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The articulation between project based learning and the use of information and communication technologies in the foreign languaje teaching process

The point is not to show you can dazzle people with lots of digital wizardry, it is to show that you can use technology in thoughtful, well-planned ways to promote more effective learning (Joseph Shedd)

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ABSTRACT

This study aims to describe the effectiveness of the articulation between PBL (Project Based Learning) and the use of ICTs (Information and Communication Technologies) in the foreign language teaching, with students of the distance learning students at a public university, by developing mini projects and, at the same time, using technology as a strategy to facilitate their performance in their learning process. In order to know students' voices, an interview and a focus group were applied, with the objective of validating data. The analysis showed that

technology is an instrument to encourage students to work as a team and also to reflect upon topics which are rather taken for granted and that enable them to develop critical thinking as well. Three main categories emerged from this research: becoming a tech teacher; skills vs. fears towards PBL; and in-depth awareness. It was concluded that, even though PBL demands commitment and time from the student teacher, they are willing to integrate these strategies into their classes, as a method of nurturing their professional development.

Key words: Project-based-learning; integrating technology, problem- solving, awareness.

RESUMEN

El siguiente estudio tiene como objetivo describir la efectividad de la articulación entre el Aprendizaje basado en proyectos y el uso de las tecnologías de la información y la comunicación Tics en la enseñanza de la lengua extranjera (Inglés) con estudiantes de la modalidad a distancia de la Universidad Pedagógica y Tecnológica de Colombia, desarrollando mini proyectos y utilizando la tecnología a la vez como una estrategia para facilitarles su desempeño en su proceso de aprendizaje. Para conocer las voces de los estudiantes se aplicó una entrevista y para validar la información un grupo focal. El análisis mostró la tecnología es un instrumento que impulsa a los estudiantes a trabajar en equipo y también a reflexionar acerca de temas que rara vez son tenidos en cuenta y que les permite desarrollar el pensamiento crítico. Así es como emergen tres categorías: Convirtiéndose en un profesor tecnológico; habilidades vs miedos hacia el uso del aprendizaje basado en proyectos, y conciencia elevada. Se concluyó que aunque el aprendizaje basado en proyectos requiere tiempo y compromiso por parte del docente, los estudiantes están dispuestos a integrar estas estrategias en sus clases como una estrategia para alimentar su desarrollo profesional.

Palabras clave: Aprendizaje basado en proyectos; integración de la tecnología, solución de problemas, conciencia.

INTRODUCTION

At the present time, it is fundamental for teachers to include the use of technology in the classrooms, not just as a tool, but as part of the curriculum, we live in a society that is changing; a culture that every day is using more technology for doing most of its tasks.

Using technology does not only offer engaging opportunities for young students to acquire academic skills, it also teaches those students to associate screens with refined cognitive skills. It reinforces the idea that screens are more than just distraction machines so that early education should provide a foundation for growing critical thinkers. (Saphiro, 2014)

According to what has been mentioned above, the critical aspect is internally linked to (PBL), which engages students in life and gives them opportunities to reflect upon a project, encouraging them to work for a specific purpose. Also, alongside the process, students might discover the boundaries of using technology within the context of PBL and underpin their learning process and developing skills which will be needed in the future as professionals.

Furthermore, it is evident that learning through technology provides students with different tools, not just to practice knowledge, but to see learning as a fun, entertaining, and interactive process. They feel they are an active part of the learning procedure. For this reason, David Warlick said, “we need technology in every class and in every student and teacher’s hand because it is the pen and paper of our time, and it is the lens through which we experience much of our world” (as cited in Rao, 2012, p.1). In addition to that statement, teaching

and learning a foreign language is also a way to experience other perspectives, and different visions of how people perceive the world. That is why the implementation of technology in an EFL classroom requires more attention since it supports the process of learning and teaching a foreign language.

The idea that most students have when learning a foreign language is that they are empty vessels and that someone is responsible for their success in learning the language. But it is worthy to mention that when teachers exploit technology in their classrooms, students´ motivation increases, and students show more interest in classes where technology is used as and primary resource than those that use traditional ones. Richards and Renandya (2002) affirm that language teachers are exploring the potential the new technology has to offer to language learning. “We should not lose sight of the fact that is the teacher, not the technology, who determines the quality of the learning that takes place in the class room¨ (p. 361).

THEORETICAL FRAMEWORK

It is well known that the challenge most teachers face is to offer a different vision of what learning English means. In recent years humanity has experienced changes regarding technology and other aspects that cause our students to be attracted to other aspects different from a classroom. The lack of motivation and creativity are essential terms in order to gather students’ attention in the majority of contexts, but the question here is: How can teachers can accomplish this?

From this argument, the components of teaching English convey students to other worlds, and this is the case for what PBL through the use of ICTs. The first step is to clarify that “PBL focuses on a problem to be solved or a task to be developed. The single most important idea in solving problems and accomplishing tasks is that you build on your own previous work and on the prior work of others. When faced challenging problem or task, you use the knowledge, skills, and aids other people have developed, as well as your background, skills, and previous experiences. (Moursund, 2016).

