Just in Time Teaching: A Strategy to Encourage Students' Engagement

"Justo antes del tiempo de enseñar": una estrategia para fomentar el compromiso de los estudiantes*

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This qualitative research study was carried out with two groups of students at a beginner English level; the students were in the fourth semester of psychology at a Colombian university. The overall aim of this action research study was to analyze learners' perceptions of the strategy *Just in Time Teaching* in a web 2.0. The data were collected through students' artifacts, journals, and interviews. Results of this study indicate that students perceived the strategy of *Just in Time Teaching* as a means to engage them in the designed activities; it was manifested by investing time to extend knowledge and promoting participation by reducing the affective filter.

Key words: Just in Time Teaching, technology in education, web 2.0.

Este estudio de investigación cualitativa fue realizado con dos grupos de estudiantes principiantes de inglés, quienes se encontraban en cuarto semestre de psicología en una universidad colombiana. El objetivo general de esta investigación acción fue la de analizar las percepciones de los estudiantes sobre el uso de la estrategia denominada *justo antes del tiempo de enseñar* en una página web 2.0. Los datos fueron obtenidos por medio de los trabajos de los estudiantes, diarios y entrevistas. Los resultados de esta investigación indican que los estudiantes se sintieron interesados por las actividades diseñadas. Este inte-

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rés se evidenció a través de la inversión de tiempo para ampliar información y de la generación de participación por medio de la reducción del filtro afectivo.

Palabras clave: justo antes del tiempo de enseñar, tecnología en la educación, web 2.0.

Introduction

This research project was carried out with two groups of students who were in the fourth semester of psychology at Universidad de Cundinamarca, a public university in Colombia. Students from this program take English classes for academic purposes; the topics of the lessons are connected with the discipline they are studying. Every class starts with an academic reading related to psychology. Observations during previous sessions with the students showed that the time was limited to explore the readings because there are only two hours per week of English class. The academic readings demand time, thus, it was difficult to fully explore the texts. Besides, it was perceived that learners did not invest enough time in the texts before class; on many occasions, the teacher discovered them doing the homework, which was mainly connected to vocabulary, some minutes before the lessons started. As a result, during the classes, there was no active participation and the readings were barely explored. These concerns led the teacher to consider a strategy which could involve learners and allow them to invest time in the readings outside the classroom hours, thus the time of the class might be better optimized and the readings better interpreted.

The strategy called *Just in Time Teaching* (JiTT) seems to be a good method to engage learners before the class is initiated. According to Novak (2007), JiTT happens before lesson hours, through activities online where students can share their knowledge with the teacher and peers; the instructor may take advantage of this previous knowledge to better prepare the classes.

This strategy has been applied during the last decade in different areas of knowledge and is starting to be applied in the language field. Studies have demonstrated that it has good results in the settings in which it has been adapted. Schuller, DaRosa, and Crandall (2015) carried out a study using the JiTT strategy. The purpose of this study was to assess the use of JiTT in a residency program of medicine. During the years 2010-2011, JiTT was piloted in 31 sessions at Northwestern University (USA) in a general surgery residency program. Participants should complete web-based study questions before weekly specialty topic sessions. Responses were examined by faculty members "just in time" to adapt session content to residents' learning needs. Participants completed surveys assessing their perceptions of JiTT. In the findings, it is manifested that more than 70% of resident survey respondents indicated that JiTT aided in the learning of key points. At least 90% of faculty survey respondents reported positive perceptions of aspects of the JiTT strategy. The authors concluded that the use of JiTT increased learner participation, learner retention, and the

amount of learner-centered time. JiTT represented an effective approach for meaningful and active learning in the program.

Abreu and Knouse (2014) developed a study with the purpose of integrating the JiTT strategy in an advanced Spanish as a foreign language class taught at a postsecondary institution; during this study, participants used the JiTT strategy with activities such as warm-ups and puzzles. The warm-ups ensured that students had prepared the material they would cover for class, usually reading assignments. Puzzles helped the teacher check that the students had understood the class material. In the findings, it is declared that with the use of the JiTT strategy, students were exposed to terminology previous to lectures; therefore, they were more prepared for discussions when they entered the classroom. Moreover, students' responses allowed the teacher to gather detailed information connected to the level of each learner in regard to comprehension and class preparation.

