

Empowering Pre-Service Teachers to Produce Ubiquitous Flipped Classes

La producción de clases inversas ubicuas en la formación de profesores

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This work focuses on technological and educational outcomes that resulted from the production of foreign language educational videos by 90 pre-service instructors enrolled in an official Master's Degree in Secondary Education programme. This teaching practice, conducted during two consecutive years, was set in a ubiquitous learning environment with the intention of effectively linking digital technology with pedagogy by means of producing flipped classroom units. The findings reveal that these pre-service teachers successfully combined instructional dynamics with digital skills to produce flipped classes adapted to the young generation's needs. The classroom becomes, therefore, a more participatory learner-centred scenario with a variety of interactive and collaborative activities performed by foreign language students.

Key words: Flipped class, language learning, pedagogy, teacher education, u-learning.

Este trabajo analiza los resultados alcanzados tras la producción de 90 videos educativos de lenguas extranjeras por los estudiantes matriculados en un máster oficial formativo de educación secundaria. Esta práctica docente, realizada durante dos años consecutivos, se implementó en un ambiente de aprendizaje ubicuo con la intención de combinar tecnología y pedagogía de manera eficaz, por medio de la realización de clases inversas (*flipped classroom units*). Los resultados revelan que estos futuros docentes adoptaron una dinámica instructiva con las habilidades digitales para producir clases inversas ajustadas a las necesidades de los jóvenes del siglo XXI. En consecuencia, el salón de clases se transforma en un escenario más participativo, centrado en el estudiante que realiza una variedad de actividades interactivas en lengua extranjera.

Palabras clave: aprendizaje de lenguas, aprendizaje ubicuo, clase inversa, formación docente, pedagogía.

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Introduction

Engaging in learning implies effective content, platforms, tasks, and assessment for students to access information and to build knowledge both independently and collaboratively. Flipping the classroom has to do with the production of educational videos that can help to differentiate learning styles and therefore contribute to the growth of different types of learners (Davies, Dean, & Ball, 2013; Tomlinson & Imbeau, 2010). The flipped class offers students the opportunity to watch the content as many times as needed before attending the face-to-face session. The time and space of the classroom are used for supportive discussions or interactive activities that promote critical thinking, collaboration, personal learning, and communicative content awareness. Initially, flipped classes used to have the form of a lecture, but nowadays they can also be presented as some task instructions, a case-study proposal, or a question/problem that learners must solve individually or as teams. Multimedia video cases that have replaced paper with digital tools can better address the complexity of a diverse classroom when dealing with the appropriate technology (Han, Eom, & Shin, 2013). The flipped classroom is a method that allows students to be more responsible for their learning process since they must spend some time (between 10-20 minutes) watching a video presentation (and also other multiparty activities such as listening to a podcast or reading a text, for instance) at the best time and place that suits them outside of the classroom (J. Anderson, Young, & Franklin, 2014; Herreid & Schiller, 2013). The practice of flipping the classroom could be part of ubiquitous learning (u-learning) environments (ULE): Learning takes place anywhere and at any time, often digitally and outside the institutional spaces and hours. The u-learning flipped session must require consequent individual tasks, but also collaborative or cooperative exercises or projects can be applied.

Based on a flipped class methodology, which is combined with a communicative u-learning environment, this teaching practice has proposed to successfully connect information technology with pedagogy in order to adapt learning to specific context and learners' needs (Huang, Chiu, Liu, & Chen, 2011). Furthermore, another context-aware bond between high school students and teachers is paramount in this study, since the participants who created these different flipped sessions are some of the future foreign language (FL) teachers at Spanish high schools. These potential instructors have enrolled in the accredited teacher education Master's Degree programme which trains pre-service teachers to successfully perform their practice in the delivery of public secondary education programmes in the Autonomous Community of The Canary Islands (*Comunidad Autónoma de Canarias*). This degree is a required qualification to access a job position in the Public Education System offered by national and regional governments. These participants applied a variety of narratives and formats for video contents to attract learners' participation in the FL classroom. Contributors not only used different approaches for their video formats but these future teaching applicants also created interactive exercises that were addressed to enhance independent and collaborative learning based on the previously flipped class content created.

This study aims to explore the following question: How can pre-service FL teachers be effectively trained to produce flipped classes for an audience of higher education students? With this purpose in mind, we have designed and applied a training procedure to be embedded in a Teacher Education Master's Degree curriculum. This five-week procedure includes basic training in video editing tools and best practices in video production, the creation of a sample flipped class unit, and the usage of a ubiquitous collaborative environment where the trainees share knowledge and reflections about their learning process.

