the context of autonomous technology-enhanced learning. It is divided into 4 sections: Self-direction and Self-regulation, Metacognition, Agency and Current Course Needs. The words 'technology' and 'technological' refer to literally any digital tool regardless of its sophistication and purpose (it does not have to be technology intended exclusively for education). Please, reflect and answer the questions as honestly as you can.

Your name and surname: \*

Long-answer text

#### SELF-DIRECTION AND SELF-REGULATION

Self-direction refers to planning and implementation of your learning trajectory, whereas self-regulation refers to micro processes that keep that self-directed learning running. As an illustration, you can think of the process of going on a diet. You need self-direction to decide what you want to achieve and how you will do it. You also self-regulation to stick to this diet every day (keep the discipline and motivation, change your approach if needed, assess progress, etc.). The following question will focus on your needs related to self-direction and self-regulation in learning.

I most want and need to improve: (tick only the most critical areas):

- Setting my own learning goals
- Setting and sticking to schedules for completing my tasks
- Deciding on optimal time to spend on my tasks
- Planning for technology-enhanced practice outside of my classroom activities
- Constructively using others' feedback on my learning
- Managing anxiety in learning
- Managing cognitive overload (when you tend to be on too many tasks or do too many things simultaneous...)
- Continuously monitoring and evaluating my own progress
- Revising learning goals
- Deciding what is important to learn
- Deciding when to learn something
- Deciding how to learn something with the help of technology
- Relying less on teacher/colleagues/peers to encourage me to learn
- Assuming responsibility for generating and maintaining my own interest in learning
- Overcoming motivation obstacles and periods of low motivation
- Feeling positive about using technology for learning
- Feeling comfortable with collaborating with other learners online
- Having positive feelings about using technology for self-assessment
- Feeling positive about challenges I face while learning with technology
- Generally enjoying learning independently of teacher/course while using technology
- Other...

#### METACOGNITION

Metacognition is broadly speaking awareness and understanding of your own thought processes (thinking about thinking). Autonomous learners "know themselves" (e.g. their most effective learning style, what motivates them, their learner needs, etc.). Metacognition also refers to metacognitive strategies (e.g. you watch videos to learn something because you know your learning style is visual). The following question will prompt you to reflect on the areas of metacognition you feel you most need improvement in.

I most want and need to improve: (tick only the most critical areas):



## TELECOLLABORATION COURSE NEEDS

The question below refers to the course on technology-infused language learning based on the FIT model that you attended in the first semester. Please, remember that your identity will not be revealed to anyone but the researcher, so try to give honest and critical feedback. Try to think as a teacher about learner needs of those students who will take the same course next year.

I think students should have more control over and decide more on (tick all that apply):

- Learning objectives
- Classroom activities
- Homework
- Telecollaborative activities
- Teaching methodology
- Assessment and evaluation methods
- Technological tools used both in classroom and telecollaboration
- Reading materials and other resources (videos, etc.)
- Task design
- Learning content (what is to be learnt)

Is there anything you think students should have less/more control over in this course?

Long-answer text

How satisfied were you with the telecollaboration course you participated in? \*

- |               |                       |                       |                       |                       |                       |                |
|---------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|----------------|
|               | 1                     | 2                     | 3                     | 4                     | 5                     |                |
| Not satisfied | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | Very satisfied |

Why? \*

Long-answer text

Do you think telecollaboration is useful/beneficial for students? Why yes/no? \*

Long-answer text

After section 1 Continue to next section

## Section 2 of 2

The following questions will refer to the autonomous learning project you have been taking part in since last semester

Description (optional)

Please fill in the sentence: The aim(s) of the autonomous learning project was/were: \*

Long-answer text

Have you observed any of the following outcomes of the autonomous learning project? Tick all that may apply.

- I know more about technology-enhanced autonomous learning (theoretical knowledge)
- I have learnt how to apply some strategies for autonomous learning



- I have learnt about some digital tools that help with autonomous learning
- I feel I can self-regulate my learning better
- I feel I have more control over my study habits
- I procrastinate less
- I am less anxious about autonomous learning
- I have found out about some useful resources (books, websites, methods) that can help me in autonomou...
- I feel I can manage my emotions better
- I have learnt about ways to get support when learning autonomously
- I have learnt about myself as a learner (my learning styles, needs, preferences, strategies I should try, etc.)

Would you recommend participation in the autonomous learning project to other students? Why \*  
yes/no?

Long-answer text

In this project, there were two parts: one in which you were required to do assignments and meet the tutor regularly and the other in which you just met tutor occasionally. Which part did you like/find more useful? Why? \*

Long-answer text

What kind(s) of tasks did you like most in the project? Tick all that may apply and/or add yours \*

- Using Trello
- Making Learner Profile
- Writing on blog
- Use a new learning strategies
- Doing tests (learning styles, learner needs and preferences)
- Self-recording of your computer screen while working
- Writing up self-reflection (task sheet)
- None

What would you change in this project? \*

Long-answer text

Do you have any other comments/thoughts/opinions you would like to share? \*

Long-answer text

Thank you very much for your time!

Description (optional)

### Appendix F: Gemma's In-service Reflection Sheet

---

**Gemma in 2017/2018:**

**Gemma in 2021:**

*Do you still agree?  
To what extent? What  
changed,if anything?*

**Gemma in 2021:**

*Have you implemented  
this belief in your  
teaching? Why (not)?  
What happened?*

---

I think that students have an optimistic (or relaxed) view of the learning. Thus, if complete freedom is given to them, they will most likely use it against themselves.

I think that students should have at least a little bit of control over everything in their learning because it's for them. They are the protagonists, so they should at least together with the teacher who knows how to do this, decide. And not only on the things that I ticked [in the questionnaire], but also in everything, and even even if the teacher ends up deciding at least there needs to be a conversation.

---

I think that ... we are working on a project students could provide some ideas for the teachers for example we're going to work on houses around the world and so students could suggest activities to do like building mockups or something. I think students should be able to suggest ideas and then discuss ok, is this viable or is this completely far fetched and we should be more realistic?

---

[Discussing a teaching unit you saw another teacher implemented]

**Jelena:** OK, so do you think these activities are a waste of time?

**Gemma:** I think this one, because it's not very well directed, I think so.

I would put I would set like, you know, requirements, you know, you need to have the title, you need to have the author of the posters, You need to have description of what's in the poster if it's a person, a person, if it's a video game a video, what's going on? You need to add, I don't know. Another piece of information um then it's OK.

---

I think students should have more control over and decide more on:

- Learning objectives
- Classroom activities
- Learning content (what is to be learnt)

---

Well, I would like to help students be more proactive.

[In relation to autonomous learning]

So in this case, and mean, I think I focus more as a teacher of primary school students, and I think that what I would like to improve is to show my students how things that they are learning are relevant for them.

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## Appendix G: Maria's In-service Reflection Sheet

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<b>Maria in 2017/2018:</b>	<b>Maria in 2021:</b> <i>Do you still think this? To what extent? What changed,if anything?</i>	<b>Maria in 2021:</b> <i>Have you implemented this belief in your teaching? Why (not)? What happened?</i>
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Um, I think that we are very, um, used to have a teacher who tell us what do we have to do. And that we don't have a lot of, uh, possibilities to, to do autonomous learning.

But I think that Melinda should give us some, um, I don't know, characteristics or some, um, point or some not read these stakes and you will be an expert by reading these stakes.

You can't learn autonomously without no one who, uh, I, I don't know, I think that there, it should be a person who is guiding you.

At least maybe a leader. Like I don't know, um, if you are learning...

It's because you are not an expert, so maybe you can, um, be wrong. And how do you know if you are wrong? Yes, maybe you can go to a book, read the book and then see what's ... But I think that it's really difficult to you assess your own learning.

---

[You were expressing your concerns about Melinda giving you learner autonomy in flipped classroom in 2018 and expecting you to come up with conclusions and learn from the assigned materials on your own]:

Okay, I can't be the expert because, um, I haven't been, um, taught this. I don't know if you're understanding me. So it's

---

like, um, I don't believe that I'm an expert, but Melinda does. So, I don't know if I'm learning or not.

---

[When I asked you how you felt about working autonomously in the flipped classroom assignments]:

Very confused because, um, I realise that maybe by reading and by speaking with my classmates and doing debates, uh, things like that, we can, um, like get conclusions and say some interesting things. But I think that Melinda should give us some, um, I don't know, characteristics or some, um, points or some.... not "read these texts and you will be an expert by reading these texts." And I feel a little bit confused, because when I read something, maybe I can think, okay, hmm, here it says "A", and my classmates say, "no, no, no, no. It's not A, it's B." And who's right? Melinda is not saying "you - you are right!"

