

## ENTREPRENEUR TEACHING EXPERIENCE: APPLYING MATERIAL DESIGN PRINCIPLES IN AN INNOVATION EXPERIENCE WITH THE UNITED NATIONS DEVELOPMENT PROGRAMME

## EXPERIENCIA DE ENSEÑANZA CON EMPRENDEDORES: APLICACIÓN DE LOS PRINCIPIOS DE DISEÑO DE MATERIALES EN UNA EXPERIENCIA DE INNOVACIÓN CON EL PROGRAMA DE LAS NACIONES UNIDAS PARA EL DESARROLLO

**Lizeth Vergara Cabarcas.** Estudiante de la Maestría en Enseñanza del Inglés como Lengua Extranjera, Universidad Internacional Iberoamericana. Especialista en Enseñanza del Idioma Inglés y Licenciada en Educación Básica con énfasis en inglés, Fundación Universitaria Colombo Internacional (Uicolombo). Docente e Investigadora

**Lewis Polo Espinosa.** Licenciado en Educación con Énfasis en inglés, Uicolombo. Economista, Universidad de Cartagena. Becario Martin Luther King Jr. (2014). Becario Study of the U.S. Institutes for Student Leaders (2015). Pasante Banco de la República (2016). Integrante del semillero de investigación Interculturalidad y Educación, Fundación Universitaria Colombo Internacional (Uicolombo).

Recibido 12/07/2017 – Aceptado 28/09/2017

**Abstract:** This experience reveals a case study where a group of students from a Bachelor of Science in Education supported a group of entrepreneurs with lack of pedagogical and material knowledge basis with their product called “La caja sorpresa”. The objective was to engage students in literacy activities, through the design and implementation of a set of pedagogical and material basis such as principles, techniques, and strategies in the teaching process. In order to achieve this goal, it was necessary the financial support from the United Nations Development Programme (UNDP) and South Korean government in order to develop a proposal to help the entrepreneurs. The main result was the necessity that the entrepreneurs apply approaches such as telling stories and scaffolding, with its strategies and techniques respectively to improve students' motivation towards literacy.

**Keywords:** literacy, telling stories, scaffolding, innovation

**Resumen:** Esta experiencia muestra un caso de estudio en el que un grupo de estudiantes de una Licenciatura en Ciencias en Educación apoyó a un grupo de empresarios carentes de conocimientos pedagógicos y de diseño de materiales con un producto diseñado por ellos llamado “La caja sorpresa”. El objetivo era involucrar a los estudiantes en actividades de alfabetización, a través del diseño e implementación de un conjunto de materiales pedagógicos como principios, técnicas y estrategias en el proceso de enseñanza. Para lograr este objetivo, fue necesario el apoyo financiero del Programa de las Naciones Unidas para el Desarrollo (PNUD) y el gobierno de Corea del Sur para desarrollar una propuesta para ayudar a los empresarios. Los resultados dejaron en evidencia la necesidad de que los empresarios apliquen enfoques tales como contar historias y andamiaje, con sus estrategias y técnicas, respectivamente, para mejorar la motivación de los estudiantes respecto a la alfabetización.

**Palabras claves:** Alfabetización, contar historias, andamiaje, innovación

## Introduction

Literacy is a term whose definition has changed based on the society development. UNESCO (1957) stated that literacy is the ability that a person has to read and write, then UNESCO (2008) added to the definition: the fact that a person also has to be engaged in all those activities in which literacy is required for effective functioning of his group and community, and this definition was used by Stokes (1998) claiming that literacy occurs while children and teenagers interact with others within their communities.

Nonetheless, nowadays the definition of literacy is conceived as activities that include aspects regarding accessing, using, and communicating about anything in print or media way, not restricted to materials or tools available only through sight or hearing (Downing, 2005). Additionally, Kliewer and Biklen (2007) defined literacy as an educational value considered a way of communication among the members of a group historically ignored and who need to be supported to achieve equality within society.