Böttcher, Kämper, and Thurner (2015) reported an experience about the use of JiTT during two semesters. The authors analyzed the effectiveness of this teaching method. More precisely, they wanted to analyze whether the results from students' achievement on their final exams correlated to the fact that they had participated in the JiTT-exercises. In addition, the authors evaluated the students' opinions as to satisfaction with this teaching method. The analysis showed that the authors could not prove a significant correlation between participation in JiTT and results on final exams. However, students manifested their interest in working with the JiTT approach in future classes.

Therefore, some studies related to the implementation of the JiTT strategy have pinpointed good results in the settings in which it has been applied; the author of this study decided that the implementation of this strategy could be a good alternative for the context in which the project was applied because students receive only two hours of English class per week and probably this method might help learners engage and, as a result, invest time in their reading processes. This study could also be a good opportunity to explore students' perceptions of the use of JiTT.

Theoretical Framework

What is Just-in-Time Teaching (JiTT)?

JiTT is a pedagogical technique that emerged in the 1990s. It was first implemented in a physics course where the instructor wanted to find a different way to meet students' learning needs (Novak, 2007). During that time there was a concern among professors related to students' mastery of key concepts, thus professors began to evaluate the quality of the pedagogical techniques used in the classroom and started to explore new strategies to be implemented in the lessons.

Some new learner-centered strategies emerged to replace traditional lectures; one of those strategies was JiTT. This pedagogical technique was designed based on the constructivism theory. Constructivism states that all learners have background knowledge and they use it to generate new information. The initiators of JiTT considered the students' background knowledge extremely important in enriching the learning course material (Guertin, Zappe, & Kim, 2007). The authors of this strategy took into account that a student's learning process is facilitated when there is active participation. They wanted students to be engaged, prepared for class discussions, motivated during and outside class time, and be curious about course content. Likewise, the authors of this strategy used web-based technology in order to foster communication between students and teachers when they were not in class hours. This type of communication could provide teachers valuable information related to students' performances and concerns about classroom topics.

How Does JiTT Work?

The JiTT strategy includes a pre-class activity developed through a web-based exercise. There are different types of activities and they depend on the specific topic of study. According to Novak (2007), the two most integral forms of JiTT exercises are warm-ups (designed to introduce new concepts and stimulate class discussion) and puzzles (designed to integrate various concepts and to assess student learning following their working with material). The purpose of the activities is to activate students' previous knowledge. Students should complete the proposed activities before class, in a learning management system (LMS), or as in the case of this study, through a web 2.0 tool. The teacher receives the answers to the activities just in time to address specific misconceptions, gaps in learning, and students' concerns about content.

Technology in Education

Technology plays an important role in the educational field. According to Deitering and Huston (2004), technology in education goes beyond the delivery of information and lies instead in the power to create learner-centered educational spaces. According to Papert (1993), technology is a resource and catalyst for socially constructed knowledge and understanding. Based on these definitions, technology in education is a tool for teachers and learners to support and mediate the learning process. If it is used properly it could generate learner-centered educational spaces in which learners can interact, negotiate meaning, and learn from each other. In this study, students developed their activities on a web 2.0 tool named *Padlet*; it is pertinent to mention that this instrument allows users to create a wall where they have the option of sharing images, videos, links, and audio. In this research, the teacher created a wall for each session in which JiTT was applied; therefore, learners could publish

their activities previous to class such as videos and paragraphs; as it was only one wall for all the participants, students were able to verify the publications from their peers on this web 2.0 tool. The teacher could observe all the students' answers towards the suggested activities and she prepared the classes based on the answers posted on the website. Besides, with the use of *Padlet*, the teacher could remind the students that they had time to participate; also, some learners wrote through this tool to ask for some extra time in order to publish their comments or videos. Hence, it was used simultaneously as a tool of communication which facilitated the interaction between students and teachers when they were not in class hours.