---

**Appendix H: Activity Sheet (Pre- and Post-activity Reflection Sheet)**

## Reflection Sheet

*This Reflection Sheet is designed to help you reflect on your learning experiences and process. You are supposed to fill it in before and after each completed activity and you can write as much as you want and need. It is not obligatory to answer all the questions - they should serve more as a guide for your reflection but you are welcome to write about any thoughts you have after completing an activity.*

Before the activity:

**Name:**

**Task description:**

**Deadline:**

-----

After the activity:

**Did the task help you with your university course work (including online meetings)?**

**How?**

**I have learnt:**

**I am satisfied with:**

**I am less satisfied with:**

**Next time, I will do differently:**

**Look at your learning goals. Is there anything you would like to change about them after completing this activity?**

[https://drive.google.com/open?id=0B\\_yOCNTPpeWkQU9MZGZhQWpaM0k](https://drive.google.com/open?id=0B_yOCNTPpeWkQU9MZGZhQWpaM0k)



**Appendix I: Theming process: Identifying Uncertainty, Teacher Guidance, Teacher Feedback, and Control Shift Themes from the Codes (Unrefined Draft Stage)**

Possible Theme	Codes and Possible Sub-Themes (The Interview Numbers Where The Code Emerged)
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**Total count: 229**

- a) **Insufficient Knowledge**
- b) **Doubt**
- c) **Use of epistemic hedges to claim insecurity /insufficient knowledge about autonomy**

The use of “I don’t know” and “I think” supports the theme of claiming insufficient knowledge about autonomous learning

- d) **Working definitions of autonomy**
  - In autonomous learning there should be no teacher presence, guidance, directions, or expert help (1, 2, 3, 4, 4, 6, 7)
  - Students learn at home (2, 6, 11, 3)
  - Being able to identify who can help you (4, 5, 7)
  - You decide what you want to do, everything (1)
  - Being able to identify who can help you (4, 5, 7)
  - Students learn at home (2, 6, 11, 3)

**Uncertainty**

- e) **“I’m not autonomous” - doubting their ability to learn autonomously**
  - I am not really autonomous (3, 4, 5, 8, 10)
  - There are different types of autonomy and I am not good in all autonomous learning (3, 4)
  - I am not autonomous because I don’t know how to summarize articles and select important ideas (3, 4)
  - I am not really autonomous (3, 4, 5, 8, 10)
  - I am not autonomous because I don’t know how to summarize articles and select important ideas (3, 4)
  - I should already be able to summarize articles and select important ideas, which is essential for autonomous learning (3)
  - Autonomy is extra work and doesn’t come naturally to me (3, 11)
  - I don’t use many digital tools for learning autonomously (3)
  - Learning without anyone’s help is like talent (3)
  - I’m not an expert, not confident in my understanding of the concepts when I learn on my own (5)
  - I am more aware of myself as a learner, but don’t apply that

---

knowledge (10)

**f) Student vs system responsibility:**

- We/our students are used to having a teacher who tells us everything (1, 4)
  - Everything is given to me, and system doesn't teach us to be autonomous (3,10)
  - The system should teach us to be autonomous (3, 11)
  - In school, they don't promote autonomy (3)
  - I am not an expert because I haven't been taught how to learn autonomously (1)
  - In the school where I work, they do not promote autonomy (10, 11, RS1, RS2)
- 

**Total count: 81**

**a) Thinking critically about the amount of teacher guidance they are receiving in autonomous learning and what it means for their learning:**

- We are used to more teacher guidance 1, 6, 9
- Teacher should guide us more guidance and not think we're experts (1, 6, 5)
- Teacher provides lots of information but not enough time to process it (1, 7)

Teacher  
Guidance

**b) Thinking critically about how much guidance should be given to students:**

- Students should be given some freedom and control but only with teacher guidance (12)
  - Student doing everything on one's own would be unrealistic (3,)
  - We think the teacher should guide students, so we're not implementing flipped classroom (2)
  - There should be more structure in activities, otherwise, the students are not learning (8)
- 

**Total Count: 48**

- Teacher never says if our opinion is correct or not, but she should (1, 5)
- I am confused because the teacher doesn't say what's right/wrong (1)
- No teacher feedback means I don't know if I am learning or not (1,6)
- Teacher should give us feedback on our progress (7, 7, 7)
- I prefer teacher feedback to peer feedback or self-assessment

Teacher  
Feedback

---

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**Total Count: 56**

## Control shift

- Students should have some control over everything in their learning (3)
  - I don't know what an autonomous fourth grader looks like (4)
  - I'm not autonomous, so I treat my students as not autonomous (4)
  - My students are too young for autonomous learning (4, 7, 11, 12)
  - I did not do a good job at promoting autonomy with my students (4, 4, 11, 12)
  - My students are not autonomous (4, 11, 12)
  - I do not promote self-directed learning because I want my students to learn
  - I don't think I'd be able to manage a more autonomous class (4)
  - In the classroom, everything changes and what we learn in methodology classes doesn't always apply (7)
-

## Appendix J: Detailed Description of the Intervention: Autonomous Learning Project

**Tools used:** WhatsApp, Google Groups, Skype, Zoom, Google Drive, Wix websites, Screencast-o-matic, Trello, Coggle, Padlet, Facebook

**Description:** The aims of the intervention were to:

a) Support the two students in their autonomous learning activities (primarily university tasks) by providing three types of assistance:

- 1) Modelling
- 2) Coaching/instructing
- 3) Scaffolding\*

\*Modelling refers to a technique in which the mentor models an autonomous learning behaviour as a good example. For instance, in this intervention, the mentor recorded a screencast video demonstrating the use of Trello for enhancing self-regulation skills.

Coaching/instructing refers to overt explication, description and demonstration of autonomous learning skills. For example, the mentor held an online presentation in which she taught the students about the three cycles of self-regulative learning. Scaffolding refers to constant, ongoing emotional, pedagogical and academic support received by the students and provided by the mentor regarding and during their autonomous learning activities.

b) Raising the students' awareness of autonomy in learning, its importance, strategies and tools to learn autonomously with technology, as well as who they are as learners, what their needs and preferences are.

c) Elicit the students' perceptions of the autonomous work they are engaged in, either as required by their university tasks or initiated by themselves, as well as elicit their perceptions of autonomous learning with technology in general

In this intervention, autonomous learning activities are those for which successful completion learners need to have developed and be able to use skills of self-direction, self-

regulation, metacognition and agency. Some university courses, primarily the Flipped classroom + telecollaboration model, necessitated the use of these skills. In this intervention, the four areas: self-direction, self-regulation, metacognition and agency, are considered and used as pillars of autonomous learning based on various conceptual models of learner autonomy. Each of these areas is made up of individual processes – indicators of technology-enhanced autonomous learning behaviour. The descriptors are used to analyse the data and identify instances of autonomous learning behaviour or students perceptions of it. It should be emphasised, however, that to date, there has been no one correct conceptualisation of autonomous learning with technology and that different researchers have proposed other dimensions as making up autonomous learning, e.g., psychological component, or political component, that were not analysed in this study due to its scope.

The intervention lasted from October 2017 to June 2018, during the last university year of the two student respondents. It was conducted in four major phases: 1) obtaining information on the learners and making a learner profile, 2) task implementation, 3) intervention redesign and 4) reimplementation. The intervention was neither obligatory nor a part of any particular subject. It was offered to students as a way to help them cope with the heavy and stressful workload that the final year university subjects imposed on them, in particular the autonomous work required from them (self-study of materials required by the flipped classroom model, as well as the self-initiated autonomous work on informal education such as attending online courses, listening to educative videos, etc.). The invitation to participate in the project outlines the type of engagement required from the participants, i.e., it pointed out that they would need to complete certain tasks and participate in online meetings. The two students who applied to participate in the project did so voluntarily despite being aware of the additional workload it would impose on their already busy schedules. In their

words, they wanted to learn about how they could learn more autonomously and thought this intervention would help them with their education. Besides their genuine interest in autonomous learning, they also shared the habit of engaging in technology-enhanced autonomous learning activities on topics that interest them and managing a number of out-of-school activities that also occupy a big portion of their time (e.g., teaching ballet, teaching mathematics, scouting, etc.). They both actively think about their future careers and feel strongly about any decisions made at this stage of their life when it comes to how they can affect their future professional life. They demonstrate a proactive attitude towards things like studying and making a change in life, e.g., they undertake activities to enhance the skills they deem necessary for their career and studies, or they embark on courses and activities that would help them develop new skills they wish to get, e.g., attending a makeup course as a way of experimenting with career options other than teaching. These and similar details from their learner profile illustrate their inherent interest in learning autonomously.

The intervention was conceived as controlled by the participants when it comes to the types of activities engaged in, the type of feedback received, the type of digital tools used to communicate or do tasks. This was done so primarily as it fits the basic concept of learner autonomy where the learner is in control (Holec, 1981) and secondly, because due to their busy schedules, the idea was for the students to feel they were doing something they wanted to do and enjoyed doing rather than that they have yet another academic and burdensome task in addition to all the other ones from the university.

A detailed description of all the steps and activities undertaken in this intervention follows:

## **Phase 1: Obtaining information on the learners and making a learner profile**

Stage 1: Recruiting students.

September 2017:

- Proposed participation in the Autonomous Learning Project to Melinda's students (Flipped classroom + telecollaboration project).
- Developed a signup form using Google Forms and sent it to the students.
- Maria student signed up, and the researcher contacted her to ask if she could help encourage others to participate.
- One more student signed up (Gemma). In total: 2.
- Created a WhatsApp group to communicate with the participants.

## **Stage 2: Collecting data on learner styles, needs and preferences**

October 2017:

- Developed Learner Needs and Preferences questionnaire (V1):  
<https://goo.gl/forms/YrxrcYRk13xz4joD3>
- Piloted LNP questionnaire with random sample recruited via Facebook, LinkedIn and Twitter (language teaching interest groups). Fifteen replies and feedback were received.
- Revised the LNP questionnaire based on the feedback.
- Implemented it with Gemma and Maria.
- Created Who are You as a Learner folder on Google Drive:  
[https://drive.google.com/drive/folders/0B\\_yOCNTPpeWkMGhvVGFbDvJrOGM?usp=sharing](https://drive.google.com/drive/folders/0B_yOCNTPpeWkMGhvVGFbDvJrOGM?usp=sharing)

- Filled the folder with a combination of learner style tests, instructions for doing them, and the Results folder for the participants to store their results. The tests were: Honey and Mumford, Kolb's, Memletics and VAK. They were chosen as the most used learner style tests in the pertinent literature.
- The students were asked to choose the test(s) they wanted to do and upload result screenshots to the designated folder. The only requirement was that they do at least one test. This was done so in agreement with the idea of them having control. They were told the results should not be taken as a definite indicator of their learning styles/needs but more as a trigger for self-reflection on how they learn the best. Maria did the VAK test, whereas Gemma completed VAK and Memletics. Both were much simpler to complete and with less detailed results than the first two (Honey and Mumford, Kolb's).
- Two semi-structured interviews were conducted, one with each student. In it, the results of the LNP questionnaire and learning style tests were triangulated data: the students were asked questions regarding their answers and test results. In addition, some needs and desires regarding the intervention (what it should be like, what they expect, etc.) were elicited.