Emerging Technologies in a Pedagogical Revolution

Pedagogy is being transformed due to the benefits of information and communications technology (ICT) for living in society in the 21st century (Beetham & Sharpe, 2013; Kalantzis & Cope, 2012; Martinovic & Zhang, 2012). Since pedagogy implies revisiting and, therefore, launching teaching and learning strategies that can be adapted to current learners' needs, the ingredients of pedagogy and digital tools are positively inspiring when applied to active learning (Bikowski, 2015; Machado, 2015; Petty, Heafner, Farinde, & Plaisance, 2015). These learning environments have therefore become ubiquitous (u-learning) and accessible from any location and at any time (Burbules, 2014; Chen & Li, 2010; García-Sánchez, 2012; Ogata, Matsuka, El-Bishouty, & Yano, 2009).

Though the flipped class concept is not necessarily bound to a particular kind of instructional asset, in practice, flipped class courses rely on digital online videos as the main source of out-of-class contents. Digital videos for ubiquitous learning and flipped classes, in particular, can have a variety of purposes: instructional, situational, interactive, real-context role-play, and feedback suggestions, for instance (see the review by Bishop & Verleger, 2013).

Technology has boosted production and availability of digital video in recent years. Three major actors involved in this video explosion are: free video streaming platforms such as *YouTube* and *Vimeo*; affordable and powerful mobile and handheld devices (laptops, smartphones, and tablets) that provide ways to record video in a great variety of environments; and, finally, a plethora of new software tools that simplify the process of video editing and publishing (Dykman & Davis, 2008). Thanks to the combination of these technologies, it is now easier than ever for anyone to produce and deliver video contents.

Another remarkable recent phenomenon is the emergence of certain video styles or “genres” that are

now dominant in the online instructional videos found in ubiquitous learning implementations (Santos-Espino, Afonso-Suárez, Guerra-Artal, & García-Sánchez, 2013b). The screencast has been one of the earliest and most distinguished examples of these new genres. Other popular styles are the Khan-Style drawing screencasts and “enhanced slideshows”, built on a combination of PowerPoint-like slides plus some added video or audio, together with more conventional approaches such as lecture recording and Talking Head video casts (Hansch et al., 2015).

A typical process for personal video cast production consists of a combination of screen recorder software, such as *Camtasia* or *Screenflow*, plus a standard application for generating action on screen. Although this is already a simple practice compared with classical video editing packages, the industry is pushing for even more simplification in the edition process. Several specific-purpose tools such as *Present.me* and *My.Brainshark* for slideshow videos or *Educrations* and *Picasst* for whiteboard and Khan-Style screencasts have recently appeared in order to focus on use cases for video production, oriented to a particular video style. By using these tools, the cost of editing and publishing videos has plummeted while keeping a moderate quality in the final product. The potential drawback of these single-use-case tools is the lack of flexibility and features, but it may get compensated by the productivity gains.

Multiple-oriented video making experiments have had several readings when positively tested by researchers who have found a constructive coordination among technology, pedagogy, and content by means of providing learners with the right tasks and tools to create their own videos (García-Sánchez, 2014, 2016; Hofer & Owings-Swan, 2005; Yerrick, Ross, & Molebash, 2003). Some other scholars have pronounced themselves in favour of self-directed methodologies when dealing with mobile devices and u-learning environments in tertiary education (El-Bishouty, Ogata, Ayala, & Yano,

2010; El-Hussein & Cronje, 2010). Several academics have considered the use of video lectures or flipped classes a method that can enhance both independent and collaborative learning skills (Bishop & Verleger, 2013; Herreid & Schiller, 2013; Hung, 2014; Tucker, 2012).

Today's students demand to be more engaged in constructive student-centred approaches that allow them to build their knowledge (Neo & Neo, 2009). When designing educational programmes, cooperative and collaborative understanding that enhances social and communicative skills in the FL should be encouraged among high school teachers. This consequently implies having in mind a communicative language teaching (CLT) approach that can be originated in the classroom and expanded upon in supplementary situations (physical or digital) happening outside the classroom by means of interaction.

Training Teachers to Produce Flipped Classes

When facing the challenge of training a person to be competent as a flipped classroom teacher, one crucial aspect is to enable him/her to provide adequate video contents for the out-of-class stage. With that purpose in mind, there are two key competences that teachers should develop: a basic skill to search efficiently for video materials on the Internet; and a more advanced ability linked to producing useful video contents by themselves. The first skill sees the teacher as a "content discoverer", while the second one treats him/her as a "content producer". In terms of the revised Bloom's Taxonomy (L. W. Anderson et al., 2001), these two competences, "analysing" and "creating", respectively, are higher-order skills in the cognitive domain.