According to this definition students come with different needs and struggles that they want to take away, but the perception of how the teacher handles the class is what they value. It allows them to build a bridge of affiliation and motivation in front of learning that, the opportunity for students to participate actively in the class is the vehicle through which teacher and students express different elements from their own culture, identity, beliefs, and feelings.

Project based learning is gaining popularity around the world. A growing number of educators on every continent recognize the need for new approaches to teaching and learning in the 21st century. (Larmer, 2015) Also, Bell (2010) points out that in a project-based learning classroom there is a monitor who provides students with a topic which they develop through research or project work for their individual or group learning. In this case, it is important to highlight that some students prefer working independently outside of class, however, they are in class, and they absolutely prefer working cooperatively.

On the other hand, during the last few years, there has been a substantial effort to include technology as a complement while teaching English. Indeed, the idea of going in-depth into being a “tech crack” is quite appealing to those who enjoy moving in different fields regarding teaching trends.

Likewise, the word ´technology´ carries along the burden of today´s society since it is present in almost every action of daily life: watching television, listening to a radio program, chatting with friends, playing video or phone games, or simply surfing on the internet. Undoubtedly,

technology helps to maintain interest in people's minds and since those ideas are eventually accepted as standard, the possibility of keeping them in isolation is less and less.

In recent days integrating technology and different approaches in education has become one of the cores of some institutions at any level. It allows context to build technological skills through the development of critical thinking, solving problems, or working cooperatively. When these processes take place in the classroom the opportunity to provide students a place to share their skills is worth it because they build their insights that will be discussed as long as the activity is being developed. No less important, the role of the teacher requires a strong linkage with real-world scenarios, so that it involves students being engaged and co-constructing efforts, with the purpose of moving form novice to active contributors. (Hung et al as quoted by Chan Lin, 2008)

Bearing those ideas in mind, the fact of linking PBL along with the use of technology has become part of the exercise when working with students who use technology for distance learning and the use of platforms and other tools that are very important for them. Long & Porter, (1985); Nunan (1992) mention that through collaboration and interaction around a computer, students teach each other to understand and solve problems collaboratively.

According to some discussions in different sessions, students consider that through the development of projects they might combine a set of processes that demand the integration of critical thinking as well. According to Elder, 2007, critical thinking offers concepts and principles that enable humans to analyze, assess, and improve thinking; they work diligently to develop the intellectual virtues of intellectual integrity, intellectual humility, intellectual civility, intellectual empathy, confidence in reason, and intellectual sense of justice.

That is why project-based learning plays an important role when working in different scenarios because as considered by Larmer, John. (2015), it has an unavoidable result: variation in quality. Project-based learning, like any worthwhile instructional method, requires time, thought, and careful planning to achieve quality. If PBL is not well developed, its reputation will suffer. Poorly designed and poorly executed projects can result in divested results, misdirected student energy, and failure to achieve learning goals.

Some projects might be "too loose," with students taking part in a variety of activities that do not add up to much beyond "fun" and a low-quality product. Hence, some teachers might simply use the socialization of a unit or the socialization of any activity and call that a project, which will fail to yield the promised benefits of PBL. The idea, in this case, is to take advantage of each topic and to lead them beyond simple completing a task, and instead using it as an excuse to dig into their critical thinking, problem-solving, working well with others and managing time and work effectively.

Another aspect to address, regarding the scope of PBL, comes from what it is called the "dessert projects" by Larmer (2015), which are hands-on activities that are efficiently completed with little planning, thought, or research. Every minute in the classroom is critical due to because of the lack of time in tutorial sessions. It is notable that the classrooms endorse them to assume a position even though they do not handle the second language correctly but they attempt to elucidate their points of view facing the most common issues in our context. More so they claim that perhaps it would be a better society if those environments had more importance in every classroom.

METHODOLOGY

The students involved in the study were university students (aged 23-38) who attend

Universidad Pedagógica y Tecnológica de Colombia in Chiquinquirá, Boyacá. They are required to take English for Secondary Education as a requirement in the sixth semester. The emphasis is not in English, but Math and Spanish. They study English as a complement in their professional development as elementary teachers. This study was developed from August to November, 2017. Students were organized in groups of 5-6 students with the aim of implementing the projects. The topics were mostly related to those that the curriculum establishes, with the idea to try to combine them with daily life situations as well as technology.

With the aim of integrating technology, students received instruction regarding tech tools that were useful to participate and develop every project. Although it was challenging for them to get access to computers and internet, because the majority live in a rural area, the tech room was equipped for them to practice. The project required an exhaustive search of aspects relevant to complete the goal. They also used the computers to prepare their material and to nurture the ideas with the other participants of the same group using the tool real-time board.

They also learned how to create games that are very common in our context such as *Battleship the Never have you ever or the taxi* games using Adobe Flash and PowerPoint. Because so few students had access to the internet in their schools, it was decided to use strategies that did not have to be managed through the internet.