### **Stage 3: Analyzing learner styles, needs and preferences**

October 2017:

- a list of coding themes based on questionnaire data was developed to be used for the analysis of the results and interviews.
- The videos were watched with the emerging codes were added to the list.
- The videos were watched again to decide on the best method of transcription and inclusion of paralinguistic cues.



- The interviews were transcribed provisionally. (Automatic transcription using Google Documents was tried at first to save time, but it did not work well because the audio was unclear. Then the method of uploading a private video to YouTube and getting automated subtitles was tried, but it didn't work either). Some snapshots were added to the provisional transcription where it was thought to be useful (particular facial expressions and gestures that were notable). The problem with the first two videos was that the audio was not well synchronised with the images, so it was hard to pinpoint gestures and facial expressions to the utterances.
- The transcriptions were coded using the list that was previously made and analysed them using thematic categorization. The researcher triangulated this data with the ones obtained from the questionnaire.
- A list of learning goals that the researcher thought each student would want to attain in the intervention (and in general) were drafted. These goals were to do with self-direction, self-regulation, metacognition and agency. The students were then asked to validate/edit the goals and give their feedback:  
[https://drive.google.com/drive/folders/0B\\_yOCNTPpeWkQU9MZGZhQWpaM0k?usp=sharing](https://drive.google.com/drive/folders/0B_yOCNTPpeWkQU9MZGZhQWpaM0k?usp=sharing)
- Based on the results, the learner profiles were developed:  
[https://padlet.com/jelena\\_jm\\_marjanovic/fjqf0thxejk](https://padlet.com/jelena_jm_marjanovic/fjqf0thxejk) and  
[https://padlet.com/jelena\\_jm\\_marjanovic/x74lzyd1u4vf](https://padlet.com/jelena_jm_marjanovic/x74lzyd1u4vf)

## **Phase 2: Task implementation**

### Stage 1: Assignment 1

November 2017:

Based on the information collected on their learner needs, preferences and goals, Assignment 1 was designed. It was meant to tackle the following goals: To be able to curb procrastination and stick to my to-do lists better (Maria); To learn to organize my work better so as to avoid cognitive overload and to forget to complete tasks; To learn about many more technological tools that can help me in my learning and future teaching; To learn to prioritize tasks and learning objectives and to procrastinate less on the tasks that I don't enjoy doing (e.g., writing reports); To cut task-completion time (I.e., learn to be less of a "perfectionist") (Gemma). In addition, the assignment was supposed to help them attain some more general goals such as: To feel more positive about the challenges I face when I learn with technology; To feel more comfortable and confident when making decisions about my learning (i.e., not to be discouraged by the absence of teacher's validation/rejection of my ideas).

The assignment was designed as follows: the main aim was to create a blog post (text/video/image/infographics, etc.) in which they would reflect on what they have learnt during the task of using Trello for task organization. In order to get to that point, they needed to first read and watch the researcher's blog post on how to use Trello to organize work better (the screencast demonstration was made by the researcher):

<https://iownmylearning.wixsite.com/website/single-post/2017/11/06/How-to-Organize-Your-Work-with-Trello>. The post was published on a website specifically created for the purposes of this intervention. More specifically, it was imagined as a designer space for the students. The website is in shared ownership of the mentor and the students. Although the students were invited to customize it and use it at their will, they did not edit anything on it.

In order to make their blog post on their reflections on the Trello assignment, they needed to do several tasks. First, after reading and watching the researcher's blog post, they were to think of one of the following: 1. How to use Trello to organize their university coursework; 2. Other tools/methods of organizing work that they prefer; or 3. both. Then, they needed to set a task for themselves. They were to choose whether to try out Trello or any other preferred tool to organize self-study for at least 1 task they had upcoming or in progress in their university course. They also needed to complete the Before task section in the Task Sheet\*: <https://docs.google.com/document/d/1Fx8Y1sgWDxWktxZVh4td6DulJ3L8LmvH-YHXDLVaQ54/edit?usp=sharing> (example) prior to doing the Trello part. Once they finished the Trello task, they were supposed to fill in the After Task section of the Task Sheet and finally make a blog post.

\*The Task Sheet was designed to help them plan and reflect on the tasks. The before part required them to describe what they would do briefly and set a realistic deadline for completing it. The part after was to be completed after the task and required them to answer a set of questions prompting them to reflect on the results of completing a task, their progress and how it aligned with their learner goals.

As described above, Assignment 1 contained a number of sub-tasks that could have been given one by one to avoid the information overload so that the students wouldn't feel overwhelmed by it. However, the researcher decided to present the whole assignment in one instruction email so that the specific actions they would undertake to manage this big assignment could be monitored, such as whether they would focus on each smaller task individually or look at the assignment holistically, whether they would set a realistic deadline for completion, etc. A graphical representation using Coggle mind maps was created to facilitate instruction since they both preferred to visualize learning materials:

<https://coggle.it/diagram/WgCih-ojMQAB8TUy/t/assignment->

[1/01fb3172d57796ee2e6f7d8a4b2e1dda9e005af215dcaff6205ef3bd1c280d84](https://iownmylearning.wixsite.com/website/single-post/2017/11/06/How-to-Organize-Your-Work-with-Trello) and send it to them too.

The steps:

- Modelling: The researcher recorded the Trello tutorial and wrote the blog entry: <https://iownmylearning.wixsite.com/website/single-post/2017/11/06/How-to-Organize-Your-Work-with-Trello>
- The researcher created the instruction mind map, wrote up the instruction and sent it to them.
- The participants were asked to record their screen while working on a task of their choice (whether for university or for the intervention). Screencast-o-Matic was used at first: <https://screencast-o-matic.com/account>, but Gemma eventually switched to a tool that was more convenient for her.
- The students filled in the before part of their Task Sheets
- The students did the task of using Trello to plan and monitor their task execution
- The students uploaded the screen recordings of their self-study to a designated folder on Google Drive
- The researcher analysed the Trello snapshots, the screencast recordings and the Task Sheets and pinpointed the interesting moments or those where some clarification was needed to use in the interviews as prompts for eliciting more information on their activities and cognition.
- Meeting 3: Maria and the researcher discussed the screencast videos, the Trello screenshots and the Task Sheet details in an online Skype meeting (stimulated recall)
- Modelling/Coaching: The researcher wrote the blog post *Learners Are Designers*: <https://iownmylearning.wixsite.com/website/single-post/2017/11/21/Learners-Are->

Designers---What-Can-They-Post-Online. This post modelled the use of blog and shows the types of blog posts learners can make in order to move from passively receiving information from the web to actively designing content and expressing their creativity.

- The students were asked to do Assignment 1 wrap up, which included: Write and post a blog article on something practical they learnt while working on Assignment 1 in a manner of a how-to-do tutorial; Fill in the after part of the Task Sheet.
- Meeting 4: Gemma and the researcher discussed the screencast videos, the Trello screenshots and the Task Sheet details in an online Skype meeting (stimulated recall)

### **Stage 2: Post-Assignment 1**

December 2017:

- Meeting 5: Gemma, Maria, and the researcher met online and discussed their issues with autonomous learning and university chores in general
- Coaching email/Follow up: The researcher sent them two e-books and recommended three more about emotionally intelligent learners, as that was the topic much discussed in the previous meeting.

### **Stage 3: Assignment 2**

December 2017 – January 2018:

This assignment aimed to help the students attain the following goals: To be able to influence my motivation to complete specific tasks (i.e., learn how to find relevance in them); To learn to organize my work better so as to avoid cognitive overload, but also the goals addressed in the previous assignment, more relevant to self-direction and self-regulation. This

assignment was centred around learning about learning strategies – identifying their own most used ones and experimenting with those that were underused. The idea was to help them raise their metacognitive awareness of their own learning strategies and processes and encourage them to try out some new strategies which can be used to attain all the other goals. They were supposed to do the following (quoted as given to the learners):

- **Step 1:** Go through the Second Language Learner Strategies Inventory. They needed to look at both the Inventory and its appendix (Part G).  
[https://drive.google.com/open?id=1\\_XwCSHW4g95atifRnPNT\\_19qxGgWMfTs](https://drive.google.com/open?id=1_XwCSHW4g95atifRnPNT_19qxGgWMfTs) (If you want, you can actually test yourself, I've added the result sheet.)
- **Step 2:** Think of yourself as a learner and identify the strategies you mostly use in your language learning. Add them to your Learner Profile (Padlet). Feel free to add new strategies or explanations if necessary.  
[https://padlet.com/jelena\\_jm\\_marjanovic/fijqf0thxejk](https://padlet.com/jelena_jm_marjanovic/fijqf0thxejk) and  
[https://padlet.com/jelena\\_jm\\_marjanovic/x74lzyd1u4vf](https://padlet.com/jelena_jm_marjanovic/x74lzyd1u4vf)
- **Step 3:** Choose one strategy that you don't use sufficiently and would like to try out in your learning. Post it in your Learner Profile.
- **Step 4:** Look at the other student's strategies (you have access to each other's Padlets). Based on their learner profile (learning styles, preferences, needs, interests etc.), recommend a tool or a method to help them try out the strategy they chose. You can leave a comment directly on their profile, and they can reply, so a discussion can be generated. I will also give my comments and recommendations.
- **Step 5:** In the end, you should make the final decision on what tool/method to use to help you try out a new learning strategy. You can see an example here (my profile as a

learner of Spanish). You can start by commenting on my strategies if you'd like (I'd sure be grateful!:) [https://padlet.com/jelena\\_jm\\_marjanovic/dbb3lv2kjl4u](https://padlet.com/jelena_jm_marjanovic/dbb3lv2kjl4u)

## Part 2:

- **Step 6:** For one week (or some other period you find to be more suitable), you should try out the new strategy in your learning with technology.
- **Step 7:** After one week, reflect on your learning (Task Sheet). Think not only as learners but future teachers as well.
- **Step 8:** Create a website post (optional)  
 (Like in Assignment 1, the full instruction was sent by email rather than breaking it down into individual steps so that the researcher could monitor what specific actions they would undertake to manage this big assignment, whether they would focus on each smaller task individually or look at the assignment holistically, whether they would set a realistic deadline for completion, etc. However, the instruction was slightly more concise this time as the steps were clearly indicated as Step 1, Step 2, etc. This time, no visual representation of the task was created for them).