In this case study, we focus on the creative competence at the highest level so that these FL pre-service teachers can self-produce video lessons adapted for their students. We consider that developing this skill in teachers is foremost in applying the flipped classroom model successfully. If one compares a flipped design based on self-produced

videos with another flipped session that is built using a selection of quality third-party material, several benefits can be identified in the first option:

- a. Teachers have more freedom for course design and implementation.
- b. Teachers can adapt material design to their actual students and to their social/cultural environment and special needs. Students will interact with the same person they have had in their face-to-face sessions. This may favour engagement and motivation and improve learning, as suggested by the recent findings of Cognitive-Affective Theory of Learning with Media (Park, Plass, & Brünken, 2014).
- c. Moreover, we consider that in several real-life teaching scenarios those benefits may compensate for the lower technical quality of the self-made items compared to excellent third-party videos. This is the base that has led us to include this competence in the secondary education curriculum, and to assess how these pre-service instructors perform at learning these technological and pedagogical tasks.

The Study

The Case Description

This case study was conveyed as part of the compulsory subject entitled "Innovation and Research in the Foreign Language Classroom" of the official Master's Degree in Secondary Education programme at the Universidad de Las Palmas de Gran Canaria. This analysis especially dealt with the part devoted to "Innovation in the Foreign Language Classroom" ("Innovation" from now on), which took place during four hours a week in a five-week period of the second semester, just before students initiated their teaching practicum. A mixed methodology approach of qualitative and quantitative data was used to observe, collect, and analyse the elaboration process of the videos, the anonymous blog contributions of the participants, and the online anonymous survey, which had a total of six

multiple choice questions (1, 2, 4, 6, 8, and 10) and four open questions (3, 5, 7, and 9) as seen in the Appendix.

This teaching innovation took place in two consecutive academic years during 2013-2015 with a total number of 90 participants: 46 in the first year and 44 in the second year. The participant age range was 23-50 years old, with 90 per cent of them being under 30 years old. They were all postgraduate students who had previously completed a FL Degree in the Humanities area. The preponderance of participants (59/90) was specialised in English as a Foreign Language (EFL), followed by 17 dedicated to French as a Foreign Language (FFL) and 14 out of 90 were the postgraduate practitioners dedicated to German as a Foreign Language (GFL). A few (27%) had already had some working experience in teaching foreign languages at private high schools but the majority (73%) were about to start this profession once they ended their Master's degree studies. The percentage of adult men was 22% while 78% were women according to the data collected from Question 1 in the survey.

The Instructional Design

The instructional design for "Innovation" had two components: the structural learning scenarios and the activities. The former, based on a u-learning environment, was supported by the course virtual platform, the discussion forums, and the blog. The latter had a variety of forms: in-class discussions, self-study activities, collaborative learning tasks and online discussions by means of the contributions posted on the blog, and the discussion forums of the *Moodle* platform. These would-be FL teachers were aimed at dealing with u-learning environments as students first and as pre-service teachers later. They had to face both positions in order to complete the "Innovation" course goals, and therefore, the final product of their contextualised flipped classes.

On the one hand, the individual activities these participants completed were the discussion forum and the blog contributions. The conversations were delivered

in the language the three FL specialities (English, French, and German) had in common: Spanish. The former was signed with their using their true identities while the latter was anonymous when they registered on the blog. The forum participation implied constructive feedback of other classmates' video recordings posted on *Moodle*. The blog entailed extending the discussion to external spheres and in an anonymous scenario. Learners responded to two different topics on the blog by using an unidentified alias and their institutional email addresses so that the "Innovation" instructor would be able to mark their participation records. Their active involvement with the blog contributed to 10% of the final mark. Both the blog cooperation and the democratic feedback shared on the *Moodle* forum resulted in 100% of participation and although individually opinionated, they especially addressed group arguments that promoted advantageous interactions.

