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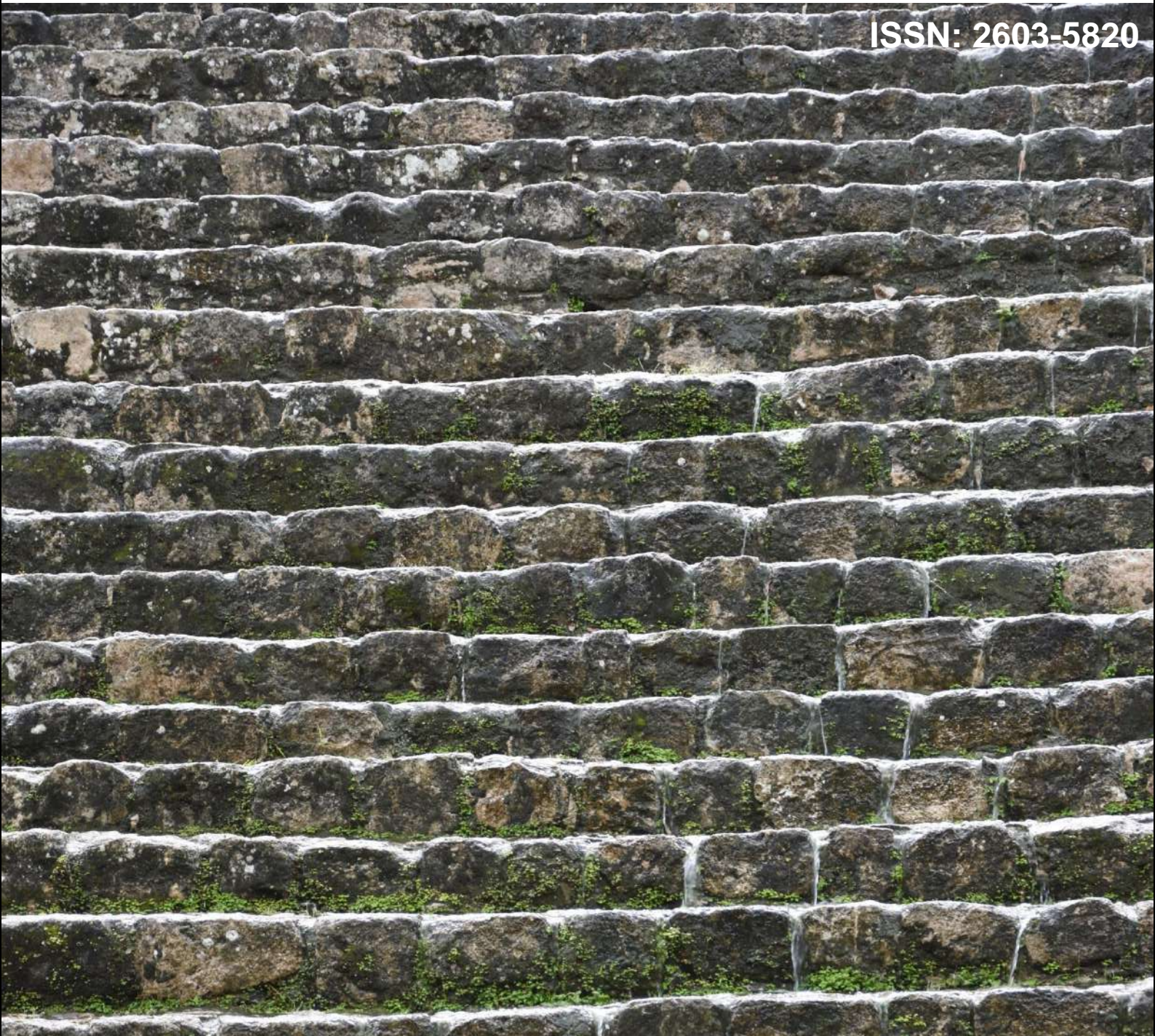
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Cover: Stairway in Calakmul, a Mayan archeological site (Campeche – México). Photo: Antonio Pantoja.