Taking into account the last definition, it is clear that literacy is an important part of any person, especially children. This competence is present in each dimension of our lives, such as taking notes, reading letters or emails, writing and sharing stories, discussing ideas, and so on. Moreover, this statement is supported by some researchers who have studied the richness and competence of a depth literacy competence (Alvermann, 2003; Lee, 2005).

In the same way, it is known how difficult is to engage and motivate students in activities related to literacy in class and even at home. That is why some authors state the importance of selecting relevant topics that allow children to communicate their ideas, and making them feel strongly interested in the process. The National Endowment for the Arts (2007) found a high correlation between literacy skills (reading and writing) and excellent academic performance; Therefore, by acquiring literacy skills, children will solve and do assignments with complex writing and reading tasks, but children and teenagers with poor literacy skills need a major effort from teachers and parents to get over it and avoid dropping out of school.

It is known by many teachers the importance of literature as a resource at the moment of developing and improving the communicative skills in a language, but the latter desire from teachers could be achieved providing the right materials and situations that can enhance, engage and

encourage students in their own learning in order to make a meaningful learning sure (Keshavarzi, 2012)). In the same way, employing literature sources in a teaching process could be seen as the best vehicle to know and interact with cultural features, and students can appreciate this issue if it is taught properly (Goodwyn, 2009). Nonetheless, some studies have proved the fact that students do not feel motivated about literacy; this is why it is suggested to adopt activities such as drama at the moment to address the content (Kemeh, 2015).

Based on the aforementioned, teachers should look for strategies to enhance students into the content; telling stories is a good option that promotes interaction and catches students' attention (Malderez, 2010). In the case of mixing literacy and target language, the literature suggests that teachers must integrate and follow three rules for language learning to occur, they are: exposure, motivation and use of the target language, but these rules have to be synchronized and taught inductively with literacy in the mother tongue (Ellis, 1995; Spolsky, 1998)

In the city of Cartagena, Colombia, there is a non-profit organization working on the development and motivation of children regarding literacy content. Its initial name was "Amigos Imaginarios," which has been working for a while with children and teenagers from low socioeconomic status in order to help them with this topic. This company is composed of three professionals with a Bachelor of Arts in Linguistics, and they employ a product called "La caja sorpresa" to implement activities related to literacy (storybooks, toys, puppetry, etc.), and, during these activities, they realized about the students' lack of reading and writing skills while they were assigning some tasks from "La caja sorpresa."

Having this situation, the entrepreneurs did not know how to deal with it. They tried to search and ask about the best way to solve this, but they did not have the knowledge to approach it. Therefore, the United Nations Development Programme (UNDP) together with the South Korean government through a project called "Campus de innovación microempresarial" looked for students from college to support technically and financially some entrepreneurs like "Amigos Imaginarios" with different aspects that they could need in order to correct the shortcomings and get a better service or product (La caja sorpresa). So, a group of students from the bachelor in education program offered by a private university called Unicolombo were required to support this enterprise where the problem was: How to engage students in literacy activities contained in "La caja sorpresa", through the design and implementation of a

set of pedagogical and material basis such as principles, techniques and strategies in this teaching process at UNDP?

Accordingly, the general objective of this case study is *to engage students in literacy activities, through the design and implementation of a set of pedagogical and material basis such as principles, techniques and strategies in the teaching process*. To achieve this objective, it was necessary to work on the following specific objectives: to identify lack of pedagogical basis and the best approaches and methods according to the activities based on literacy and English; to improve the material made by the entrepreneurs and the support group called “La caja sorpresa”; and, finally, to implement the final product and the set of methods and techniques recommended.

This experience is so relevant given that it is important to contribute in the integrated development of children through activities based on literacy and culture promotion; but, there are many environmental factors that explain the lack of motivation and commitment on the part of students, such as parents socioeconomic status and level of education achieved, which represent less likely of children engagement.

This is why it is important to design an adequate product where students can interact and enjoy with literacy content and at the same time to catch their attention towards English as added value in globalization context, where innovation is the vehicle to highlight a company. Furthermore, it is necessary to provide the pedagogical basis to the entrepreneurs because they will continue working with different groups of children that need the best motivation to fall in love with literacy and guarantee a good academic performance at school.