Web 2.0. Web 2.0 is a term used to describe a series of websites and applications which allows users to create and share information. According to Vallance, Vallance, and Matsui (2009), the use of web 2.0 tools can promote a constructivist approach to language learning and teaching as learners focus on constructing knowledge rather than receiving it; they are able to think, understand, analyze, and apply information and not just memorize. Students become active, not passive learners. However, Cote Parra (2015) indicates that in Colombia there have been only a small number of studies connected to the use of web 2.0 tools in educational settings. Nevertheless, there have been some significant contributions as the study carried out by Espitia and Clavijo Olarte (2011), which reported on a "teacher education experience in which tools such as blogs, learning software, e-mail, forums and internet-based tools were used to improve EFL learning and teaching" (p. 29); or some other studies which have reported on implementing other web 2.0 tools, such as *StoryBird* (Herrera, 2013). The main purpose of this research was to present "how the use of Collaborative Writing (CW) through *StoryBird*, a web 2.0 tool which promotes the creation of stories collaboratively, led two groups of learners to improve certain specific aspects of their writing skill" (p. 166). However, it is necessary to continue exploring more possibilities when using web 2.0 tools which could contribute to improving the competences in the target language or the pedagogies applied in the educational settings.

Research Design

This study was aimed at analyzing learners' perceptions towards the use of the JiTT strategy in a web 2.0 and the question that guided the study was: What are the perceptions of students of a beginner English level on the use of the JiTT strategy activities in a web 2.0? In the following lines, there will be a description of the students who participated in this study.

Participants

The 23 participants of this study ranged from 19 to 25 years old. They were psychology students in their fourth semester in a public university. The criterion for selecting the participants in this study was *convenience sampling*. According to Maxwell (1999) "convenience

sampling is simply based on whoever is available or whoever volunteers to participate in the study" (p. 97). This criterion for selection was chosen because it was believed that by having volunteer students, they could collaborate actively in the process of this research.

Type of Study

This study was developed through the qualitative action research approach. According to Freeman (1998), qualitative methodology is "a study in which the researchers do not set out to test a hypothesis, but rather to observe what is present with their focus, and consequently with the data, free to vary during the course of the observation" (p. 11). In this sense, qualitative methodology fits this research because this study aimed at analyzing the perceptions of students on the use of the JiTT strategy activities in a web 2.0, rather than testing any hypothesis.

Data Collection

In order to answer the research question that guided this study, the following instruments were used: students' artifacts (participants' productions on the web 2.0 *Padlet*), semi-structured interviews, and journals.

Students' artifacts. According to Holly, Arhar, and Kasten (2004) saving samples of work produced over time could be useful; in this study, they were convenient in order to triangulate the information manifested by the participants in the journals and interviews with the students' productions on the web 2.0 *Padlet*.

Semi-structured interview. Interviews are applied in action research in order to understand the perspectives of students or teachers. Elliot (1993) indicates that the interview is a good way of finding out what the situation looks like from others' points of view. I carried out a semi- structured interview between weeks 12 and 13 of this study (see Appendix 1).

Journals. Lankshear and Knobel (2004) define journals as "data that participants are asked to write in order to collect their personal insights and reflections on an event, practice, concept, phenomenon, and so on" (p. 36). In this research, they were applied between weeks 7 and 8 (see Appendix 2).

Implementation

This study was carried out with two groups of psychology students who were in their fourth semester at Universidad de Cundinamarca; the implementation was developed in three months. Students from this program have two hours of English class per week, and it is expected that they develop two hours of autonomous work at home. The classes are designed to discuss academic readings related to the psychology field. Before the implementation of

the JiTT strategy, the purpose of this technique was explained to the participants, as suggested by Camp, Middendorf, and Subiño Sullivan (2010), because it could be new to them. Learners were told that in order to have better knowledge of the readings that would be discussed in the classes, some activities should be developed before the lessons started. The teacher clarified to the learners that they should participate by having a good time before the class started due to the fact that based on their responses, she could prepare the lessons. Thus, the teacher and the students reached the agreement of delivering the previous activities two or three days before the class started. Besides, the teacher told the students that the activities would be evaluated in terms of effort and completeness. Therefore, students were aware of the purpose of JiTT and how it could be implemented.