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Editorial

In this new MLSER issue, we keep up looking toward the journal's consolidation, so it can soon become a leading journal for all the educational researchers. I thank the entire editorial, technical, IT and translators team for their work, with the firm conviction that this is the path we must follow in our pursuit of excellence. I am aware that these may be big words for such a recent publication. However, it is important that all parties involved have this as our final goal.

This first issue of the journal's second volume collects 6 articles with different research lines. It is started with a study that evaluates the addiction prevention program "Entre todos", developed by the Asociación Proyecto Hombre. Its main conclusions deepen into the importance of applying and evaluating this type of projects and the fact that adolescents can be prevented by working with their families and stimulating the individual's complete development.

The second article is about inclusive education through children's literature as a novel contribution. It analyzes different tales with characters that present some type of functional diversity and they are selected those with ephemerides treated in the center. Finally, it is made a didactic proposal favoring the detailed study of works that could be candidates to address the inclusion.

Also within inclusive education, but from a completely different point of view, the next article analyzes the Frankfurt's theoreticians before a world in which intolerance approaches arise. It adds, as a relevant conclusion, the school's capacity to educate for a world of solidarity and respect for each other's differences.

The fourth article is about the idea that effective feedback can become the most powerful factor able to encourage learning. This is what the author calls feedback information. Thus, it is performed a research in which the Hope model is applied and it concludes by claiming that there is a relation between feedback information and learning perception.

From a totally different point of view, there is the study on moral development and political corruption, based on the current reality of Spain, given the existing

connection between decisions and moral dilemmas that people must face in their daily life, specially the several news about political corruption. It is exposed a questionnaire performed to check the students' moral development.

The last article is about the cellphone use to strengthen databases learning in students, in a way they can reinforce subjects treated at class, ask questions and interact with the teaching staff. On this basis, the study is experimental and seeks to get to know the relationship between the main variables.

Antonio Pantoja Vallejo
Editor in Chief



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EVALUATION OF THE ADDICTION PREVENTION PROGRAM “ENTRE TODOS”

Celia Menéndez-Hernández
Leticia-Concepción Velasco-Martínez
Juan-Carlos Tójar-Hurtado
Universidad de Málaga

Abstract. Introduction. This article evaluates an addiction and drug addiction prevention program. The evaluated program is “Entre Todos” (Proyecto Hombre Association, 2000) which was developed in 2017 with a sample of 135 5th and 6th grade students from every school located in Torrox (Málaga, Spain). Method. The design of this evaluative research was mixed, combined with a qualitative methodology -through interviews and observation and a quantitative methodology, through surveys. In addition to the students’ sample, 5 teachers took part in the evaluation, who collaborated with the program’s development. The research’s objective was to evaluate the quality of the program and to determine possible improvement areas for the future. The quantitative data was analyzed in a descriptive way (frequencies and percentages). The qualitative data was subject to a content analysis. Results. The results allowed to evaluate the program’s design, execution and resources, aiming at identifying the strategies that allow to better meet the detected needs and better adapt to the program’s addressees. Discussion. Apart from evaluating the program, detecting some weaknesses as well as areas for improvement, it is concluded that implementing and evaluating projects like this one is key. The fact of working with families and the attention to the integral personal development are essential in preventions programs aimed at adolescents.

Keywords: Training on drugs, addictive behavior, prevention, Elementary School students, adolescent behavior

EVALUACIÓN DEL PROGRAMA DE PREVENCIÓN DE ADICCIONES “ENTRE TODOS”

Resumen. Introducción. En este trabajo se evalúa un programa de prevención de drogodependencias y adicciones. El programa evaluado se denomina “Entre Todos” (Asociación Proyecto Hombre, 2000), y se aplicó en 2017 a una muestra de 135 estudiantes de Educación Primaria, de 5º y 6º curso, de todos los centros educativos del municipio de Torrox (Málaga).