The steps:

- Sent out Assignment 2.
- The researcher interacted with Gemma on Padlet:  
[https://padlet.com/jelena\\_jm\\_marjanovic/x74lzyd1u4vf](https://padlet.com/jelena_jm_marjanovic/x74lzyd1u4vf)
- Coaching email: self-regulation secondary gain tips were sent.
- The researcher had an email conversation with Gemma on her Final Exam and her doubts about whether she did it well. It was also discussed at the next meeting.

#### **Stage 4: Presenting preliminary findings on self-regulation**

February 2018:

- Meeting 6: Online presentation – discussion of the researcher’s findings of the study on their self-regulation: <http://www.ijiet.org/vol8/1117-FM033.pdf>. The idea was to give them practical tips, implications drawn from the study on their obstacles to self-regulation and to elicit ways to use this knowledge to enhance their self-regulation skills.
- The intervention so far was discussed, and they gave their feedback on what they considered useful and what they would like the intervention to look like in the next stage.
- Gemma solicited the researcher’s advice on some online tools for games in our WhatsApp group.

#### **Phase 3: Intervention Redesign**

Based on the feedback received in Meeting 5 and some observations made thus far, the intervention was redesigned to fit learner needs and preferences better. The task format was replaced by a design in which the students received no explicit tasks anymore, but they committed to meeting me occasionally to discuss their progress and any issues they would be interested in discussing, as well as recording their screens while working. The idea of continuing to communicate through WhatsApp and Google Group was also discussed.



#### **Phase 4: Reimplementation**

March 2018:

- Invited them to join the researcher's CoP on Facebook: the Online Teaching Community: <https://www.facebook.com/groups/online.teaching.community/about/>. Gemma accepted, interacted on one post and later inquired about it in meeting with the researcher.
- Gemma uploaded screencast videos of her doing a task required by the methodology subject.

April 2018:

- Gemma uploaded screencast videos: writing a reflection paper on the teaching unit she did for the methodology subject.
- Meeting 7: Met Gemma online (unstructured conversation, discussing issues related to her course work and aspects of autonomous learning with technology).

May 2018:

- Coaching: The researcher referred them to the tool [www.classtools.com](http://www.classtools.com) that fit Gemma's need for a tool to develop online game activities for her students.

#### **Phase 12: Wrapup & Feedback**

June 2018:

- Meeting 8: Met Maria online, but she was having huge technical problems with the Internet, so the meeting was only partially successful.
- Gemma filled in the post-intervention questionnaire.

- Meeting 9: Met Gemma online (unstructured conversation, discussing issues related to her course work and aspects of autonomous learning with technology).

### Appendix K: Data Overview

Data Type	Description	Quantity	Dates
Whatsapp snapshots	Snapshots of group and individual correspondence	30 snapshots	12/10/2017–ongoing
Google group and Gmail snapshots	Snapshots of group correspondence and individual correspondence	14 topics + individual emails	19/10/2018 – 05/06/2018
Pre-intervention questionnaire	Learner needs and preferences questionnaire they needed to complete before the project. Contains questions about their self-direction, self-regulation, metacognition, agency, perception of the current teacher education course and preferences regarding our autonomy intervention. Mostly quantitative, a few open questions. The questions about self-direction, self-regulation, metacognition and agency were based on the research synthesis on autonomous learning with technology previously conducted where these individual descriptors of autonomous learning with technology were identified.	4 quantitative questions: to select areas they want to improve + 9 qualitative questions	18/10 - ~26/10/17 piloted and implemented
Learning Styles Test Results	Results from tests aimed at identifying their learner styles. The students could choose to do as many as they wanted out of the following: Honey-Mumford, Kolb, Memletis and VAK	Gemma: 2 results (2 different VAK tests), Maria: 1 result (VAK)	19/10 – ~26/10/17 task completed
Meeting 1 recording	Video recording of online meeting with Maria following	1 video 57 minutes	27/10/17

	<p>the LNP and LS testing. The purpose was to triangulate results from the testing and obtain more information needed to create their Learner Profiles and to agree on tasks, assessment etc. in the autonomy intervention (Autonomous Learning Project)</p>		
Meeting 2 recording	<p>Video and audio recordings of online meeting with Gemma following the LNP and LS testing. The purpose was to triangulate results from the testing and obtain more information needed to create their Learner Profiles and to agree on tasks, assessment etc. in the autonomy intervention</p>	1 video 50 minutes	28/10/2018
Learner Goals	<p>Personal Learner Goals composed based on the previous testing and meetings and updated and validated by the students</p>	2 goal sheets: 5 goals per students + their feedback	02/11/ and 17/11/2017
Task Sheets	<p>Sheets to be completed before and after each assignment. The pre-task section requires them to plan what they will do, what steps they will take and until when they will finish the task. The post-task part requires them to reflect on their task completion, their progress and their learning goals (and change something if they see the need). There are V1 and V2</p>	1 fully completed Task Sheet by Gemma and 1 partially completed (pre-task only) (V1; Assignment 1) by Maria	Completed on: 9/11 (1) – 24/11 (2) and 15/11/17 (1) (ongoing)
Designer space - Wix Website	<p>Wix website with shared ownership intended for the students' creative expression. They were asked to post on it in Assignment 1. They could also</p>	2 blog posts by me, 2 blog posts by Gemma	07/12 and 08/12 by Gemma

	use it to book a meeting with me		
Assignment 1 – recordings of work	Self-made video recordings of work on Assignment 1	1 video by me (model), 6 videos by Gemma (146 minutes altogether), 4 videos by Maria (82 minutes altogether)	12/11, 6/12, 7/12; 16/11 and 28/11/2017
Assignment 1 – Trello snapshots	Snapshots of students' activity on Trello	16 snapshots	08/11 ongoing
Meeting 3 recordings	Video recording of online meeting with Gemma. Mostly stimulated recall (assignment 1)	1 video (90 minutes)	17/11 and 24/11/2017
Meeting 4 recording	Audio recording of online meeting with Ana. Mostly stimulated recall (assignment 1)	1 audio (80 minutes)	
Learner Profile on Padlet	Learner Profile of each student, made in Padlet based on all the data collected thus far. The ss were supposed to validate and update	3 screenshots – 2 Gemma and 1 Maria 1 screenshot of my profile (model)	04/12/ and 19/12/17
Meeting 5 recordings	Video and audio recordings of 1 online meeting (with both students). The purpose was to discuss issues in the current teacher education course and their autonomous work on tasks.	3 videos (85 minutes altogether)	07/12/17
Assignment 2 – Learner	Results of Oxford's Learner Strategy Inventory	1 completed test (Gemma)	31/12/17

Strategies test results			
Assignment 2 – Padlet profile completed with strategies	Added to their Padlet Learner Profiles: strategies they usually use and those they would like to try out. Also, it contains feedback and suggested digital tools from me and the other students.	Gemma's strategies; Gemma's comments on my strategies; My comment on Gemma's strategies	31/12/17
Assignment 2 – Trello snapshots	Ss' organization of work on Assignment 2 using Trello	4 snapshots	31/12/17
Assignment 2 – recordings of work	Gemma studying autonomously on Futurelearn.com	1 recording	February 2018
Meeting 6 recordings	The 3 of us met to discuss their autonomous work on tasks and I also presented some findings from my study on their self-regulation in learning and we discussed them too.	1 recording	16/02/2018
Recordings of work	Gemma is working on a task required by a teaching methodology subject at university	2 recordings	March 2018
Recordings of work	Gemma is writing a reflection paper on the TU she did	2 recordings	10/042018 – 11/04/2018
Meeting 7	With Gemma catching up, discussing issues	1 recording	April 2018
Meeting 8	Meeting with Maria, catching up, huge technical problems	1 recording	April 2018