Taking into account the suggested readings for the fourth semester of psychology, activities were designed on *Padlet*. The activities aimed at exploring students' previous knowledge before the class meeting. Each week students worked on a question related to the academic reading that would be discussed in class. Table 1 shows a summary of the activities.

Table 1. Activities Developed Before Class

Topic	Question	Type of activity	Link to the activity
Bipolar disorder	How are Colombians affected by bipolar disorders?	Paragraph (Individual work)	http://es.padlet.com/leavethemessagetocupita/ybbsp3fyzk6k http://es.padlet.com/cupita83/basiaiconecon
Depression	How is depression manifested?	Video (Group work)	http://es.padlet.com/leavethemessagetocupita/1jmb6odzjglh http://es.padlet.com/leavethemessagetocupita/6sesshl2g6sw
Personality change	Can personality change?	Chart (Individual work)	http://es.padlet.com/leavethemessagetocupita/5b9pijm5cxo1 http://es.padlet.com/leavethemessagetocupita/xcn346c7mvu
Internet addiction	How are we affected by internet addiction?	Video (Group work)	http://es.padlet.com/leavethemessagetocupita/fm9a5qj7qkko http://es.padlet.com/leavethemessagetocupita/ckqa1dc15br9

As mentioned before, the activities were developed two or three days before the class meeting. This allowed the teacher to have time to read the students' answers and prepare the

class based on their responses. Taking into account the students' answers on *Padlet*, the teacher designed the activities for the classes. For instance, in the session about bipolar disorders, students' answers in the pre-class activities were useful to compare the data they found about bipolar disorders in Colombia and the data presented in the academic reading for that session. In the class of depression, students' videos were useful to identify the symptoms of depression explained in the academic reading. During the lesson of personality change, students' answers gave the opportunity to create a debate. In the session of internet addiction, students displayed their videos and compared them with the cases presented in the academic reading for that lesson. In short, pre-class activities gave the teacher material to prepare more relevant lessons. Figure 1 describes the steps carried out in this project through JiTT.
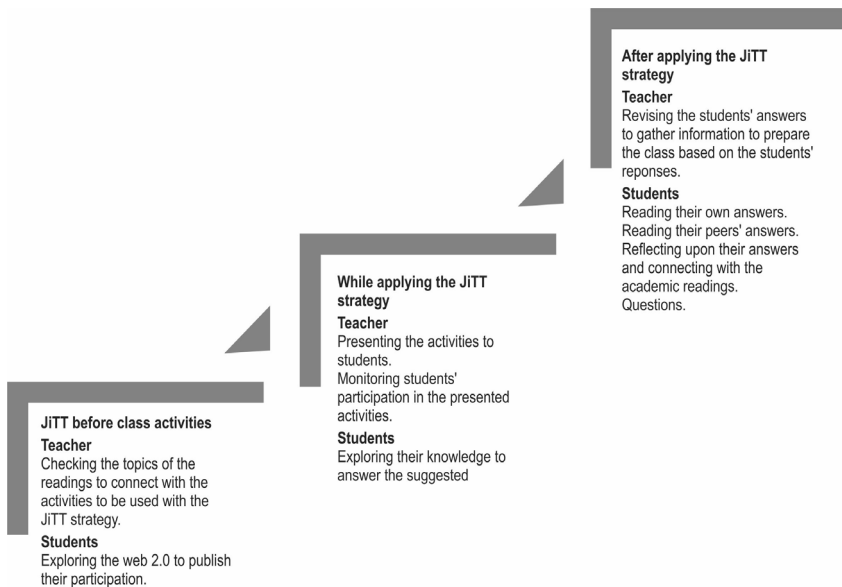
After applying the JiTT strategy
Teacher
Revising the students' answers to gather information to prepare the class based on the students' reponses.
Students
Reading their own answers.
Reading their peers' answers.
Reflecting upon their answers and connecting with the academic readings.
Questions.