Método. El diseño de esta investigación evaluativa fue mixto, combinando una metodología cualitativa, a través de entrevistas y observación, con otra cuantitativa, a través de cuestionarios. Además de la muestra de estudiantes, participaron en la evaluación 5 docentes, que colaboraron en el desarrollo del programa. El objetivo de la investigación era evaluar la calidad del programa y determinar posibles áreas de mejora para futuras aplicaciones. Los datos cuantitativos se analizaron de manera descriptiva (frecuencias y porcentajes). Sobre los datos cualitativos se realizó un análisis de contenido. **Resultados.** Los resultados permitieron valorar el diseño, la implementación y los recursos del programa, con el fin de identificar las estrategias que permiten satisfacer más adecuadamente las necesidades detectadas y que mejor se adaptan a los destinatarios del programa. **Discusión.** Además de haber sido posible la evaluación del programa, destacando algunas posibles mejoras en el mismo, se concluye con la importancia de aplicar y evaluar este tipo de proyectos. El hecho de trabajar con las familias y la atención al desarrollo integral de la persona es crucial en los programas de prevención en la adolescencia.

Palabras clave: Formación en drogas, comportamiento adictivo, prevención, estudiantes de Educación Primaria, actitudes de los adolescentes

Introduction

The drug addiction phenomenon constitutes a social concern due to a series of factors as: increase in consumers, starting age, emergence of new addictions, greater availability of new substances, existence of a culture that favors their consumption, the enormous cash movements in that world and the crisis of values that is present in our society (Escámez, 1990).

The Proyecto Hombre Association, from a clearly stated philosophy, has worked and adapted diverse therapeutic programs to the demands of a changing society in accordance with its cultural, political, economic situation, and so on. Its intervention proposals have evolved from the exclusive therapeutic care in centers to the development of prevention programs in educational centers. Bearing in mind the existing relationship between the prevention models and the needs (Sierra, Saldarriaga, Benítez, & Olarte, 2017), new programs (Jiménez-Iglesias, Rodríguez, Oliva Delgado & Ramos Valverde, 2010) have been appearing with the objective of acting as prevention through socio-educational interventions in schools and educational institutions.

‘Entre Todos’ is a school and family program aimed at the prevention of consuming drugs, including other kinds of addictions. As KornBlit, Camarotti & Di Leo (2010) it is considered addictions when we refer to “activities, not only substances, since the behavior pattern that is established with drugs can also be seen in relation to other activities” (p.9)

The evaluation and collection of data were made ad hoc, taking advantage of the program’s implementation made by the Proyecto Hombre Association, in March and April 2017 and it was focused on 5th and 6th grade students from the 5 Elementary Schools located in Torrox (Malaga). This town has more than 15 000 inhabitants (INE, 2016) and it is located in Costa del Sol, Malaga, between the Mediterranean Sea and the Sierra de Almirajara. The schools are CEIP Los Llanos, CEIP El Morche, CEIP Mare Nostrum, CEIP El Faro and CEIP Colina del Sol. Four sessions in the classroom were made with the school’s students and one session with the students’ families. The sessions with the students lasted for 3 hours and the session with the students’ families took place after school, for 2 hours.

With this research, the aim was to value the design and its implementation in order to identify the strategies that best adjust to the detected needs, and which best adapt to the program's target audience (Tejedor, 2000).

For the purpose of justifying the contents that constitute this research's basis, the main elements of the theoretical framework are described below.

Young people and addictions

The program's audience and those who take part in this research are young people aged between 10 and 13. In accordance with Palacios, Marchesi & Coll (2009), this range of ages correspond to the preadolescence, during which there is a great advance regarding the *construction of the self* and important changes in their judgments related to themselves. Likewise, such authors indicate that adolescence is a period during which big changes take place in psychological, sexual and social aspects occurring from 12 to 18 years old.

As well, it must be taken into account that adolescence comes with an increase in stress, due to the challenges, biological and physical changes that are related to the puberty, consequently triggering an emotional, cognitive and social disorder. On top of that, academic pressures, acceptance of the new physical image, increase in autonomy, group acceptance, etc. can create strong stress in adolescence (Calvete & Estévez, 2009).

For this is a vulnerable collective, acquisition of new tools to cope with the problematics or changes of their age is determining. This can make a difference, that is: ending in an addiction or not. Addiction is defined as "...a dependence from a substance, activity or relationship that takes the addicted person away from everyone else surrounding him". (Castillo, 2011, p. 26).

