BREAKING GROUND IN A TEACHER EDUCATION PROGRAM THROUGH THE IMPLEMENTATION OF FLIPPED LEARNING

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Abstract
This paper describes an ongoing study performed within a teacher education program. This study explores student teachers’ perceptions in relation to self-regulated learning with the purpose of laying the foundations for the implementation of the Flipped Learning approach. Participants are prospective language teachers enrolled in an English Didactics class. The information was collected by means of students and professors’ surveys, a focus group, prospective teachers’ reflections and researchers’ field notes. Data was analyzed using the principles of thematic analysis. The first phase of this research illustrated student teachers’ views concerning self-regulated learning and the role their professors play in their training and their future performance as teachers. Initial findings revealed that it is necessary to train learners on self-regulatory behaviors and transform professors’ roles into facilitators as a necessary condition for Flipped Learning to take place.

Keywords: Flipped Learning, Self-Regulated Learning, Teacher Education, Prospective Language Teachers.

1 INTRODUCTION
Flipped Learning (FL from now on) is a powerful movement which has evolved rapidly and is moving ahead in 21st century education. The Flipped Learning Network [1] describes it as a pedagogical approach that allows effective teaching and interactions among teachers and learners in class by switching the idea of classroom-based learning. Therefore, out-of-class time is used to introduce students to content before class whereas in-class time is then used to strengthen understanding through discussions and problem-solving activities in which teachers act as facilitators (see Fig. 1).

However, learners might fail to understand the instructional materials (videos, readings, worksheets, etc.) by themselves due to their lack of autonomy. This is precisely what teacher researchers observed...
in the English Didactics classes and in some of the students’ reflections after they had to access content on their own. The whole study aims at fostering Autonomy through the implementation of Flipped Learning. Nevertheless, in the development of this first stage of the project, initial findings revealed that autonomy became evident in students through a series of self-regulatory behaviors and actions. That is why this preliminary study attempts to answer the research question: What are pre-service teachers’ perceptions, beliefs, and behaviors towards Self-Regulated learning in a teacher education program in Bogotá, Colombia? Zimmerman [2] defines self-regulated learning (SRL for short) as a cyclical process in which learners plan a task, monitor their performance, and reflect on the outcome. The cycle then starts again, so reflection is used for learners to adjust plus prepare for the next task (see Fig. 2). The process should be tailored for individual learners as well as for specific learning tasks. In this paper, SRL is proposed to prepare students for the implementation of FL.

The main objective of this study is to determine pre-service teachers’ perceptions, beliefs and behaviors towards self-regulated learning in a teacher education program in Bogotá. Consequently, a second key objective is to determine the changes needed in the English Didactics classes for the successful implementation of FL.

2 METHODOLOGY

2.1 Type of study

The study was carried out under the framework of qualitative research, which according to Johnson [3] has become relevant in social sciences because this field considers reality as pluralist. In other words, for qualitative research, it is not possible to generate ‘universal answers’ for one issue. The latter is due to the fact that ways of living, subcultures and behaviors vary. For that reason, researchers must be prepared to face new contexts and social perspectives in their background targets. Regarding Johnson [3]: “Qualitative researchers view human behavior as dynamic and changing, and they advocate studying phenomena in depth and over an extended period time” (p. 418). In addition, Johnson [3] determines four main reasons for qualitative research: 1) Convenience of methods and theories. 2) Diversity and participants’ viewpoints should be taken into account since subjectivity of the target population is considered to be true and valid. 3) The researcher’s reflection upon the studied phenomenon. 4) The diversity in approaches and methods of research.

Within the framework of the qualitative research we can find ‘action research’, which in education becomes then an interesting option for teacher researchers in a teaching and learning environment. For that reason, it was the type of study implemented. Regarding this concept, Ferrance [4] affirms that “action research is a collaborative activity among colleagues searching for solutions to everyday, real
problems experienced in schools, or looking for ways to improve instruction and increase student achievement” (p. 1). The main objective in action research is to promote positive changes in educational contexts; in teachers, to improve their teaching practice and in learners, to foster better learning outcomes. Action research takes into account a cycle that is presented below in figure 3.