On the other hand, the collaborative learning tasks completed the assessment criteria for "Innovation". These pre-service teachers worked on teams of 3-5 members in order to build a flipped class together with its subsequent interactive exercises (by means of *eXe Learning*¹) in the FL they were specialised in. Both creative tasks would play a part in the instructional design of their secondary education u-learning scenarios. Once their learning units were created, they had to post the link of their flipped classes on the course forum and provide some constructive feedback on other videos, following the same rubric designed for their self-study reflections. This implied that participants watched all the videos outside the classroom (in a ULE) so that the interactive activities, which were created to extend the content of the flipped class, were presented in class to promote constructive discussions and the exchange of ideas among the educational community. The design of these exercises addressed at least two different language skills and was based on a communicative approach.

¹ See the software website on <http://exelearning.net/>

Table 1. Innovation in the FL classroom: Tasks and Assessment

A. Online Activity 1 (10%)	A. Online Activity 2 (25%)	B. In class activity (15%)
<ul style="list-style-type: none"> • Blog discussions on two topics. (Individual work) Anonymous + alias + institutional e-mail 	<ul style="list-style-type: none"> • Design of an innovative project following a u-learning approach and a flipped class methodology. A video session of 3-5 minutes (<i>YouTube, Brainshark, Screencast</i>) + Creation of three interactive exercises with SCORMS (Sharable Content Object Reference Model) by means of using <i>eXe-Learning</i>. (Group work 3-5 students) • Focus on, at least, two foreign language skills. • Posting of the video link on the course forum and provide positive constructive feedback to all groups. 	<ul style="list-style-type: none"> • Presentation of their SCORM exercises (independent learning). • Presentation of complementary exercises to promote cooperative and/or collaborative learning using <i>eXe-Learning</i>. (Group work 3-5 students)

These potential high school instructors were given the learning goals and the competences they needed to achieve on the first day of the “Innovation” course. The equivalent assessment criteria for each assignment (the individual blog participation, the group activity of the flipped class and its posting on the course forum, and the explanation of the interactive exercises using the *eXe Learning* programme), which followed a continuous summative assessment, were also presented on the first day of the course of “Innovation” as illustrated in Table 1.

A Twofold Setting as Students and Teachers

This innovation practice pursued a double teaching-learning understanding since the participants behaved as postgraduate students and as future teachers e.g. creating their own instructional content. Inclusive learning strategies that promoted training and action research were implemented. First, learners were provided with a learning design adapted to their needs as students attending the “Innovation” course. Secondly, they had to face the teaching role by creating and presenting FL digital content for their secondary education sessions.

The Videos, Tools, and Techniques

During the instructional sessions, a selection of video editing and publishing platforms was described and put

into practice with *Present.me, my.Brainshark, YouTube, and Picasst.com*. Examples of flipped classes were shown, and the use of *Present.me, my.Brainshark, and Picasst.com* was illustrated in class while students were simultaneously using their laptops to follow the training. Regarding *YouTube*, the “Innovation” instructor posted a third-party video, which clearly explained how to register, edit, and post videos in this free video streaming platform.

Each team, organised according to their language specialty, designed and edited a video unit paying attention to different FL skills and ULES. Teams were free to choose the preferred tools but they were asked to consider some necessary content (situational, storytelling, grammatical, lexical, role-play, instructional) they wanted to improve in their future learners. Interactive activities, which were based on the *eXeLearning* software, were planned in correspondence with the flipped classes. A total of 30 videos (16 in 2013-2014; 14 in 2014-2015) were created using, *Camtasia, iMovie, My.Brainshark, YouTube, and Present.me*.

Results and Discussion

Videos for Flipped Classes

A comprehensive list of the 30 videos created by these instructive participants during this teaching practice is presented in Table 2. The videos have been

classified into two dimensions: *didactic* and *audio-visual*. The didactic dimension involves the use of the narrative or discursive approaches to generate learning: instructional (lecture) and storytelling, for instance, as shown in column “Didactic style”. On the other hand, the audio-visual dimension deals with techniques and tools to display contents on the screen. Column “Audio-visual style” shows the kind of style or genre that is used in each video (slideshow, movie, etc.). The term *slideshow* is used to mark videos where

a PowerPoint-like presentation is being displayed, in combination with some other elements like a small picture of the narrator. This particular style (slides combined with narrator picture) is named “h&s” in Table 2, which stands for “heads and slides”. Another slideshow variant is the *slidecast* (full-screen slides with voiceover). Finally, the column “Production tool” shows the software tool used for editing and publishing the video. Blank fields mean that the usual recording and editing video software has been used.