As Castillo (2011) says, there is a difference between the consumerist influences or habits and an addiction. The main characteristic of the latter is whether a dependence exists, consequently causing severe consequences in real life. Many kinds of addictions exist: addiction to psychotropic substances or to a specific behavior.

Bukoski (1995, cited in Pinazo & Ferrer, 2001) signaled that there are four levels related to the risk factors of abusive consumption of drugs during adolescence. Individual factors, such as early consumption of drugs, low self-acceptance, an inadequate social network, etc. Another group are the family factors, including lack of a comfortable environment or the use of drugs made by the parents. Within social factors, Muñoz, Sandstede & Klimenko (2016) state that the educational center may be a socialization place favorable to start consuming drugs. Also, the factors related to the group of peers or classmates can be a pressuring source and social influence regarding decision-making. Finally, community factors, with issues like social exclusion, stress or sociocultural rules.

In addition, there are protective factors that are the elements that allow people to opt for non-related drug addiction behaviors or options, and that are considered healthy. These factors compensate for the risk factors. (Castillo, 2011).

The educational process and the institutions in charge of it must boost and consolidate the acquisition of habits, values, attitudes and abilities geared towards having a healthy lifestyle from an early age. This allows to develop aptitudes and

knowledge that consolidate autonomous people, capable of withstanding the group's pressure so that addictions in the adult population are reduced in the future. (Escámez, 1990).

Due to the early origin of the problem, it is essential to identify the involved risk factors to establish preventive programs or strategies. (Calvete & Estévez, 2009).

Drug prevention

Drug addiction prevention is understood as, in accordance with Martín (1995):

An active process of initiatives' implementation aimed at modifying and improving the integral development and quality of individuals, by enhancing the individual self-control and the collective resistance to the drug offer. (p. 55)

To complete this definition, Becoña, Rodríguez & Salazar (1995) add that "a prevention program is a set of actions whose main objective is to prevent the problem that the program is preventing from appearing" (p.23)

When talking about drug addiction prevention, it must be highlighted that such programs are basically focused on legal drugs prevention, together with marijuana in some cases. Illegal drugs are not usually included, since their consumption during adolescence is sporadic and affect few people (Becoña, Rodríguez & Salazar, 1995). Such is the case of the program considered in this research.

Calafat (2000) noted that diverse types of distinctions can be made when dealing with prevention: *specific* and *nonspecific*.

Specific prevention is any action that tries to influence in a clear, concrete and explicit manner in the use of drugs. On the contrary, the nonspecific prevention tries to alter consumption indirectly, through programs, actions or environments that are supposedly not at all connected with the use of drugs. (p. 90)

In addition, Caplan (1980, cited in Becoña, Rodríguez & Slazar, 1995) noted that there are three kinds of prevention: *primary*, *secondary* and *tertiary* prevention. Primary intervention aims to avoid the problem before interventions are made. Secondary prevention tries to intervene as soon as possible in order to improve the problem. The objective of tertiary prevention is to stop or delay the problem's evolution at the onset of the first symptoms, such as the physical, psychological and social consequences.

Another classification proposal is made from the contextualization: *Current*, which adapts to the moment, universal, aimed at all populations, *selective*, aimed at a group of adolescents that are considered to be at risk, and

indicated, destined to a concrete group of risk or in which some of them are already consumers (Castillo, 2011).

The educational centers can be the ideal context to carry out a preventive education in addictions or substance use, mainly for the following reasons: access to boys and girls aged between 4 and 16 is easy since education is compulsory at such ages. These are evolution periods where there is a greater responsiveness to learning and in which healthy lifestyle habits are acquired. The school context also has available greatly qualified professionals from the pedagogical point of view (Jiménez-Iglesias, Rodríguez, Oliva y Ramos, 2010).

'Entre Todos' Program

The 'Entre Todos' program (equivalent to 'All together' in English) is based on another prevention program called 'Construyendo Salud' (equivalent to 'Building Health' in English). The latter is within "...a universal intervention, aimed at preventing the drug consumption and the implication in other kind of problematic behaviors in the beginning of adolescence" (Gómez Fraguera, Luengo, Romero & Villar, 2003, p. 185). The following modifications were made on this program: 1) implementation of a subprogram for the families, 2) giving the Prevention Program a supervision strategy and an extension of the subjects within the Didactic Units.