![Figure 3. The Action Research Cycle. Retrieved from https://images.app.goo.gl/3uJ81a9BzEgP69fT8](https://images.app.goo.gl/3uJ81a9BzEgP69fT8)

2.2 Context

This study is taking place in a private university located in Bogotá, Colombia. The university offers programs in different areas and the School of Education offers three majors: Physical Education, Children’s Pedagogy, and Spanish & Foreign Languages. Participants in this study belong to the latter program. Data were collected in an English Didactics class, which aims at giving prospective teachers the conceptual grounds for English Language Teaching. Topics involve First and Second language Acquisition Awareness, Language Teaching Methods, Teaching the Language Skills, Using Technology in the English as a foreign language (EFL) class, Lesson Planning, and Materials Design.

2.3 Participants

The first stage of this project involved eight student teachers, two men and six women, who were between 19 and 28 years. English Didactics is a subject offered in the seventh semester of the program and the class is taught in English once a week for three hours. This class does not have any course prerequisites. Consequently, students sometimes do not have the proficiency level required to be able to take this subject. Although the institution is private, most of the students belong to low socio-economic strata. Their personalities, learning preferences, attitudes, and motivation towards learning the language were very diverse. Even though this was a small group, it was heterogeneous. A key element that could make a difference in this population was the fact that most of them had part-time jobs and were parents at the time they were taking the subject. As a result, they devoted less time to studying compared to students whose parents supported them economically and who did not have any other obligations at home.

2.4 Data analysis

Data analysis has been done under the principles of thematic analysis proposed by Braun and Clarke [5]. According to these authors, thematic analysis refers to the process of recognizing themes within qualitative data. In other words, it identifies patterns in the data that are relevant or interesting and uses them to tackle the study. A proper thematic analysis goes beyond identification—it interprets and makes sense of the data.
Braun and Clarke [5] differentiate two levels of themes: semantic and latent. In the former:

“... the themes are identified within the explicit or surface meanings of the data and the analyst is not looking for anything beyond what a participant has said or what has been written.” (p. 84).

In contrast, the latter:

“... goes beyond the semantic content of the data, and starts to identify or examine the underlying ideas, assumptions, and conceptualizations – and ideologies - that are theorized as shaping or informing the semantic content of the data” (p. 84).

In this study, researchers attempted to do both: identifying themes at the semantic level and trying to move beyond describing what is said to focus on analyzing and explaining it.

3 RESULTS

In an attempt to answer the research inquiry conducting this study: What are pre-service teachers' perceptions, beliefs, and behaviors towards Self-Regulated learning in a teacher education program in Bogotá, Colombia? two main themes were apparent from the data analysis: self-regulatory behaviors and teacher educators' roles. The initial analysis demonstrated that the former theme was evident for participants as crucial for their academic success. As a result, although the latter theme was not included in the research question, the teacher's role is evolving from transmission of knowledge to assisting and guiding self-regulated student learning. That is why it proved to be decisive in the development of self-regulation for learners.

3.1 Self-Regulatory behaviors

Following Zimmerman [2],

“Self-regulation is not a mental ability or an academic performance skill; rather it is the self-directive process by which learners transform their mental abilities into academic skills” (p. 65).

In this study, the results showed that participants may be considered what Zimmerman [2] calls novice self-regulators, due to the fact that they are constantly looking for teacher's validation of their work and the learning strategies they use. In other words, they are teacher-dependent. In the focus group interview, students stated that they associate this teacher-dependency, as Cuesta, Anderson, and McDougald [6] name it, with adverse habits acquired at school and preserved in higher education, as demonstrated in the following extract:

“Well, I think I am sometimes like a child. I do things if I am really interested in them. If not, I will not do them. But I think it also depends on the teacher. If s/he cares, I will care. If s/he does not, I lose my motivation to learn” (Student 3. Focus Group Interview. November 21st, 2017).