### Methodology Design

This project, as a unique experience, was conducted as a case study, given that a story provided the context or data of certain results through describing what happened during the process. For this specific case, the problem to approach was how to engage students on literacy content by providing pedagogical and material basis.

For achieving this objective, it was necessary to know everything about “Amigos Imaginarios” as first stage in order to plan the steps to take and address the problem. After this, the UNDP asked for creating a new company between the entrepreneurs (professionals with BA in Linguistics) and the solver team (students from a BS in Education). As a result, the new project was called “Soñando Ideas;” having this, it was necessary to follow

certain steps to solve the problem. The steps to follow were:

- Evaluate the portfolio of services of “Amigos Imaginarios” (the initial company)
- Identify the lack of pedagogical basis to introduce literacy content
- Recommend the appropriate methods, techniques, strategies and material to develop an innovation product that could help the entrepreneurs to teach literacy (this product will be called “La caja sorpresa”)
- Propose a timetable or agenda to achieve, explaining the step-by-step of the project

### Results: Case Report

In February 2016, five students from the BS in Education at Uicolombo were contacted by UNDP to participate in the project “Campus de Innovación Empresarial,” which consists on a co-creation model and knowledge generation applied to challenge solutions design in micro-companies. In this case, the company selected for the co-creation of the model was “Amigos Imaginarios,” which is working with children and teenagers with activities related to literacy.

There was a first meeting between the entrepreneurs and the support team. In that space, the entrepreneurs presented the product or the material that they were using with children and teenagers. They called it “La caja sorpresa.” This tool contained storybooks, typical toys like marble balls, dolls, cars, and so on. Additionally, the entrepreneurs demonstrate what they usually do with “La caja sorpresa:” first, they asked the support team to take one element from “La caja sorpresa” and say a special moment of their lives related to that element, and second, one of the entrepreneurs took a storybook and read the story out loud in a good voice tone. After this, they mentioned that in many cases the guys involved in the activities had lack of reading and writing skills, and the population was heterogeneous. In most of the cases, they did not know how to address that situation in order to provide them a meaningful learning. For this reason, they asked for pedagogical basis or strategies in order to solve this problem and fulfill their goals.

In order to achieve this requirement, it was necessary to create a new project which was called “Soñando ideas”, with the purpose to integrate both the professionals with Linguistics' degrees (Amigos Imaginarios) and the undergraduate students of Education (Uicolombo). The support group started working on the proposal

which was presented first to the entrepreneurs, and then to the UNDP and an official of South Korean government in an event where the rest of the solvers had to present theirs as well, in order to obtain financial support and could develop the project. The grants or funds were obtained in that event. The proposal had to be developed and executed in three months with the following stages:

### **Identifying lack of pedagogical and material basis, improvement of the product “La caja sorpresa,” and giving the set of approaches and strategies to be applied**

The first deficiency identified was the inappropriate materials that “La caja sorpresa” contained. In this stage, the solver team and the entrepreneurs analyzed all the materials that the product should have such as puppetry, marble balls, dolls, theater elements, and so on. Having these materials, the group of students from Unicolombo proposed a strategy where the entrepreneurs should gather the stories that the guys could express with the elements contained in the box, the aim of this strategy was to transcribe these stories with the purpose of making them feel important by contextualizing the content with their environment, this is what Meier (2003) suggests regarding simple, meaningful, and relevant steps to encourage students in literacy development, choosing material or content which the students can feel identified with and could catch their attention to increase their motivation.

On the other hand, “La caja sorpresa” also contains storybooks to read out loud and to be dramatized with the puppetry. This strategy is completely enjoyable, given that, in the way that it can catch the readers' attention and make them feel different emotions during the reading, they will appreciate the story and they will be more interested on it. It is noteworthy that this strategy is contained within the telling stories approach, and its application is so powerful to help students with literacy.