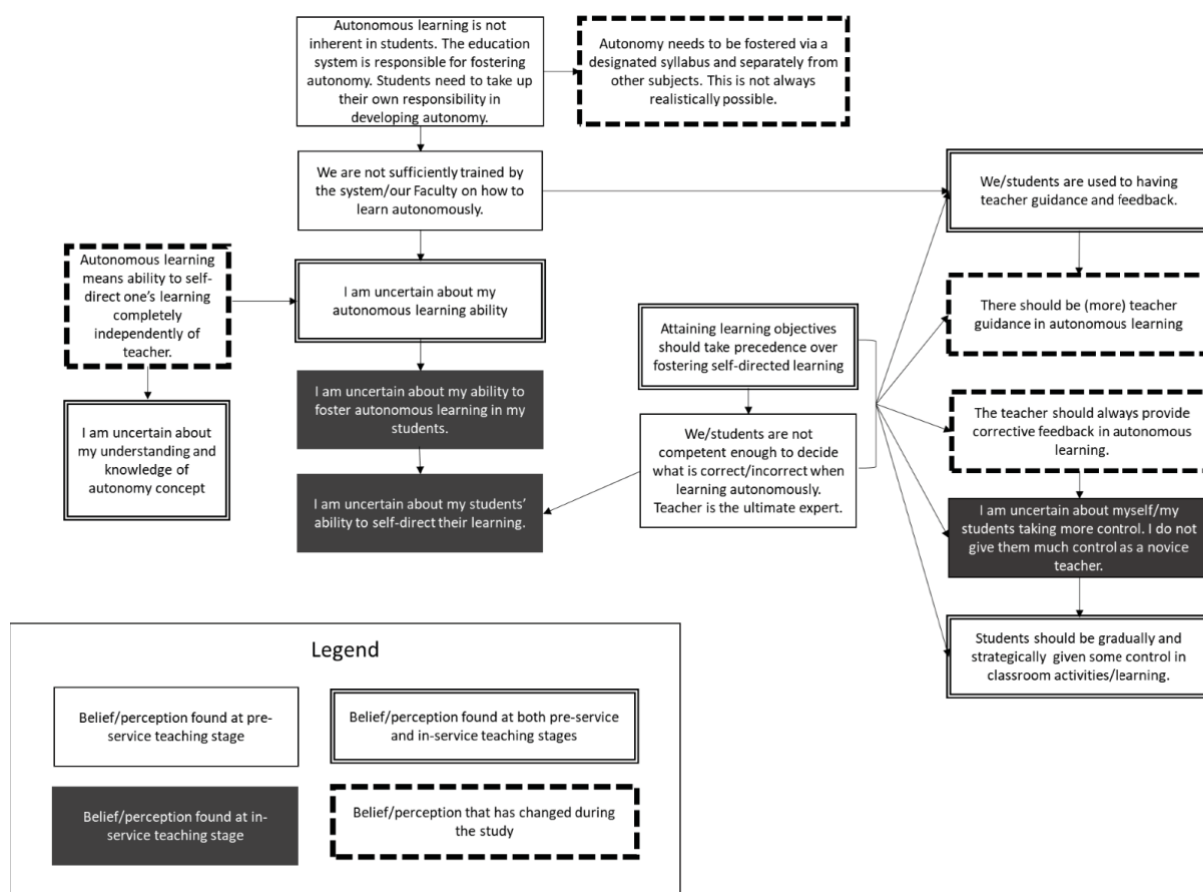
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Meeting 9	Meeting with Gemma catching up, discussing issues	1 video recording	June 2018
Post-intervention questionnaire	Same as pre-intervention questionnaire with a section containing questions about Gemma's and Maria's perception of the intervention		

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## Appendix L: Finding's Matrix Used to Help Visualize Findings and Their

### Interrelatedness





## Appendix M: Selected Screenshots from Participant Pre-Service Lesson Planning and Reflection Materials, Anonymized

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Student teacher

HOME TEACHING UNIT REFLECTION LEARNINGS CONTACT






# REFLECTION ON THE TEACHING UNIT

This infographic aims to reflect on the implementation on the teaching unit described in this website.

It briefly states the key information on the strongest and weakest points of the teaching unit, suggestions for improvements, and the management of teaching and learning and classroom communication that it puts forward



## MY TEACHING SEQUENCE

Strong points	Weak points	Improvements
 <ul style="list-style-type: none"> <li>Logical sequencing of activities</li> <li>Final outcome with an audience</li> <li>Emphasis on both English and science</li> </ul>	 <ul style="list-style-type: none"> <li>Unclear objective of the T.U. to the children</li> <li>Little information retrieval in subsequent lessons</li> <li>Automatic response in L1 from students</li> <li>Little interactional space in teacher-led lessons</li> <li>The assessment was barely implemented</li> </ul>	 <ul style="list-style-type: none"> <li>Explain the final outcome and the means to obtain it at the beginning.</li> <li>Simplify the teaching sequence and materials</li> <li>Combine teacher-led activities with individual and group-work activities</li> <li>Prioritise assessment over secondary activities</li> </ul>
Management of teaching and learning	Classroom communication	
 <ul style="list-style-type: none"> <li>Rituals to start and end the lesson</li> <li>Different kinds of activities, (to suit different learning styles)</li> <li>Use of different and engaging tools</li> <li>Autonomous group tasks</li> <li>Small groups and distribution of roles to ensure participation of all</li> </ul>	 <ul style="list-style-type: none"> <li>Consistent use of L2 from the teacher</li> <li>Oral comprehension of English instructions (not oral production in L2)</li> <li>Linguistic support (images, gestures, modelling)</li> <li>Teacher-students and peer interaction</li> </ul>	

Secure | <https://prezi.com/p/xmnawjtrby6-/final-reflection/>

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Report

## Final Reflection

TRANSCRIPT

### Practicum V in perspective

Practicum Overview

#### The Overview

An enriching experience

##### Seminar discussions

- A fresh and honest insight into what teaching means
- A place to share ideas and experiences
- A place to share concerns and doubts, and support each other.

##### Seminar discussions

##### New digital trends

This was a particularly challenging activity as my understanding of what a technology-rich classroom at the moment was quite different from the one I possess now, that I have already finished.

I understood the difference between tool and trend, and I learned about some of the latter (although I am still quite skeptical about some of them).

I learned about other trends and developed critical thinking towards the different kinds of tools. Certainly, bouncing balls might come in handy at certain points, but with them, pupils

Each tool has a time and place. And as a teacher, I need to be able to choose the one that best suits each situation and to use them to expand my pupils' horizons.

##### New digital trends

##### Coteaching

##### The co-teaching

This was for me the greatest asset of this practicum.

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### The co-teaching

This was for me the greatest asset of this practicum

- I truly enjoyed doing it
- I got to see how a different school might do things in alternative ways
- I learned from my peers
- I found out about different ideas and ways to teach
- I discovered some of the ways in which I and my friends teach differently
- And hopefully, I also get to give a hand to my friend

### The Teaching Unit

The Teaching Unit

Let's make penfriends!

The teaching unit revolved around a telecollaborative project in which my pupils met the English pupils of a different school.

With this project I learned

- To teach for the pupils, not for the project. Sometimes things do not go as expected, and time or activities fail to meet the teacher's expectations. It is not the children who have to adapt themselves to the project, but the project that needs to be flexible to better suit the students' needs.
- The challenges that come with managing a classroom that require many changes. Especially if the kind of activities differ greatly from the activities the pupils are used to. Having students move around the classroom (to record videos, to project something on the smartboard or to arrange groups) was not easy.
- And about the advantages of having a communicative TU objective. Having an objective that went beyond grammar practice allowed the pupils to focus on an effective communication in order to convey their messages.

### A general perspective

#### A general perspective

#### Technology in the classroom

##### The technology in the classroom

My telecollaboration partner and I chose these tools because of their motivating nature. Children were more engaged when using these them. What is more, these specific tools allowed the children to get to know their friends and audience much better.

It is true, however, that the use of the tools was very teacher-directed. The students were not autonomous when making decisions on how to use them or on what to do with them. In addition, as a teacher, in general I did not encourage exploration of everything the tools can offer.

See n

access, place your bookmarks here on the bookmarks bar. Import bookmarks now...

However, the choice of tools proved to be very accurate according to the project and the students needs and capabilities

My expectations

Have they been met?

### **My expectations**

#### **New tools**

##### **To gain technological tools for the teaching of English**

I consider it is very convenient for a teacher to have a wide range of tools at her disposal. During the practicum, and especially thanks to the sessions at the university, I have learned about new technological ones.

However, having finished the internship, my priority is not to know as many tools as possible, but to be able to choose those that truly boost the teaching and learning, and that allow teachers and students to explore beyond the limits of the analogical tools

#### **Clear instructions**

##### **To give clear and straightforward instructions**

This is one of the areas where I feel I need to work on the most. I have managed to shorten whole group instructions and thus, curate the information. Yet, partly because instructions are in English, I feel that at times, they are not clear enough.

On the other hand, I have also realised that sometimes whole-group instructions are not needed. Instead, it is preferable for the teacher to help the children individually to scaffold their accomplishment of the task.

When implementing the teaching unit, I realised that the tasks I put forward were far too difficult for the children to complete. Thus, in order to ensure their success, I had to lower the level considerably.

The seminars, and especially the co-teaching activity have been excellent oportunities for me to witness how one of my peers use scaffolding and other linguistic support to encourage the children to use the language more autonomously

#### **To be both realistic and challenging**

##### **Realistic and challenging**

Again, this period has allowed me to understand the importance of differentiated instruction, and how it is essential in the English classroom, where the language is an additional challenge.

I have realised that the teacher can (and should) set different goals for different children, because they learn at different rates.

One-to-one interaction is crucial for me, but sometimes it is not possible. I would like to keep working on ways to meet all the pupils' needs.

And I have realised that sometimes exceptions need to be made. And that is fine.

And I have realised that sometimes exceptions need to be made. And that is fine.

### To learn how to differentiate in the English classroom

#### Differentiation in the English Classroom

On one hand, I feel I truly gave an opportunity to all the children to use the language for a communicative purpose, in which making mistakes was an essential part of the learning process.

However, I consider that I failed to encourage pupils to use English a bit more through the use of scaffolding and other linguistic support

### To create a safe environment where English is used

#### Safe environment

### To create a motivating Teaching Unit with which all children can learn

#### A motivating TU

The Teaching Unit that I implemented during my internship created a very positive atmosphere in the classroom, in which the pupils found themselves wanting to find out more about their penfriends. This shared feeling was more present towards the end of the Teaching Unit. That is why I strongly believe that as a teacher my next step is to get pupils to be very strongly motivated from the very beginning.