Table 2. Classification of the Videos Produced in the Study

Video Title	Didactic style	Audio-visual style	Production tool
Begrüßungen	Roleplay	movie	
Fernando & Anika	Storytelling	slideshow (cartoons)	MyBrainshark
Lieblingsdinge	Lecture	slideshow (h&s)	Present.me
Adjectifs	Lecture	slideshow (h&s)	Present.me
Au café	Role play, lecture	movie, video cast	
Les faux amis	Lecture	slideshow (h&s)	Present.me
Où se trouve la bibliothèque?	Role play	movie	
Présent du verbe “groupe –ir”	Lecture	slideshow (h&s)	Present.me
British vs. American English	Lecture	slideshow (slide cast)	MyBrainshark
Bullying	Lecture	slideshow (h&s)	Present.me
Christmas & The Simpsons	Lecture	slideshow (h&s)	Present.me
Going to vs. Will	Role play	movie	
Going to & Will	Lecture	slideshow (h&s)	Present.me
Greetings	Role play	movie (voiceless)	
Present Simple & Present Continuous	Role play	Video cast (puppets)	MyBrainshark
Pumpkin soup recipe	How-to	slideshow (h&s)	Present.me
Storytelling	Storytelling	slideshow (cartoons)	MyBrainshark
Tricky words	Lecture	slideshow (h&s)	Present.me
Vowel sounds: an introduction	Lecture	slideshow (h&s)	Present.me
False Friends	Lecture	slideshow (slide cast)	MyBrainshark
Adjective comparison	Lecture	Video cast (chalk & talk)	
Bullying	Lecture	slideshow (slide cast)	MyBrainshark
BRD-Berlin Rockt die Deutschland	Documentary	slideshow (slide cast)	
Modal verb can	Lecture	cartoon show (voiceless)	GoAnimate
Presentation Australia	Documentary	slideshow (slide cast)	MyBrainshark
Herr und Frau Maier	Storytelling	slideshow (puppets)	MyBrainshark
Callejeros viajeros	Interview	tv show	
Pet Monkey	Role play	movie	
Jane Eyre	Storytelling	cartoon show	Powtoon
Hamlet’s today monologue	Theatrical	Video blog	

The data show that the most frequent didactic approach chosen by these pre-service teachers is instructional (14 videos are lectures), followed by stories based on role-plays (six videos) and storytelling (four videos). One video uses a hybrid approach, showing an initial role-play segment followed by a lecture segment. Five other courses make use of various narratives such as how-to, documentary, interviews, and theatrical performances.

As regards the audio-visual style, the slideshow is the most prevalent model (18 videos), with the “heads & slides” as the preferred variant (10), followed by slide casts (5), and others (3). Six other videos are shot as conventional movies, all of them recording role play stories. A few teams have explored alternatives such as “how-to” videos or mimicking mass media formats like documentaries (3). Some teams (4) used puppets and cartoons as characters, which demonstrate that teachers’ narratives can be combined with several visual aids, beyond simply adding the face and voice of the instructors.

As far as software tools are concerned, *Present.me* has been the first preferred tool to make videos by the majority of the participants in 2014 (14 out of 16 videos) and *My.Brainshark* during 2015 (eight out of 14 videos). Some students also added other resources such as *GoAnimate*, *iMovie*, and *Camtasia* (five videos) for the elaboration and edition of their video sessions. *YouTube* was the platform chosen to post their FL flipped classes by seven teams.

From these outcomes, two conclusions arise: (a) the preferred video style is a lecture displayed as some variant of slideshow, mostly combined with narrator’s face and voice; and (b) simple record-and-publish software tools are favoured over more sophisticated settings, which seems a reasonable justification since the goals of the flipped class can be achieved with an uncomplicated design process and some short preparation time. Equally, there has been room for creativity in the didactic and audio-visual styles and also in the selection of tools.

As a final remark, the observed average quality of audio is low: Eight videos show poor quality and only nine of them deserve a satisfactory level. Audio quality is influenced mostly by local arrangements in the recording infrastructure, such as narrator location, ambient noise isolation, and microphone type. Voice quality is an important feature of learning units for language learning; therefore, this substandard audio is a concern to be addressed in teacher training (Murray, Koziniek, & McGill, 2015).

Technology-Based Pedagogies for Today’s Learners

The videos used to produce flipped sessions for the FL classroom have addressed a variety of educational purposes but under the same goal of responding to current adolescents’ needs. These flipped classes have also shared some common technological characteristics that would be described in this section.