According to Moon (2000) and Cameroon (2001) telling stories is a powerful tool to teach literacy and a foreign language to young learners, since they enjoy exploring and asking about meaning in order to analyze the form and try out what they learned. It means, they are exposed to a content which is meaningful to them because is contextualized, then some attempts to use it and finally the outcomes. Furthermore, the authors mention certain features that make the telling stories strategy powerful, some of these features are: visual aids, gestures when is told, easy comprehension, and often repeated. These characteristics allow teachers to do an excellent

performance and students to be engaged and motivated.

In that sense, the proposal for improving “La caja sorpresa” suggested the cluster approach which consists in classifying students according to their level, it means, grouping students with high level with similarities and so on, this is for designing different types of materials related to “La caja sorpresa”; and, in this way, they could focus on students' specific needs. This was recommended by the fact that they did not take into consideration how different they are each other in their learning styles. Taking into account this, they could not have the same activities and the input by the entrepreneurs

Along with this, in most of the cases, the entrepreneurs did not give students the chance to select or choose the storybook or other activity. As a result of this, the next approach to implement was “scaffolding to learning negotiation.” This approach involves teachers with many ways of getting interaction with learners, teachers handle learning engagement and motivation modelling and providing input to students. Powell, McIntyre & Rightmyer (2006) state that the best strategies to get success in this approach are:

- Pupil choice: students select the tasks and the stories, which are interesting and relevant for them.
- Appropriate challenge: providing adapted assignments which scaffold their learning, it means, providing support learning gradually with their performance.
- Pupil control: letting learners make their own decisions and take responsibility for their development.
- Peer collaboration: encouraging them in social interaction with other students which allows them to learn from each other.
- Construction of meaning: helping learners to make sense about what they are learning by taking situations that they really know.
- Positive consequences: making students believe in their skills to achieve what they desire.

### **Innovative aspect in the product “La caja sorpresa”: contact with the target language.**

To complete the set of pedagogical and material recommendations, the UNDP asked for a differential aspect in the product, it means, the innovation. As future English teachers and the importance of the contact with a target language, the support team decided with the

entrepreneurs to add this language in “La caja sorpresa.” The idea was to transcribe the stories narrated by the entrepreneurs and the ones narrated by the children and teenagers through the exercise reflecting with the toys in “La caja sorpresa.” For instance, if a child had a funny story with a marble ball, the entrepreneurs should be attentive to each part of the story and transcribe this one, and, in this sense, students can be contextualized and feel important having his own story written in a future little book (primer), and also have more narrative material to share with the students.

Furthermore, with these stories the entrepreneurs must identify the most common words in order to write them in English, and the students can see them on the reading. For example, if they are reading a story of an elephant, in one part of the page could appear certain vocabulary that they can relate to the story such as “elefante” with “elephant”, “pink” with “rosa”, and so on.

Having this, the students could see something different than can get their attention for exploring and asking about something new. Comparing telling-stories with others approaches, for example, the task-based learning (TBL), a case study in Korea demonstrates that students acquire more competent skills with TBL, but learning through telling stories is more enjoyable because this strategy provides authentic language input (Kim, 2013). Cameroon (2001) claims that young learners do not need to understand a whole text or forms of the language to identify the main language elements. In the same fashion, Norton (2011) stated that this interactive and guided learning process develop students emotional intelligence, and Wright (2008) also expresses that employing telling stories allows students to familiarize with the tone, intonation, accent, rhythm and others speech features.

### **Presentation of the improved product “La caja sorpresa”**

Three months later, the UNDP and the South Korean government organized the final event of “Campus de Innovación Empresarial” in a well-known hotel in Cartagena, where each group had to present the final product in order to make sure the work of each solver team. There, the company Soñando Ideas presented the final product and exhibited all the material purchased with the funds from the program “Campus de innovación empresarial”.

While Soñando Ideas was presenting the improved product “La caja sorpresa”, some evaluators were asking about all the proposed material and the strategies to be used during the implementation. Also, they were checking

whether the product and the specifications were according to the proposal, and the limitations during the process. To do this, the solver group explained each approach and strategy taking into consideration the elements, additionally the entrepreneurs participated in the explanation to make them sure the knowledge that they already acquired.