RESULTS

Bearing in mind that the research aimed at describing what PBL methodology, including that technology, reveals in a group of students of the Distance Modality at Universidad Pedagógica y Tecnológica de Colombia, this chapter highlights the most relevant aspects that emerged alongside the development of the study.

Although it was difficult for students at the beginning to handle technology, every session they showed interest in using it for along each project. For instance, the first project was called a game *Battleship*. In this project students worked as a team with the aim of solving brainteasers related to social issues. This was developed through the program Real Time Board. They then had to present different solutions while playing the game *Battleship.*

It is significant to highlight the students' participation in the discussion of the games rules because, for them it was necessary to add additional rules that made the game, in the words of students fairer. This project allowed students to think about some critical points for the society. There were students who claimed that when they were children, it was taboo to mention topics such as politics or religion. Finally, students were challenged to play the game *Never Have you ever*; taking as reference topics about politics, social, economic, religious and cultural concerns that they have faced at a specific time in their lives.

This stage was very interesting because, at first sight, it looked as a simple game but as soon as the game began students were involved in taking a risk telling the truth; the truth that sometimes is seen a prejudiced when spoken in front of other people. For instance, a student answered the question: Never have you ever sold your vote? The participant explained why and the other classmates attempted to help ease his feelings of guilt even though they disagree, both sides tried to mediate the situation as a team.

The first part of the qualitative data was gathered from students' voices through interviews and a focus group. The interviews were analyzed at the completion of the study. To validate data the focus group was developed after the three last tutorial sessions. The information was analyzed to set commonalities using preliminary patterns which provided some initial categories.

This descriptive analysis brought three main categories: Becoming a tech teacher, Skills vs. fears towards PBL and In-depth awareness.

BECOMING A TECH TEACHER

The role of being a teacher with several skills increases daily. In some contexts, attractive teachers are those who depict the boundaries that sometimes are missing due to the policies of the school. For instance, one of the leading discussions in the game *Battleship* was about how considerably teachers are involved in ICTs training and the lack of support from the government regarding limited resources and connectivity.

From students' perspectives, to develop the process of becoming familiar with technology is crucial, on the one hand, they perceived the project as "fun" and "enjoyable" and not as a requirement to be fulfilled and, on the other hand, they discovered that it brought benefits for their professional development and the teaching practice itself.

SKILLS VS. FEARS TOWARDS PBL

Even though some students expressed anxiety at the moment of using technology while developing the projects, the arrangement of a set of internal desires endorsed them to achieve the goals. According to Chen and McGrath (2003), hypermedia tools could indeed sustain students' motivation and cognitive engagement. The use of a computer can enhance students' organizational skills, connect them with a real audience and foster a better understanding of the World Wide Web (Isbell 2005). (As quoted by ChanLin,L, L. 2008).

Students gradually showed interest how they were engaged in the development of the projects (SI #225). "Every time I come to the classroom, I looked forward to challenging myself on both sites: using technology while developing the project. As a result I gained strategies for my teaching practice and also learned to work cooperatively. Because of the distance modality it was hard to meet my partners we had to work individually at home".

IN-DEPTH AWARENESS

A means to facilitate the learning process for students led by the number of meaningful opportunities created by the teacher. The success of their attempt is, of course, dependent on the learners' willing cooperation to make use of the conditions that have been created. (Kumaravadivelu. 2003, p 44)

Following these lines, this type of learners in Barge's (2010) words, can act positively towards their learning due to the presence of an atmosphere where teachers can serve as their learning and decision-making partner. (As quoted by Marwan, A. 2015) "I *am really impressed about the way how the teacher explains the use of tech tools, it looks easy and it makes me feel comfortable in trying the exercise. Besides, I am aware that I am not a fan of technology because of my age but it is amazing how we combine skills with my colleagues, one working on technology, the other one reflects, the other one writes and the product is just remarkable. (FG#358)*

CONCLUSIONS

This research aims to implement PBL through the use of technology in an English class at a public university. It was evidenced that for most of the students to play a role within a group makes them build awareness of the responsibility that working as a team holds. The correlation between PBL and the use of technology lies in the construction of a bridge in which teachers and students attempt to discover skills and boundaries that, in some cases, are missing because of the resistance that some teachers have towards the use of technology in their classrooms.

Another vital aspect to address is motivation. As stated by Marwan (2015) PBL is not just a set of teaching approaches which comprise planning, developing, reporting and assessing. In other words, its application needs to consider other influential factors such as learners' motivation, language background and confidence level.

Lastly, teachers should bear in mind that occasionally, creating large or ambitious projects may not fit in all the settings. That it is to say that the successful of teaching does not imply a good performance by the teacher alone but the students' performance in the tasks is evidence that there is an adequate component that is being notoriously effective in the classroom. (Harmer, 2005).

In conclusion, working with PBL is always a challenge to underpin students' performance in the classroom and it enlightens the perspective of having students developing interpersonal and technological skills as well as learning a foreign language.

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