The self-regulatory behaviors observed in participants of this study were very different and diverse (see Fig. 4). Some of them concern actions related to time management and organization; others are related to planning and practicing; and others still involve setting learning goals and creating action plans.
3.1.1 Time management and organization

This sub-theme refers to how students distribute and plan their time to carry out their academic and non-academic activities. Participants in this study seem to be aware of the importance of organizing their time effectively to have academic success, as expressed in the following excerpt:

“I’m very organized. I think I’m totally organized with the time. I organize it weekly because I have hundreds of things to do during the week because I work in different places. I don’t know if that’s a mistake, but I don’t waste time in the university. So, for example, when I finish my classes, I go home because I don’t stay here talking or chatting or playing something. And if I have gaps in my schedule, I try to take advantage of that time (Student 3. Focus Group Interview” November 21st, 2017).

Students understand that distributing their time properly and having good study habits are essential to being successful learners. However, the following extract shows that this aspect varies depending on their personal situations:

“Teacher, I try to organize my time because you know I have a daughter. So, I try to say this day I will do this homework and that day I will do the other. I try to do most of my homework on weekends, as much as possible on the weekends and the others during the week” (Student 8. Focus Group Interview. November 21st, 2017).

Students also mentioned the importance of using different strategies such as calendars and reminders to keep track of the activities they have to do during the week:

“I think I’m also pretty organized with my time, but it’s different because I don’t have like a specific schedule or something like that. In fact, I have lots of reminders on my cell phone. That’s also like a useful thing for me. If a teacher gives me a task today for the next week, I put a reminder today in order to do that today. So, next week I’m going to be free. It’s like a different perception of organization because I try to go in advance almost all the time” (Student 4. Focus Group Interview. November 21st, 2017).

No matter how students organize and manage their time, participants of this study seem to be aware of its importance and value in order to streamline their learning and academic results.

3.1.2 Planning and practicing

This theme has to do with how students plan and perform precise actions to enhance their learning process. In this particular case, planning is associated with study routines and timetables. Thus, students organizing their activities implies being able to cope with their assignments. However, they expressed that they do it to comply with their duties to their teacher and not for the sake of their learning process. In other words, students lack agency in their learning process. As stated by Lindgren and
McDaniel [7], agency takes place when learning experiences are directed by the learners themselves. Put differently, it must involve learners’ activity and initiative.

In relation to practice, participants of this study see it as absolutely necessary, given that their opportunities to practice are limited to class time as evidenced in the excerpt below:

“I think that at the university we don’t have the enough time to cover all the topics so we have a lot of things to study, so we have to go deeper by our own because I think it is hard to go deeper in a topic just in two hours, nor in four hours” (Student 3. Focus Group Interview. November 21st, 2017).

All things considered, practice is pivotal for significant improvement and it should not be forced by the teacher. When students determine what they require practice and do it consciously, their results are positive and successful. However, as Van Lier [8] suggests, the decision to practice a skill must come from the learner.

### Setting of learning goals and the creation of action plans

From a social cognitive perspective, Bandura [9] and Chunk [10] claim that self-regulated learners direct their learning process by setting challenging goals for themselves. The process of setting goals permits students to decide on what they want to achieve. With that understanding, they become aware of what they must focus on and improve. Goal setting allows students to enhance their academic performance, increase their motivation, and improve their self-confidence. Likewise, goal setting implies the creation of action plans, which include the steps to follow in order to accomplish their goals.

Participants in this study do not consider an action plan is necessary to overcome their weaknesses as expressed in the following comment:

“Maybe, not exactly an action plan, but for example if I know that I have a specific difficulty in something, I try to look for information about that in order to cover what I didn’t understand or what I need to reinforce, but not exactly an action plan or something like that” (Student 4. Focus Group Interview. November 21st, 2017).