While applying the JiTT strategy
Teacher
Presenting the activities to students.
Monitoring students' participation in the presented activities.
Students
Exploring their knowledge to answer the suggested

JiTT before class activities
Teacher
Checking the topics of the readings to connect with the activities to be used with the JiTT strategy.
Students
Exploring the web 2.0 to publish their participation.

Figure 1. Steps Applied Through the JiTT Strategy

Data Analysis

The data analysis of this project is based on the grounded theory approach. According to Corbin and Strauss (2008), it refers to a theory derived inductively from data systematically gathered and analyzed through a research process to discover categories, concepts, and properties and their interrelationships. This approach was used in this study because the

researcher considered it an appropriate method to analyze students' perceptions of the use of JiTT activities in a web 2.0. This approach allowed the researcher to compare and contrast data obtained with the theory reviewed during the research project. After a journey of systematic analysis, the researcher identified the following category: Creating Engagement. This category was manifested through two actions: *Investing time to extend knowledge*, and *activating participation by reducing the affective filter*.

Creating Engagement

Engagement has been a topic of interest for many academic experts and for the educational field. Educators know that engagement plays an important role in the learning process. In fact, there has been ample research on engagement in the education field, but it has been difficult to present a unique definition of it.

Schaufeli and Bakker (2003) state that students' engagement focus on three areas: behavioral engagement, emotional engagement, and cognitive engagement. Behavioral engagement covers academic involvement and learning tasks. Emotional engagement includes attitude towards instructors and interests. Cognitive engagement consists of motivation and effort.

According to Finn and Rock (1997),

[Engagement] implies psychological and behavioral characteristics. Psychologically, engaged learners are intrinsically motivated by curiosity, interest, and enjoyment, and are likely to want to achieve their own intellectual or personal goals. In addition, the engaged child demonstrates the behaviors of concentration, investment, enthusiasm, and effort. (p. 226)

Based on the previous definitions, the author of this paper describes engagement as students' interest, enjoyment, and enthusiasm towards proposed activities. Thus, engagement could facilitate the learning process. In this study, learners manifested engagement through some specific actions as: (a) investing time to extend knowledge and (b) activating participation by reducing the affective filter. Participants pointed out that with the use of the JiTT strategy, they had the possibility of investing time to look for information related to their interests and share it with their classmates. Moreover, students indicated that through the JiTT strategy, they could organize their ideas before class and as a result they felt more confident to participate actively in the lessons.

The results of this study are connected, in regard to participation, to the findings presented by Schuller et al. (2015); they indicated that with the use of the JiTT strategy students increased the retention of concepts and consequently improved participation in the sessions. Therefore, the previous activities through the use of JiTT, in the before mentioned study and in this project, helped learners prepare for the lessons which could facilitate students' participation in the activities in the classroom and as a result to be engaged in their

learning processes. In the following lines, there will be a description of the actions that were connected to engagement in this study.

Investing time to extend knowledge. The participants of this study engaged in questions before the class meeting. These questions were connected to the topic of the class. It was observed that students found new information and in some cases tried to extend the information through different references, as illustrated in the excerpt shown in Figure 2.
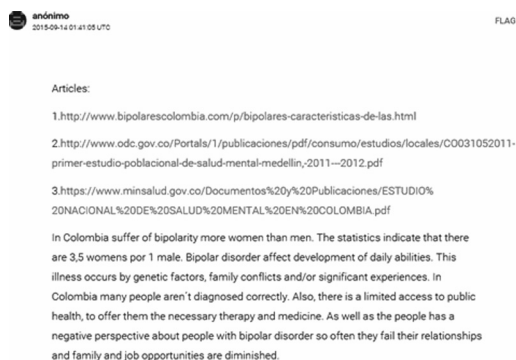

Figure 2. Student's Artifact: Participant 3 (Sept. 14th, 2015)

The sample in Figure 2 illustrates how Participant 3 answered the question: How are Colombians affected by bi-polar disorders? This student found three sources of information then summarized the information in a concrete paragraph. This participant indicated in the interview conducted at the end of this research that she felt a desire to look for more information, as illustrated in the following excerpt:[1]