And in order to motivate the pupils, I truly need to believe in my unit, too.

Hide full transcript

The screenshot shows a Prezi presentation slide with a purple background and a blue abstract shape. The slide title is "To give clear and straightforward instructions". The text on the slide discusses the challenges of giving clear instructions in English and the importance of scaffolding for individual students.

**To give clear and straightforward instructions**

This is one of the areas where I feel I need to work on the most. I have managed to shorten whole group instructions and thus, **curate** the information. Yet, partly because instructions are in English, I feel that at times, they are not clear enough.

On the other hand, I have also realised that sometimes whole-group instructions are not needed. Instead, it is preferable for the teacher to **help the children individually** to scaffold their accomplishment of the task.

Apps For quick access, place your bookmarks here on the bookmarks bar. Import bookmarks now...

Prezi

Product Business Why Prezi Customers Discover Pricing Log In Get

# My expectations

Have they been met?

- A motivating TU
- Safe environment
- Differentiation in the English Classroom
- Realistic and challenging
- Clear instructions
- New tools

Prezi

Product Business Why Prezi Customers Discover Pricing Log In Get start

When implementing the teaching unit, I realised that the tasks I put forward were far too difficult for the children to complete. Thus, in order to ensure their success, I had to lower the level considerably.


The seminars, and especially the co-teaching activity have been excellent opportunities for me to witness how one of my peers use scaffolding and other linguistic support to encourage the children to use the language more autonomously

## To be both realistic and challenging



## Appendix N: Selected Screenshots of the Conversation Between the Researcher and the Participants in the Autonomous Learning Intervention via Gmail

Autonomous Learning >  
**Learning Goals Quick Revision**  
 1 post by 1 author

 me (Jelena Marjanovic change) 2 Nov

☆ Other recipients: autonomous-learning@googlegroups.com

Hi girls!

How was your weekend?

This will take you no more than 5-10 minutes (I promise, it is super quick), so please do it at your earliest convenience :)

In the shared folder (link below), open the file with your name on it. There are a few learning goals I have come up with after analysing our conversations and your questionnaire responses. We will address other autonomy related objectives too, but I felt these are the most important ones for each of you.

Your task: to agree/disagree or change anything you feel should be changed. So, feel free to add goals, change the existing ones (e.g. add more specific detail, etc.), delete anything or ask for clarification, if you wish. You should do it directly in the file. I would just ask you to do it with a different colour or font so I see what has been changed.

Then, you can just let me know once you have done it.


[https://drive.google.com/open?id=0B\\_YCNTPeWkQU9MZGZhQWpaM0k](https://drive.google.com/open?id=0B_YCNTPeWkQU9MZGZhQWpaM0k)

Thank you a lot!

Best,  
 Jelena

Click here to [Reply](#)

Autonomous Learning >  
**Assignment 1 - yay!**  
 9 posts by 1 author

 me (Jelena Marjanovic change) 6 Nov

☆ Hi girls,

I hope you are doing great :)

Here is the first "official" assignment in our project and it is for both of you. I have created a website to publish our work on - you should have received an invitation to be admins of the site, so please accept it if you haven't already. In other words, the website is owned by all three of us so go ahead and make any changes in the design, add pages, etc. if you like. It is on the Wix platform which should be quite straightforward to use, but please let me know if you have any questions on how to manage it. The link to edit the website is this one:

<http://www.wix.com/website/builder?editorSessionId=63C4E84B-F533-4093-B7D4-05CD22F1A303#builder/story/9ca4d694-85c4-466f-9564-9d8925ddb71e.9764f7ee-bf97-4965-955b-5ea1955b4e70>

Remember, you have to accept the admin invitation before you can do anything on the website.

So, what I am asking you to do is the following:


- **Read my blog post on Trello and watch the included video** (I am sorry for the audio quality, I realize it is not optimal).
- **Think of one of the following:**
  1. how to use Trello for organizing your university course work, or
  2. other tools/methods of organizing work that you prefer
  3. or both!
- **Set a task for yourself.** Choose either a) to try out Trello or b) to try out the other preferred method (or c) both) for **at least 1 task you have upcoming or in progress in your university course.** For this, you'll need to complete the *Before task* section in the **Task Sheet** (the template is in the Task Sheets folder on our Google Drive, so just copy it and name it something like yourname\_Task Sheet 1). You need to **put your name, a short description of what you will do and set a deadline for it** (be realistic!). You can take as much time as you need for your task, but do bear in mind that we have quite a few assignments coming so try to avoid working on many assignments at the same time.
- **Complete your task**
- **Fill in the *After Task* section of the Task Sheet.\***
- **Publish a blog post\***

\* We will discuss these two later, don't worry about them for the time being.

I know this might be a lot of information to digest, so go ahead ask me for any clarifications. As we do more assignments, you will get into the routine of completing the Task Sheet and publishing your work, so it will be much

## Assignment 1 wrap-up

2 posts by 1 author

 **me** (Jelena Marjanovic change) 21 Nov

☆ Hi girls,  
How are you doing?

I want to thank you for your hard work done so far - I am very happy you are starting to take charge of your own learning and are fully engaged in our project. What is left to do is finish Assignment 1. Here's how:

- Design content and post it on our website** - remember, we share ownership over the [iownmylearning.com](https://iownmylearning.com) website, so we should all contribute to it. To get some ideas on what you can post on the website, you can read my blog post: <https://iownmylearning.wixsite.com/website/single-post/2017/11/21/Learners-Are-Designers--What-Can-They-Post-Online>

The topic of your post should be something practical you learnt while working on Assignment 1. If you don't feel you've learnt anything, then that's your new knowledge. The tone should be more like how-to tutorial as the intention should be for you to give some concrete tip(s) that you picked up from your work on Assignment 1 - literally anything (related to Trello, organizing your time, technological tools in general, planning, scheduling or anything else). Your post can be super short (like I did) or longer if you wish. Just note that I don't advise you to spend too much time on this. You can find login credentials in the Wix Website folder, although maybe you already have access as I invited you to admin it. (Remember you can also change the design if you want).

- Fill in the After Task part of your Task Sheet** - you don't have to answer all the questions, they exist as a tentative guide for your reflection. Just make sure you reflect on what you've learnt and how that relates to your learner goals. And if at that moment you'd like to change something about the goals, or add a new one, go ahead, just use a different colour.

That's it! Please note I will send you Assignment 2 no later than beginning of December.


If you have any problems or questions or need help, let me know. It would be good to always communicate in the group so that everyone can benefit, unless you really have something you'd prefer to tell me in private.

Oh, btw, I've fixed the book online feature on the website so now many other slots are available (thanks Anna.!).

Warm regards,  
Jelena

[Click here to Reply](#)


---

 **me** (Jelena Marjanovic change) 22 Nov

☆ Sorry - I forgot to say something. - just remember to record your work and please let me know if you have any issues with the recording software. Anyways, I can soon get you the better one but if the one you're using at the moment works than we might as well keep it. Thanks!

- show quoted text -

**Assignment 2 :** Inbox x

 **Jelena Marjanovic** to Autonomous [Unsubscribe](#) 17/12/2017

Hi girls,  
How are you doing? I'm sure you are looking forward to the upcoming holidays!

First of all, thanks for the uploaded videos and the blog posts - I know you're very busy so I really appreciate your efforts.

The time has come for the second assignment. Now comes a long post but please don't panic as it's divided in two parts and we'll do it part by part.

**Part 1:**

- Step 1: Go through the Second Language Learner Strategies Inventory. You need to look at both the Inventory and its appendix (Part G). [https://drive.google.com/open?id=1\\_XwCSHW4g95atIfRnPNT19qxGqWwMTs](https://drive.google.com/open?id=1_XwCSHW4g95atIfRnPNT19qxGqWwMTs). (If you want, you can actually test yourself, I've added the result sheet.)
- Step 2: Think of yourself as a learner and identify the strategies you mostly use in your language learning. Add them to your Learner Profile (Padlet). Feel free to add new strategies or explanations if necessary.
- Step 3: Choose one strategy that you don't use sufficiently and would like to try out in your learning. Post it in your Learner Profile.
- Step 4: Look at the other student's strategies (you have access to each other's Padlets). **Based on their learner profile (learning styles, preferences, needs, interests etc.) recommend a tool or a method to help them try out the strategy they chose.** You can leave a comment directly on their profile and they can reply, so a discussion can be generated. I will also give my comments and recommendations.
- Step 5: In the end, you should make the final decision on what tool/method to use to help you try out a new learning strategy. You can see an example here (my profile as a learner of Spanish). You can start by commenting on my strategies if you'd like (I'd sure be grateful!) [https://padlet.com/jelena\\_im\\_marjanovic/d6b3lv2kj4u](https://padlet.com/jelena_im_marjanovic/d6b3lv2kj4u)

**Part 2:**

- Step 6: For one week (or some other period you find more suitable) you should try out the new strategy in your learning **with technology**.
- Step 7: After one week, reflect on your learning (Task Sheet). Think not only as learners, but future teachers as well.
- Step 8: Create a website post (optional)

For now, let's focus on the first part only. Let me know what questions you have and then proceed to plan how you will go about doing this assignment and fill in the Task Sheet (**remember to use V2**). When setting and sticking to your deadline, remember what we spoke about last time - break the task into small manageable steps and be realistic about how many of them you can do in one day. Also bear in mind that the core part of this task is the second one (the actual implementation of the skill) so make sure this is reflected in the distribution of the time you want to spend on this task.

One more thing - my Whatsapp is out of function, so please communicate through email only for now.