Researchers observed that students ignore the importance of a formal action plan because they do not know how to do it and have not been taught. Participants need to learn what relevant action plans are and how to create them. Consequently, students do not plan formally; instead, they make decisions about their learning based on their immediate needs. That is why they spend more time trying to assimilate concepts, do not see significant progress in achieving their goals and as a consequence, feel disappointed with their learning process.

Professors also ponder over goal setting and action plan creation. One of the professors stated that being autonomous “means to be aware of the use of learning strategies, the establishment of goals, use of learning pathways” (Professor 1, Survey, Question 1). In the same vein, another professor claimed: “[being autonomous] allows students to set some objectives regarding their learning and take charge of their learning” (Professor 5, Survey, Question 1).

All in all, participants’ perceptions, beliefs, and behaviors towards self-regulation were revealed and researchers observed the importance of scheduling, planning, and organizing in the creation of student teachers’ learning route. The following section describes the second theme emerging from the data: the teacher educators’ role.

### Teacher Educators’ roles

In the development of this study, it was clear that in order to improve teacher education programs and their potential to develop innovative alternatives for learning, a key aspect to be considered is the role of the teacher educator. In this sense, Korthagen, Loughran, and Lunenberg [11] assert:

“Teacher educators not only have the role of supporting student teachers’ learning about teaching, but in so doing, through their own teaching, model the role of the teacher. In this respect, the teacher education profession is unique, differing from, say, doctors who teach medicine. During their teaching, doctors do not serve as role models for the actual practice of the profession i.e., they do not treat their students. Teacher educators, conversely, whether intentionally or not, teach their students as well as teach about teaching”.

Regarding the same theme, it is certain that prospective teachers perceive their professors as role models and professors help learners build their identities as teachers and determine their teaching
methods in their teaching practice. The information collected in this project allowed the identification of three main roles educators play in the development of self-regulated learning: the teacher educator as an example, the teacher educator as a facilitator, and the teacher educator as an autonomy builder (see Fig. 5).

![Figure 5. Self-Regulatory Behaviors (Image by Wendy Rey Cárdenas)](image)

3.2.1 Teacher educator as an example

In teacher education, as well as in any other level of education, the role of professors is crucial since they can be good or bad models of teaching practices. In the development of this study, students differentiated both types of role models. Students considered some professors as role models who supported their professional development since they were suitable examples of attitudes and behaviors. For students, having professors who strive for knowledge is motivating because they challenge themselves and their students to go beyond subject contents as seen in the student’s comment below:

“Sometimes I read books and I know that if I go to professor ‘X’ or ‘Y’ and I start talking with them, even if it’s not a university task, I will have that exchange of knowledge because they really care about their knowledge. You can see that they enjoy what they’re doing and that’s important” (Student 3. Focus Group Interview. November 21st, 2017).

In this respect, authors such as Wideen, Mayer-Smith, and Moon [12] support the latter idea stating that the processes in teacher education may be more important than the content provided to student teachers. Russell [13] backs this idea when he reflected on the way he teaches teachers: “How I teach IS the message”.

Along the same lines, some professors also emphasized the importance of fostering autonomous learning as a requirement for successful learning, “I’ve tried to promote autonomous learning among my students and I have used myself as an example, and I’ve told my students that it has helped me become a successful learner” (Professor 5. Survey).

On the other hand, Professors can also set a wrong example with their actions. The excerpt below exemplifies a student’s annoyance and disappointment when professors assign superficial tasks, do not plan or do not provide feedback.