Regarding the educational purposes, adapted personalised u-learning has been one of the outcomes reported from these videos. The creation of self-productive flipped classes has allowed these pre-service teachers to assume some needs their young students may demand (Bergmann & Sams, 2012). Although Strayer (2012) has already pointed out that the inverted classroom can positively improve cooperation and task orientation, the results also propose that independent u-learning is another common attribute these videos have pursued since the viewers are guided to follow some specific content and activities in an inclusive learning environment (Lage, Platt, & Treglia, 2000). Two examples of personalised u-learning flipped classes are shown below. The first recording (Figure 1), for instance, combines the form of a traditional lecture of content with visuals and the presenter’s body language, which helps to understand such a well-designed session on the vowel sounds in English. The second video (Figure 2) illustrates a quite innovative session that combines personal u-learning with collaborative learning, task

as traditionally authoritarian and repetitive in the grammatical lecturing format. They do not provide either engaging participation from the learners or add a contextualised situation that may attract students' attention. These sessions could be improved by presenting attractive grammatical content applied to real life situations, which would invite adolescents to easily connect with the language in use. These flipped sessions could also have an additional value if reduced in time, if the same repetitive structure is avoided, and if used as a combined language with motivating cultural events and with communicative skills that would engage students in the flipped sessions with questions, tasks, and interesting facts. *Excellent* and *satisfactory* flipped classes, on the contrary, are the successful video models that have especially combined independent learning skills with collaborative learning abilities in a communicative approach and ULE. The flipped classes have also blended the instructional session with role-play and the resulting interactive activities (with *eXe Learning*) for the FL learners. Accordingly, there is a fusion between engaging information, real-life situations (at the coffee shop, travelling abroad, false friends, bullying), and students' active participation in their learning process, both individually and collaboratively. Finally, it is significant to report that 88% of these pre-service teachers have considered the communicative competence a necessary skill to be improved in secondary education. The remaining percentage (12%) was committed to more limited grammatical situations.

Furthermore, these self-directed and group-directed learners managed to produce, share, and present their u-learning environments. The process of empowering pre-service teachers to create personalised flipped classes in a u-learning environment has implied a variety of abilities such as engagement, discussion, interaction, and digital guidance in order to finally design their FL flipped classes and their corresponding interactive exercises in a u-learning scenario.

Students' Satisfaction

Student's satisfaction concerning the "Innovation" course, content, and results was measured by analysing the data collected from Questions 2 to 8 in the online anonymous survey. The responses to Question 2 have provided this study with remarkable facts that suggest participants were pleased with their creative abilities and appropriate use of ICT during the production of their videos (97%). The respondents also reported that the characteristics and learning approaches that they enjoyed most in this course (Question 3) were the use of various digital tools to deal with flipped classes and interactive *eXe Learning* exercises (49%), the concept and implications of creating ULES (30%), the techniques applied to collaborative learning (14%), and the importance of dealing with multiple intelligences (7%).

The qualitative data also propose that 99% of these pre-service teachers felt their learning achievements, together with the evaluation criteria designed for "Innovation", were positive as shown in Question 4. This is read by understanding that 30.95% chose "Excellent" as the condition that described their learning achievements, followed by 40.48% who felt it was "Very good". "Good" was the third option selected by the remaining 26.19% contestants while 2.38% felt their learning outcomes were "Poor" as shown in Table 3. This introspective satisfaction would imply not only having motivated pre-service teachers but well-trained professionals ready for the challenges of starting a new career in secondary education. Similarly, this testimony supports O'Flaherty and Phillips's (2015) recent analysis of the appropriate learning design of flipped classroom preparation, online activities, and face-to-face synchronous tasks to enhance both specific content and communicative language skills. These pre-service teachers seem to have positively valued the learning outcomes resulting from the video-based learning courses to promote independent and collaborative learning in their future students.

Table 3. Respondents' Evaluation of Their Learning Progress in "Innovation"

Question 4	Poor	Good	Don't know	Very Good	Excellent
If you had to assess your learning in these "Innovation" sessions for the FL classroom, you would consider it _____	2.38%	26.19%	0%	40.48%	30.95%

Table 4. Contestants' Responses About the "Innovation" U-Learning Design

Question 8	Excellent	Good	Don't know	Poor
In general terms, you believe the sessions, the tasks and the discussions offered (inside and outside the classroom) have been _____	48.78%	48.78%	2.44%	0%

As to possible suggestions these students could add to the "Innovation" sessions and its evaluation (Question 5), the answers varied but it seems that the most common responses underline that the course was well-structured since the evaluation combined content with competences (94%). A significant number of respondents (68%) affirmatively proposed to have this subject at the beginning of the Master's Degree programme with more sessions in which they could explore these innovative practices. Question 6 enquired as to whether or not these pre-service teachers felt ready to start teaching and motivate their students. Positively, 74% of contestants felt prepared to face the FL class, while the remaining 26% chose a dubitative answer to this question by selecting "I don't know".