Autonomous Learning >  
**Let's Chat about My Findings**  
9 posts by 3 authors



me (Jelena Marjanovic change)

12 Feb

★ Hi girls!

We've had a small break and I hope it did you good! How are things at the moment - overwhelmed with work, more things to do? Or same as before?

I wanted to propose to meet because I'd like to share some results with you. I've been analyzing our conversations and your work and thought you might be interested in hearing about what I've found. Also, I would use that opportunity to propose a change in our collaboration that would allow us to continue working together but wouldn't necessarily be additional burden for you (since I know your time is very limited). So, how about this week, say Thursday or Friday?

Best  
Jelena

[Click here to Reply](#)

12 Feb

Dear Jelena,

At the moment, I am a little bit more relaxed, as this winter break has allowed me to catch up with some things... But I'm afraid this won't last much longer (hahaha)

The idea of the meeting sounds great to me. I'd love to find out about your results and proposal! I could meet, however, only on Friday (from 9.00am to 16.00). Would that suit you both?

Best,

You received this message because you are subscribed to the Google Groups "Autonomous Learning" group.  
To unsubscribe from this group and stop receiving emails from it, send an email to [lowmylearning+unsubscribe@googlegroups.com](mailto:lowmylearning+unsubscribe@googlegroups.com).  
To post to this group, send email to [lowmylearning@googlegroups.com](mailto:lowmylearning@googlegroups.com).

## Appendix N: Gemma's and Maria's Learner Goals in the Autonomous Learning

### Intervention

Gemma's goals:

- To learn to prioritize tasks and learning objectives **and to procrastinate less on the tasks that I don't enjoy doing (e.g. writing reports)**
- To cut task-completion time (I.e. learn to be less of a "perfectionist")
- To learn to organize my work better so to avoid cognitive overload and forgetting to complete tasks
- To learn about many more technological tools that can help me in my learning and future teaching
- To enhance my critical thinking on the university course learning content and methods

Your feedback, please :) : **I think that the goals you wrote down summarise very well what I intend to improve along this course. Thank you for arranging them in such a clear way.**

Maria's learning goals:

- To be able to influence my motivation to complete specific tasks (i.e. learn how to find relevance in them)
- To be able to curb procrastination and stick to my to-do lists better
- To feel more positive about the challenges I face when I learn with **or without** technology
- To feel more comfortable and confident when making decisions about my learning (i.e. not to be discouraged by the absence of teacher's validation/rejection of my ideas)
- **To learn about many more technological tools that can help me in my learning and future teaching**

Your feedback, please :) : **I think that you did a very well summary of what I want to improve!**

## Appendix O: Screenshots of Gemma's and Maria's Padlet Boards Developed in Autonomous Learning Intervention, Anonymized

**profile**

**Learning Goals:**

- To learn to prioritize tasks and learning objectives and to procrastinate less on the tasks that I don't enjoy doing (e.g. writing reports)
- To cut task-completion time (i.e. learn to be less of a "perfectionist")
- To learn to organize my work better so to avoid cognitive overload and forgetting to complete tasks
- To learn about many more technological tools that can help me in my learning and future teaching
- To enhance my critical thinking on the university course learning content and methods

**Learning Preferences, Needs and Styles**

**Primarily visual, then auditive**  
Learns best with mind maps and visual presentations, makes notes and summaries

**Needs external input on what is an important skill to have**  
E.g. autonomous learning - the system should "teach" students it is important to develop it.

**Needs some amount of structured guidance**  
E.g. believes teacher should have full control over reading materials and telecollaboration setup as s/he is the expert

**Motivation depends on seeing she's making progress in learning**  
E.g. she appreciates that Duolingo enables her to track her progress.

**Generally is comfortable with her teachers' use of technology and their methodology**  
She believes they are doing a great job as it is because it is difficult to integrate fit this new "fancy" technology into the curriculum

**Relies on peers to recommend useful digital tools**

**Would like to have more control over the type of activities done in classroom**  
E.g. students could provide ideas to the teachers on types of activities connected to a topic and then discuss these ideas

**Interested in doing collaborative work**

**Preferred assessment - that which allows her to improve her learning and is appropriate for a specific learning goal**

**Preferred tools/most often used**  
Duolingo, YouTube, Skype, Google Drive, email, Whatsapp, Pinterest, Gynzy, Moodle platforms, ClassDojo, podcasts, Coursera, Future Learn

**Interested in learning how to help her future students learn better**

**Learning**

**Interested in doing collaborative work**

**Languages**  
At first pushed by her mother to learn English, but now has come to like it. She says she is "a freak about languages" and autonomously searches for online exercises in English to do.

**Healthy Lifestyle**

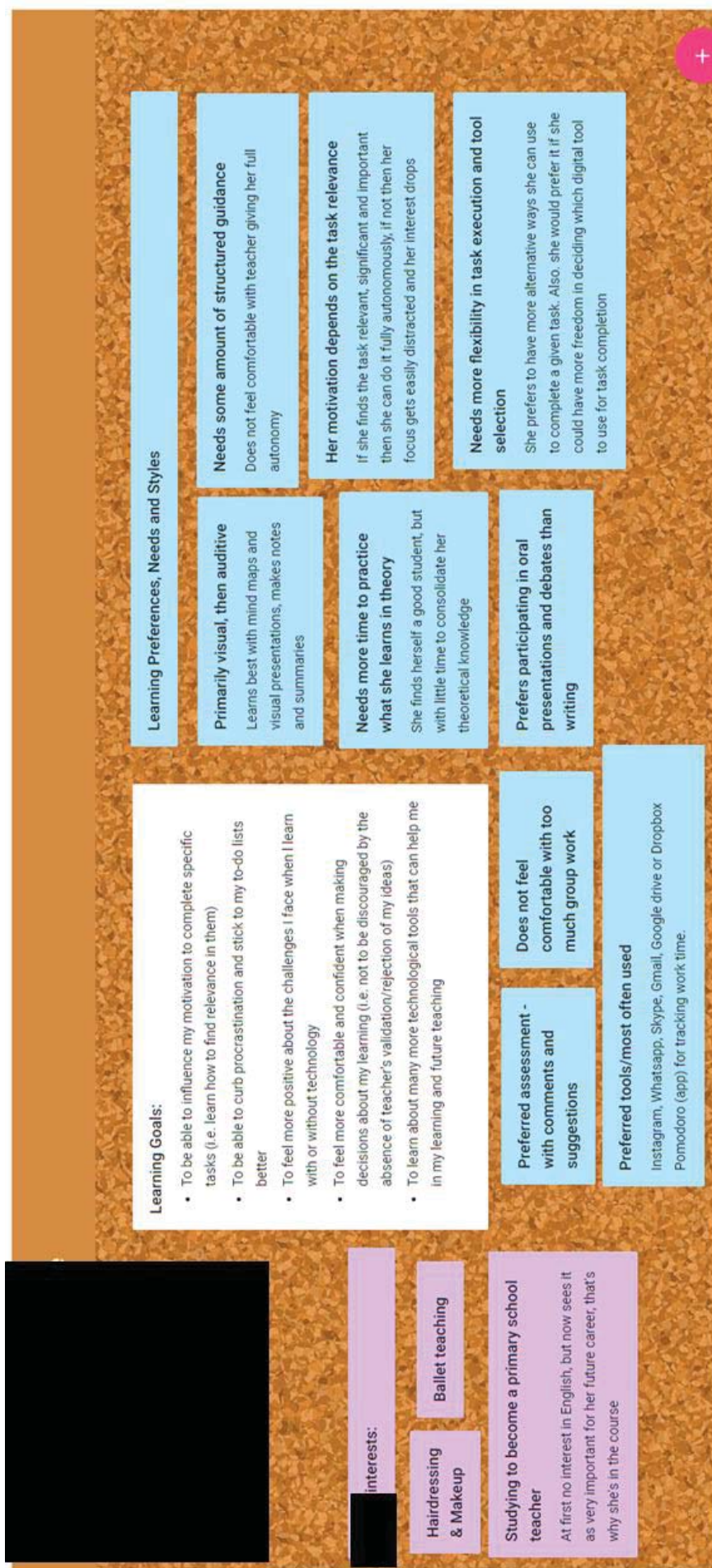
**Cooking**

**Environmental protection**

**Studying to become a primary school teacher**

**Interests:**





## Appendix P: Selected Screenshots from the Screencast Recordings Made by Gemma and Maria, Anonymized

Home Tools Dodge\_2009.pdf 4 / 21 150%

### AND WHY SHOULD WE USE THEM?

*"Formative assessment isn't an end in itself, but the beginning of better instruction."*  
CAROL ANN TOMLINSON (2007/2008, p. 11)

**F**ormative assessments are ongoing assessments, observations, summaries, and reviews that inform teacher instruction and provide students feedback on a daily basis (Fisher & Frey, 2007). While assessments are always crucial to the teaching and learning process, nowhere are they more important than in a differentiated classroom, where students of all levels of readiness sit side by side. Without the regular use of formative assessment, or checks for understanding, how are we to know what each student needs to be successful in our classroom? How else can we ensure we are addressing students' needs instead of simply teaching them what we *think* they need?

Traditionally, we have used assessments to measure how much our students have learned up to a particular point in time (Stiggins, 2007). This is what Rick Stiggins calls "assessment of learning" and what we use to see whether our students are meeting standards set by the state, the district, or the classroom teacher. These *summative assessments* are conducted after a unit or certain time period to determine how much learning has taken place.

Although Stiggins notes that assessments *of* learning are important if we are to ascribe grades to students and provide accountability, he urges teachers to focus more on assessment *for* learning. These types of assessment—*formative assessments*—support learning during the learning process.