“The teacher sometimes gives tasks just for covering time! For example, we have to read something and when we arrive, we never talk about what we read so it’s stupid to spend time doing something that we supposedly are going to discuss in class when the teacher didn’t even read and is not going to be able to give us some feedback” (Student 3. Focus Group Interview. November 21st, 2017).
3.2.2 Teacher educator as a facilitator

The data collected also observed that one of the roles teacher educators should play when guiding their students is that of a facilitator of learning. In other words, educators are in charge of facilitating the acquisition of knowledge and competences. Moreover, teachers as facilitators need to build a positive learning environment in which they direct the learning process by providing feedback and advice. One of the professors stated: "[in an autonomous learning environment] the teacher is only a facilitator, helper and a guide" (Professor 4. Survey, Question 3) as claimed in the Flipped Learning Network transforming teachers into ‘guides on the side’ instead of ‘sages on the stage’.

3.2.3 Teacher educator as an autonomy builder

According to La Ganza [14], it is undeniable that there is a direct relationship between professors’ autonomy and learners’ autonomy. Professors’ beliefs and practices on autonomy mold its development in learners. That is why professors must be autonomous themselves to teach student teachers to be autonomous as well and consequently student teachers will be able to foster autonomy in their future learners.

Both students and professors who participated in this study recognize the importance of autonomy building and the low levels of control over learning that students have when they are going start their higher education. Thereby, autonomy cannot be considered natural to students. They needed to be taught by their professors, which is supported by some of the information collected. As an example, one of the professors stated:

"I think autonomy is not something spontaneous and, in our context, it is a painstaking process that needs a guide from the very beginning, that is to say in elementary or high school" (Professor 2. Survey).

Moreover, another professor supports the former idea by emphasizing the need for training on how to become more autonomous learners:

"I apply strategies to promote autonomous learning in my classes. Those (students and teachers) who apply this type of learning require training to be counselors, to be creators of cognitive and metacognitive work-guides which will be very helpful depending on the students’ needs and interests" (Professor 1. Survey).

Researchers of this project, as professors in a teacher education program, understanding the relevance of autonomy, decided to include training on autonomous learning in the curriculum. For instance, some formats are used to help students visualize their thinking regarding self-regulatory behaviors (i.e. learning contracts, action plans, goal setting, etc.). There is explicit instruction on how to fill them out and track their progress throughout the semester. This way, students’ ability to self-regulate is enhanced.

4 CONCLUSIONS

Taking into account the research inquiry leading this study What are pre-service teachers’ perceptions, beliefs, and behaviors towards Self-Regulated learning in a teacher education program in Bogotá, Colombia? students’ understanding, assumptions and responses regarding self-regulation were revealed. Unexpectedly, the roles teacher educators played in building and strengthening students’ abilities to become autonomous learners were also unveiled.

The analysis of the data collected by different instruments displayed two major themes: Self-Regulatory Behaviors and the Teacher Educator’s role. Regarding the former, prior to starting an implementation of FL, we conclude it is necessary to train students on SRL for FL to work successfully in the context under study. In relation to the latter, teacher educators, as role models, should set an excellent example for their students.

Explicit training on self-regulatory behaviors such as time management, organization, planning, practicing, setting learning goals and the creation of action plans, is necessary since they constitute essential tools for learning and achieving academic success.

In relation to the role played by teacher educators, as role models they should enlighten and encourage students in their search for success. Thus, teacher educators need to be an example of life and professional growth for their students so that they support their students’ identity as future language teachers. This study shed light to four different roles: teacher educator as a role model, teacher educator
as a facilitator of learning, and teacher educator as an autonomy-builder. Each role proved to be relevant and supported by enough evidence from the participants in this study.

All in all, we consider the need for training learners on self-regulatory behaviors and the necessary transformation of the teacher educator’s role into professional educators to be a must for FL to be implemented successfully in a teacher education program such as the one under study.

ACKNOWLEDGEMENTS
Authors want to acknowledge students enrolled in the English Didactics class 2018-I, professors from the Spanish and Foreign Languages Program at Universidad Libre, Carolina Rodríguez-Buitrago from Institución Universitaria Colombo Americana - UNICA for her constant assistance, and Universidad Libre Bogotá for its financial support.

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