> I have never investigated about the problem of bipolar disorder in our country, with these activities, we investigate for the task, but we also investigate to learn more about the topic. (Oct. 20th, 2015)

Participant 3 manifested that she sought information, not only for the task itself, but to learn more about the topic. In this sense, the participant invested more time to acquire more knowledge about the topic; thus, she could find a good opportunity to increase her academic capital. According to Kramsch (2013), if learners invest in a language, they do so with the understanding that they will acquire a wider range of symbolic and material resources which

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[1]   The excerpts in this article have been translated from Spanish by the author.

will, in turn, increase the value of their cultural capital and social power. In this study, learners invested time in extending information because they found a possibility, through this type of strategy, to get more information that was connected to their field of knowledge.

Furthermore, students manifested that with the use of the JiTT strategy, they could have the option of investing time to search for information and share it with their classmates as illustrated in the following excerpts:

> The activities before class are very dynamic, with this strategy, we have time to verify the topics deeper, because we can check information in different sources such as videos and articles; we can see our participation but also what our classmates have published, thus we can arrive to class more prepared and with a clear idea of the theme of the lesson. (Participant 8's journal. Oct. 20th, 2015)

> The activities previous to class are a good support. I have the possibility to search information about the topic and share with the classmates our activities. (Participant 7's journal. Oct. 20th, 2015)

As mentioned in the earlier sections, learners participated in the activities previous to class through a web 2.0 tool named *Padlet*. The participants of this study expressed their opinions on a wall and inserted their comments accompanied by audio visual aids. They had the option of publishing their post and simultaneously seeing what their peers had published. It is likely that through the use of the JiTT strategy, learners were able to engage in a community of practice which led them to invest time in order to share their findings with their peers. According to Wenger, McDermott, and Snyder (2002), communities of practice are "groups of people who share a concern, a set of problems, or a passion about a topic, and who deepen their knowledge and expertise in this area by interacting on an ongoing basis" (p. 4). Thus, with the JiTT strategy, learners could have the opportunity of building a community of practice where they would be able to meet, invest time, and practice topics beyond the classroom that were appealing to them; such an action might be beneficial for the learners to increase their knowledge about the topics of their academic field and to practice the linguistic skills outside the class hours.

Activating participation by reducing the affective filter. According to Weimer (2011), there are many benefits when students participate in class. For instance, participation adds interest to the class; it is difficult to maintain students' attention when they only listen to the teacher. When students participate, it helps them to hear another voice or another point of view. Besides, when the students participate, the teacher receives feedback on the lesson; instructors can check the understanding of a topic and, as a result, it is possible to help the students correct what they have not got right or do not see quite clearly. Moreover, participation can encourage creating dialogue among and between students; learners can comment on what another has said or it can be a pair discussing a specific topic. Thus, participation plays an important role in the learning processes.

In this study, learners felt that the activities done before class helped them get more information and organize their ideas, and they felt more confident in class sessions so they could participate actively. This is shown in the following excerpts:

> I consider that the previous activities are really important and I see them positively, due to the fact that when we arrive to class we have already gotten relevant information to participate. (Participant 5's journal. Sept. 24th, 2015)

> The activities are functional; we read and develop activities related to the topic before the class, so we can participate actively during the class. (Participant 9's journal. Sept. 24th, 2015)

> I believe that the previous activities to the classes are so fruitful and they motivate us. They allow us to arrive to class with a clear idea about the topic of the class, thus I can feel better prepared to participate. (Participant 15's journal. Sept. 21st, 2015)

Therefore, the use of the JiTT strategy allowed learners to feel more prepared in content and vocabulary which may have helped them decrease their anxiety and participate more during classes. Consequently, learners may reduce their affective filter and as a result, they may feel more confident to participate. The affective filter is defined as "a type of psychological obstacle that inhibits language learners from receiving available comprehensible input completely" (Krashen, 1981, p. 33). Krashen declares that there are some affective factors which could determine the learners' language involvement. The affective factors can embrace some types of emotions, such as motivation, self-confidence, and anxiety, among others, in the process of acquiring a second language. Negative emotions could prevent learners from processing the language input; on the contrary, positive emotions can promote the efficiency of the process.