Since formative assessments are considered part of the learning, they need not be graded as summative assessments (end-of-unit exams or quarterlies, for example) are. Rather, they serve as practice for students, just like a meaningful homework assignment (Chappuis & Chappuis, 2007/2008). They check for understanding along the way and guide teacher decision making about future instruction; they also provide feedback to students so they can improve their

Recording 2 - A1Çgata november

SUGGESTED TEMPLATE for the TASK (Autosaved) [Compatibility Mode]

Georgia 12 A A A

Normal No Spacing Heading 1 Heading 2 Heading 3 Heading 4

State goal)

The task that I put forward is a morning routine. It aims to start the session off by exploring the calendar, the seasons and the weather. Pupils will learn how to write the date and how to state the weather of each day

This task is carried out if not every, most of the days in which the teaching sequence takes place. By doing it regularly, the pupils will become better at it very rapidly. That is why, with time, this task should take increasingly less time. It will be carried out first thing, before we dive into the subject matter. This way, not only does the task catch the children's attention and gets them thinking, but most importantly, it is a warmer of what is coming next: some time to learn (in) English in an enjoyable way.

Start the day off with the morning routine and explore the calendar, weather, seasons and practice number sense skills.  
Visual support  
Interactive?  
Erase al final de la diapositiva

TITLE OF THE TASK: Initial routine

LEVEL: (specify grade) 4<sup>th</sup> grade of Elementary school

TIME: Initially, I expect this task to take around 10 to 15 minutes, but the aim is for it to last for around 5 minutes by the end of the teaching sequence

COMPETENCES:  
Foreign languages  
Competence 1: To obtain basic information and to understand oral, simple or adapted daily-life texts from the media or the school ambit  
Competence 2: To plan and produce brief and simple oral texts suitable to the communicative situation  
Competence 8: To produce simple texts suitable to the communicative situation using supports

SKILL: \_\_\_\_\_

LANGUAGE: (specify grammar structure or lexical area):  
The task aims to get the children to be able to write and say the date. This requires them to have a good command of (and thus, focus on) the days of the week, the ordinal numbers (from 1<sup>st</sup> to 31<sup>st</sup>—depending on the day in which the task takes place—, the months and the years. They also build up further vocabulary on the seasons and the weather (sunny, foggy, snowy, cloudy, etc.)

MATERIALS NEEDED: Ideally, this task would require a smart board and a *Quizizz* account to carry out the activity "Morning routine". Otherwise, it can still be carried out but in a probably-less engaging and visual way, using the regular blackboard.

The aforecited material can be accessed by clicking on this link.

PROCEDURE:  
(Describe the steps to follow when implementing the task proposed. You have two possibilities here. Either use imperatives to list the steps the teacher must follow in class or use the present simple (3rd person) to describe the procedure the teacher must follow to implement the task.)

TEACHERS TALK:  
(Describe the task again as you would do if you were already addressing your students. Provide the instructions, the language support, feedback, ways of praising their job, etc.)

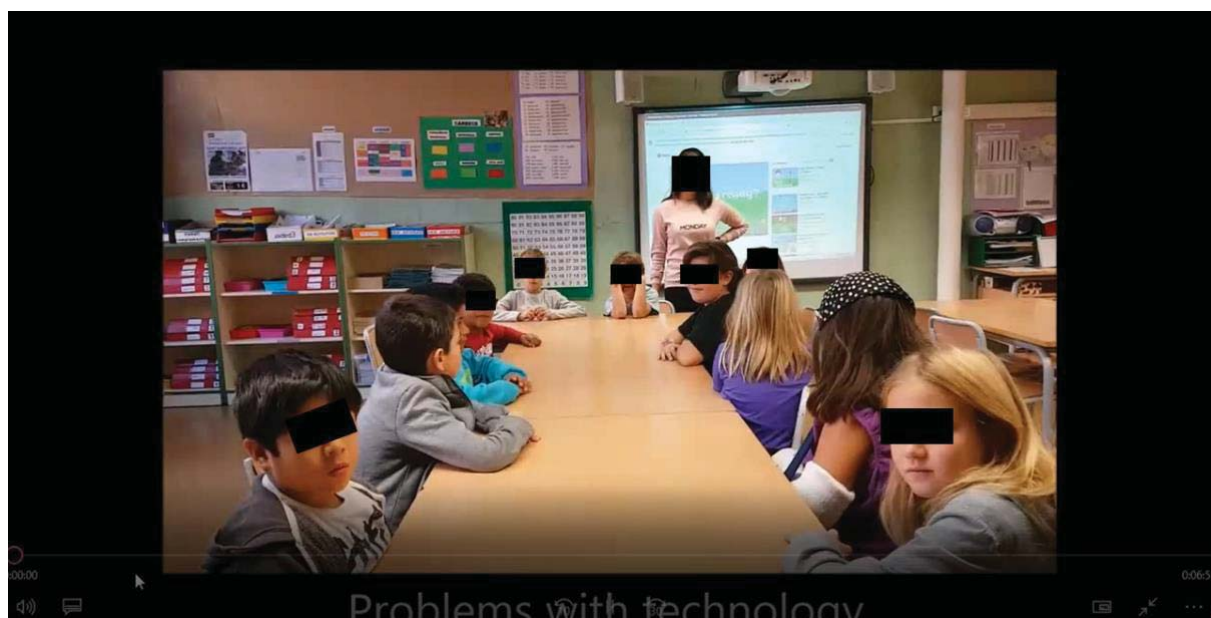
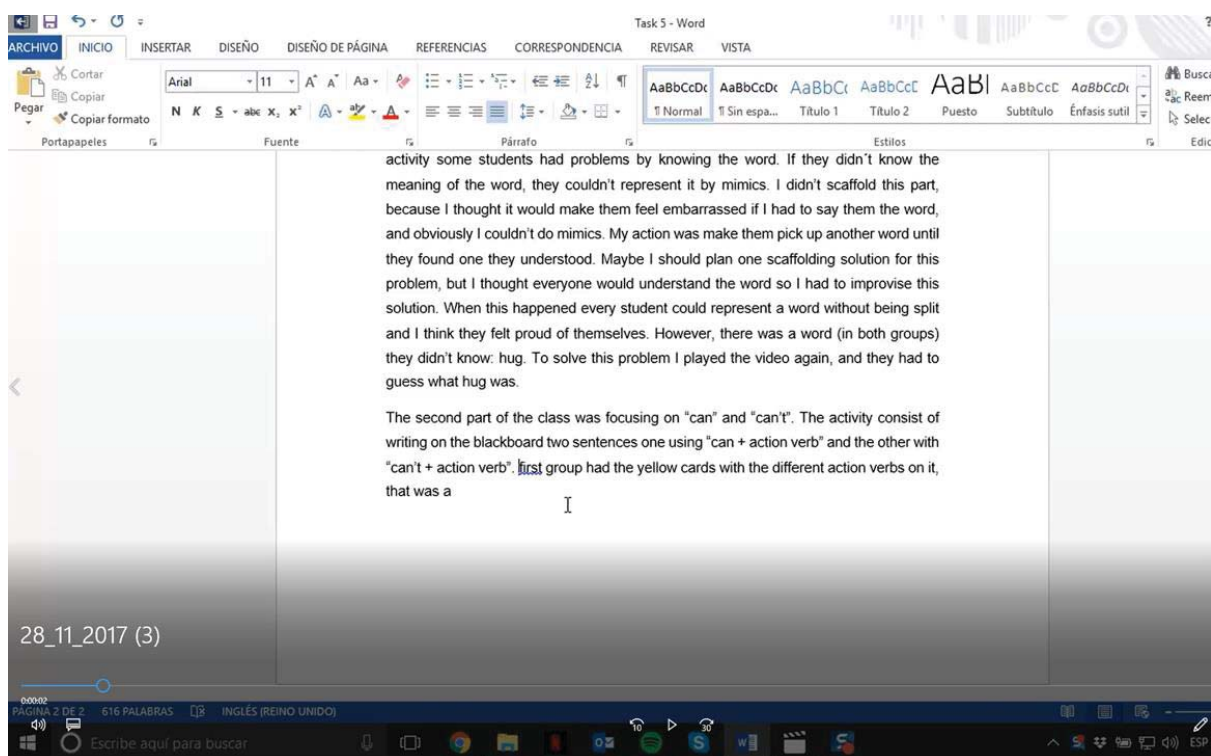
COMMENTS:  
Add suggestions, if necessary, anticipate challenges or offer an alternative procedure.

BIBLIOGRAPHY:  
If you are using visual materials or texts, please specify your sources.

DURING THE IMPLEMENTATION OF YOUR TEACHING SEQUENCE  
Record yourself while you present and implement your task.

AFTER IMPLEMENTING YOUR TEACHING SEQUENCE  
Transcribe your recording/provide your recording. Compare your performance (the language you used) with what you had planned.





The screenshot shows a web interface for managing a blog post. The main content area contains the following text:

What I liked about Trello

- \* It makes me break whole projects into smaller tasks of quicker completion and whose finish line seems closer.
- \* By doing it, I also see how much I need to do and how I should organise my work.

I want to improve

- \* Stick with the timetables I set for myself in order to complete a task
- \* Use these tools regularly and for all types of tasks to make the best of them

... a realisation

- \* I don't find it practical when the task I have to complete is very simple or the sub-tasks in which it could be divided are carried out simultaneously. (E.g. reading an article and

The right-hand sidebar contains the following elements:

- Current Status: **Draft**
- Publish Post** (button with dropdown arrow)
- Save as Draft (button)
- Preview (button with eye icon)
- Featured Post (button with star icon)
- Tags (tab) / Categories (tab)
- Input field containing: e.g. fruit, horse, bed
- Advanced (button with right arrow)