### **Application of the set pedagogical and material basis through “La caja sorpresa” by the company Soñando Ideas**

After the presentation of the product, the entrepreneurs started working and applying the tools within “La caja sorpresa.” They started clustering students depending on their level, in these sessions they applied some tasks to diagnose reading and writing skills with some story books and sheets of paper. They asked students to read a story and write the most important aspect according to their perspective, or filling a worksheet with some questions of the reading. Then, the entrepreneurs started gathering the tasks in order to check them and could classify students depending on the results.

After applying the cluster approach, the entrepreneurs begun scaffolding with the strategies recommended, where students could be more independent in their own learning. The entrepreneurs allowed students to choose the storybooks according to their preferences, during that session, students were so enthusiastic and participating all the time; also, they were asking about the meaning of words in the story, which helped them to increase vocabulary.

In this activity, the entrepreneurs realized the importance of this strategy because the students were more enthusiastic and interactive with the activity. At the same time, they were aware of the set recommended in order to take the best resources and get over the lack previously presented. Something to highlight is that students had the chance to interact with the culture through the selected storybooks, because they felt identified with the stories, and some of them had already heard about them.

Furthermore, for each storybook, flashcards with the vocabulary in English were created to make awareness of this aspect. Among the more popular storybooks for students were: Corto el puente by Juan Ramón Fernández Serrano Rosa caramelo by Adela Turin and Nella Bosnia, El enemigo by Davide Cali. It is important to highlight that, for all the storybooks, the entrepreneurs performed plays where they could dramatize some activities and promote culture. During these performances they caught

students' attention, and it was evidenced how students were enjoying this space. In this space they took advantage of the activity to talk about the importance of reading for having a better academic performance and keep the oral tradition.

The recommendation of transcribing the own stories of students in order to present them a contextualized material is in process; they are still working on that at the same time of implementing the new "Caja sorpresa." Therefore, while these stories are written, integrated with the English part, and printed, the product would be in continuous assessment and observation to fit the material based on students' performance and needs.

## Discussion

This case study was a complete challenge for both the entrepreneurs and the support group, the achievement of the objectives was not easy. First, seeking for the best approaches and strategies to help them get over their lack of pedagogical and material content was necessary to review literature regarding to that. The clustering part was not easy for the entrepreneurs, since they had students from different grades and ages, that is why the storybooks and the worksheets provided were so evaluated, and they also implemented scaffolding to help students and know the real level of knowledge, the results of this stage were similar in Powell *et al.* (2006), the teachers had heterogeneous population and the best way to make groups was by assigning some tasks and then gathering the activities to identify each level.

The other stage of letting students choose the storybooks was so effective, given that students were so engaged with the activities about literacy, they really enjoyed what they were reading. Also, the entrepreneurs implemented TBL in order to design each workshop based on students' production. This result was consistent with the case in Korea (Kim, 2013), where students acquired skills with this approach.

On the other hand, students had to understand most of the storybooks to answer questions from the worksheets or the random questions from the teacher, which was not similar to the results in Cameroon (2001), he claims that young learners do not need to understand a whole story or reading to perform a good workshop, the explanation could be that students from this case by their low social status and complex problems with skills were not capable to figure out some answers.

One of the limitations of the project was that, at the beginning, the communication between the

entrepreneurs and the solvers was not good. Some of the entrepreneurs thought that their work could be replaced and the timetable could be affected. Finally, they realized everything was good. Furthermore, it was difficult to find all the materials required for the project: they were so expensive for the budget, or they were not available.

Additionally, for the solver team, it was a complete challenge to find the best approaches and improve the product because they have not taken classes of material design yet., it means, they only had knowledge on approaches, methods and techniques, and for that reason they had to study about this subject to improve the product "La caja sorpresa."

This case study could be taken into account for the authorities in education in Cartagena and the rest of the country, children and teenagers need to be involved early in activities based on literacy both to ensure greatly their academic performance and the national and international tests and keep culture promotion among them. This academic experience made us aware of the implications derived from this case study, which evidences the problems related to literacy of students from low socioeconomic status, the importance of preparing teachers with excellent basis on approaches and methods to make students fall in love with reading and writing activities in order to develop a meaningful learning.

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