Accordingly, it could be said that the affective filter plays an important role in the process of acquiring a second language; if there is a reduction of negative emotions and an increase of positive emotions, learners could feel less stressed and more confident to express their ideas in class; thus, the process of learning another language might be much easier. In this study, learners manifested that the activities done previous to class through the JiTT strategy allowed them to be more prepared for the lesson due to the fact that they could explore the topic of the class before it started. As a result, the participants of this study felt more confident to express their ideas and participate eagerly in class. Then, it can be argued that the use of the JiTT strategy allowed learners to reduce their affective filter.

Conclusions

The aim of this study was to analyze learners' perceptions of the use of the JiTT strategy activities in a web 2.0. The results of this research indicate that through the JiTT strategy, students were engaged in the designed activities.

Encouraging students' engagement can be a challenge; teachers focus on different types of strategies in the classroom in order to activate learners' interest towards the activities. However, in certain moments, teachers could feel that learners do not get involved easily. There can be several reasons for the lack of engagement in students, but it is not the concern that this author wants to refer to in these lines. The researcher would like to mention some significant characteristics related to engagement based on the findings of the study.

According to the results, students' engagement was revealed when they invested time in the designed activities through the use of the JiTT strategy; with the use of this technique learners were able to invest time to increase their cultural capital based on topics that were appealing to them. Moreover, they could reduce their affective filter because they felt that the information they found before class gave them elements to participate with more confidence during the class sessions. Therefore, engagement was engendered before the lesson. Probably, if we as teachers apply strategies before the lessons, we can generate more options to foster students' engagement and, as a result, the learning process might be facilitated.

In regard to the application of the JiTT strategy, it could be said that it was totally new for the participants. This was not only because they needed to develop the activities before class, it was also because they indicated that they had never worked with a strategy that was connected with the use of technology as it was implemented in this study; in spite of the fact that the participants of this research are young learners who could be interested in the technological world. They manifested that it might be interesting to work in the English classes and in other subjects with strategies related to technology. Consequently, we as teachers should consider the role of ICTs in the classrooms as a mediating tool which could reshape new ways of teaching and communicating with the students in this globalized world.

Implications and Suggestions for Further Research

The JiTT strategy might be a new style of learning for students, thus it is advisable to present to them at the beginning of its implementation the purpose of the strategy and how it works, so they can have a good understanding about this technique. Besides, it is important to mention that this method requires time for teachers to prepare classes. According to the theory, when using JiTT, students' responses should be delivered two or three hours before the class. In this study, at the beginning of the application, the agreement that the activities should be done by the learners two or three days before the class meeting was established with them so the teacher could have time to read their responses (in some cases have time to remind students that they still had time to participate in the suggested activities).

On the other hand, it would be worth mentioning that with the JiTT strategy the participants of this study were able to integrate information that they had found before the class with the readings discussed in the lessons. Consequently, they could compare and

contrast information which is beneficial for starting the process of critical reading. In further research, it would be interesting to explore deeper how students might develop their reading skills through the use of the JiTT strategy.

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Appendix 1: Interview Questions

Have you seen something positive in the activities that are developed before class?

Have you seen something negative in the activities that are developed before class?

Can you mention something to improve the methodology that we are using (activities before class)?

Have you participated in all the activities?

Which activities did you like the most and the least?

Was it easy for you to participate in the activities before class? Explain.

Appendix 2: Journal

Dear student, the purpose of this journal is to know what your opinion is about the strategy *Just in Time Teaching* that we are using in our classes. Please, answer the following questions from an objective point of view.

How do you feel about the activities previous to class? Please, explain your answer.

Do you consider that the activities previous to class can have an impact on the classes? Please, explain.

Do you have any positive comment related to the strategy *Just in Time Teaching*? Explain.

Do you have any negative comment related to the strategy *Just in Time Teaching*? Explain.

Please, feel free to write any suggestion.