Question 7 dealt with the course evaluation and the correspondence between course content and competences. Most of the participants (89%) considered the assessment not only satisfactory but fair. The remaining respondents mentioned other adjectives such as "varied" and "motivating" to describe the evaluation (9%), and 2% reported that time was too short and did not correspond with the tasks preparation. Finally, Question 8 was especially relevant in this study because it compiled data on the dynamics of the "Innovation"

sessions, the tasks and the discussions offered inside and outside the classroom. "Excellent" and "good" were the options equally chosen by 49% of respondents followed by 2% who chose they "did not know" as illustrated in Table 4.

Digital and Communicative Creativity

Digital and communicative creativity are defined here as the abilities to design tasks or sessions that can respond to innovative practices, which pursue the performance of the digital competence together with the communicative skills in the FL. The quantitative and qualitative data suggest that this constructive FL educational community has been engaged in both digital and communicative participation when producing instructional videos and the subsequent participatory tasks. The varied flipped classes prove that these participants have focused on designing their own content in order to tackle secondary learners that would work independently and collaboratively. This self-production can be inexpensive but, without any doubt, encompasses a reflective dedication to producing useful flipped classes for successful learning results (Santos-Espino et al., 2013a).

Figure 3. Video Role-Play Using YouTube



Figure 4. Flipped Class Based on Storytelling



The two examples of videos shown in Figures 3 and 4 reveal this important concept of digital communicative creativity. These pre-service teachers have not only created real-life situations that can be useful for their learners but have also drawn pictures and made up stories to shape dialogues that pursue connecting language with context and communicative skills. The first video (Figure 3) shows a role-play situation at school in which one French student is looking for the library and then the conversation goes on with a selection of target goals. The second video (Figure 4) is creative not only for the story-telling approach these future German teachers have established, but also for the emphasis on language forms, the drawing of the main characters, and the animated voices performed by the team members in order to address the cartoons' emotions. All in all, the outcome is an amusing and engaging video-story that could attract the attention of young learners.

Ubiquitous Group Reflection: The Blog

The blog has served as both a digital platform for external anonymous discussions among the learners and as an open access repository of their flipped classes and interactive exercises. The two topics posted on the blog corresponded with some individual and group reflections suggested at the beginning and at the end of the courses.²

The first blog topic anticipated a debate about the concept of innovation for the FL classroom. Although it was first started in the face-to-face session, the vast majority of participants connected their personal experiences with learning so that the emotional

² The blog discussions can be accessed on <https://sorayagarciasanchez.wordpress.com/>. The dates of these cooperative learning discussions are February 2014 and February 2015.

intelligence and the motivational attitudes towards the acquisition of an FL were highlighted through their memories. Almost all these pre-service teachers rejected the magisterial session, which was often combined with a hesitant sensibility which dominated the walls of their teenage classroom. They praised, on the contrary, those moments in which they felt positively emotional about one activity or piece of work. These future secondary education teachers connected current and past situations at the time of considering the concept of “innovation”, and when starting to plan their instructional environments. The frequent debate favoured the use of ICT tools in the classroom, the design of tasks that promoted interaction, the use of ULES, the importance of engaging students and keeping their motivation up, the value of considering the multiple intelligences (Gardner, 1999), group activities, and the use of the FL in the classroom from day one, for example. Although an important number of participants mentioned that “Innovation” is not the equivalent of ICT tools, they agreed in using them quite often in their sessions so that they could be closer to their young students.

The second and concluding blog discussion invited these pre-service teachers to reflect on their learning process in this course. They were also asked to think about the tools, strategies, tasks, or learning methods that they would use in their future sessions to

improve communicative skills, motivation, and results in secondary education programmes. Among their reflections, they first mentioned ULES as important learning scenarios that connected ICT with personalised and contextualised learning. At the same time, they shared opinionated arguments about the importance of adapting learning to students. The appropriate creation of flipped classes that aimed to present, instruct, challenge, or enhance a content outside the classroom in order to make use of the interactive, physical space of the room with more communicative and group activities, (instead of instructional lectures) was a valuable feature of these online voices.

According to Question 9 in the anonymous survey, 92% of participants considered positive the anonymous blog contributions in order to first express their views and also to learn from their peers. Moreover, the surveyors also used the blog as a tool to exchange not only viewpoints but further links and resources that improved the quality of the online debate, as shown in Table 5. The blog was used as a platform that aimed at connecting their thoughts as pre-service teachers of secondary education and their insights as current postgraduate learners in this Master’s degree programme. Equally, they were quite critical of the methods used in their past and the great variety of possibilities they can offer today’s youngsters when learning an FL.

Table 5. Pre-service Teachers’ Views on the Anonymous Blog Discussions

Blog Purpose	Comments: Examples
To express views, exchange resources and learn from peers.	“Yes, especially reading others’ opinions. It’s very rich to have various viewpoints on the same issue.” (22/03/2015, 13:20) “Yes, because I’ve read different viewpoints that we may not feel like saying in class.” (07/03/2014, 17:32)
To connect their perceptions as learners and their roles as pre-service teachers.	“Yes, it’s been quite positive since we have been able to discuss interesting topics.” (10/03/2015, 16:10) “I like that idea of not getting to know who is writing.” (11/03/2015, 23:28)

Conclusions and Future Reflections

This article has aimed to shed some light on the application and effectiveness of flipped classes for FL pre-service teachers of secondary education with various tasks and approaches that can help to adapt their learning design to the right context their young learners may need. This teaching innovation has dealt with ICT and pedagogical strategies that could successfully respond to the youngest generations. These two key objectives have meant using digital competences, on the one hand, and educational competences on the other. For digital competences, these future teachers have learnt to produce specifically flipped classes that are created to deal with explicit needs to promote independent learning skills, FL interaction, collaboration, and knowledge building. When managing educational abilities, these prospective secondary education instructors have been initiated in the design of ubiquitous learning environments by means of producing videos that have shown a satisfactory capability to accomplish students' learning goals.

First, this innovative teaching experience has especially focused on exploring the flipped class methodology, the instructional video production, and interactive tasks that these FL participants have created in order to adapt content to their imminent learners. The thirty flipped classes reveal a variety of successful responses to "innovation" from these future teachers, who are especially devoted to attracting learners' attention by providing u-learning scenarios that promote interaction and communication in the FL.

Secondly, this teaching practice has provided pre-service teachers with highly-practical strategies as postgraduate students first and as innovative teachers later. They have been offered a collaborative learning environment (video production tasks, interactive activities, forum, and blog) in order to gain the digital and technological competences that would allow them to plan u-learning environments. They have discovered and

applied appropriate designs for u-learning scenarios that respond to communicative and linguistic competences in the FL class. It is remarkable to point out that these potential secondary education instructors have been able to produce their own videos instead of searching for third party contents. The self-production of flipped classes can particularly address the variety of learning intelligences so that learning can be not only ubiquitous but personalised depending on the design, language skills, and competences of the video unit.

Finally, it is valuable to add that the flipped class method has been confidently designed for FL learners. Additionally, the bases around flipped sessions should be measured in the official curriculum for secondary education teachers. We believe additional inclusive pedagogy strategies that could connect these pre-service experiences with real in-service teaching actions and 21st century students' results would be complementary in future research. It would also be potentially advantageous to monitor if these pre-service instructors continued self-producing their own flipped classes, and to analyse learning results from the Spanish young learners, once these u-learning strategies were implemented in their courses.

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Appendix: Online Anonymous Survey

Your feedback for Innovation in the FL classroom:

1. You are... (a) Man (b) Woman
2. In general terms, are you satisfied with this course? (a) Yes (b) No
3. Mention 2-3 characteristics, learning strategies, or tools that you have enjoyed in this “Innovation” course. (Open answer)
4. If you had to assess your learning during these FL “Innovation” sessions, you would consider it...
 - a. Poor
 - b. Good
 - c. Don't know
 - d. Very good
 - e. Excellent
5. Do you have any comment or suggestion regarding the “Innovation” lessons, activities, and evaluation? (Open answer)
6. Do you think you are ready to face a FL classroom and motivate your students?
 - a. Yes
 - b. Don't know
 - c. No
7. What is your opinion about the assessment of this course? Have the competences corresponded with the course content? (Open answer)
8. In general terms, I believe the teaching/learning dynamics together with the tasks and the debates offered inside and outside the classroom have been...
 - a. Excellent
 - b. Good
 - c. Don't know
 - d. Poor
9. Express your views about the anonymous reflections posted on the blog. Has this experience been positive? (Open answer)
10. What device are you using to answer this survey?
 - a. PC
 - b. Laptop
 - c. Tablet
 - d. Mobile phone