Subjects of 'Entre Todos' are divided into didactic units: Information (tobacco, alcohol and cannabis); Self-esteem (self-esteem and self-improvement); Decision-making (decision-making, independent thinking and advertisement); Cognitive strategies (attributional style, actions and effects); Emotional control, Social abilities (communication and social abilities, assertiveness); Values (personal, family and mass media). Tolerance and cooperation and leisure activities (Proyecto Hombre Association, 2000).

Its target audience is the Elementary School students. Materials used are these ones: the student's handbook and an informative booklet for the family. Regarding the methodology used with the students inside the classroom, there are activities like role-playing, surveys, polls, debates, moral dilemmas, brainstorming and analysis of ads (Proyecto Hombre Association, 2000).

This research's objective was to evaluate the project's quality, considering the design and implementation in the frame of reference. The program's design was evaluated by analyzing the adequacy level between what was planned and what was executed as it was planned, in order to include changes and improvements in future uses of the program. Hence, design's evaluation consisted of "a review of every component of the program (personal, functional and material) in the interactive dimension: Quality of the activities, time and work distribution, use of resources, etc." (Tejedor, 2000, p.327). As to prove the program's relevance and suitability, the participant observation was used to know the achievement degree of the program's objectives. In order to do so, interviews and questionnaires are used to know the perception and opinion of those involved in the project (teachers and students) about the design and development of the program in the classrooms.

Methodology

Design

In this study, the evaluative programs research takes a relevant place:

The evaluative research “is a research method that implies a rigorous, controlled and systematic process of reliable and valid information collection and analysis to make decisions about an educational program” (Tejedor, 2000, p.320).

Pérez Juste (2000) considers that programs’ evaluation is

...a methodological activity, that admits [...] the reflective, ordinary action of every teacher or educator in relation to his program, understood as a plan serving the achievement of the educational goals, and another one carried out by experts through the strict implementation of different kind of methodologies and scopes, aimed at the evaluation of social intervention programs and projects -in education, training, health, leisure, employment with a great extension, complexity and duration (p.266).

Pérez, Mejía & Becoña (2015) note that, taking into consideration the history of prevention programs and policies, it is necessary to acknowledge methods that help evidence, analysis and evaluation, that allow the learn from achievements and mistakes, to bear in mind the adequacy of programs to the needs and characteristics of every environment, taking into consideration the use of certain strategies in each program.

From this perspective, as it has been aforementioned, the programs’ evaluation is not a timely act by itself, but instead, we need to understand it as a process. This evaluative process must be intimately related to the program’s planning and programming, hence being able to have a constant feedback (Hernández & Martínez, 1996). In this sense, in this proposal, same as other authors do (Stufflebeam, Pérez Juste, Caride, among others) the evaluation process can be divided into four moments or evaluation types:

- Context - needs evaluation
- Design - programming evaluation
- Development - process evaluation
- Product - results evaluation

This kind of evaluation has turned into a classic over the years (Stufflebeam & Shinkfield, 1897). For these authors, the evaluation of a program should begin with an evaluation of the future implementation context, a design’s evaluation or the program’s planning before its execution, an evaluation of the process during its implementation and an evaluation of the product or of the results caused by its development. In this regard, this proposal has just only been focused on the programming’s design processes and its development for it is part of a pilot study that aims to explore and understand the elements favoring success in its implementation.

These program's evaluation process has to be conceived as a research strategy on educational processes. The results obtained in these researches should be supported by suggested patterns to guide the creation of intervention programs. Such is the reason why intervention and research complement each other. Intervention takes advantage of research as long as it comes to a solution for the practical problems thanks to it (Tejedor, 2000).

With that in mind, a mixed research has been conducted, combining the qualitative part through the use of interviews, observation, etc and another part that is quantitative, from the use of questionnaires. Data obtained are narrative and descriptive, and pursue the objective of bringing information about what the teaching staff and the students think of the prevention program we are evaluating. In this respect, in accordance with Cook & Reichardt (1986), it states a series of reasons that support the use of a mixed research methodology:

...When the evaluation problems are dealt with the most adequate tools that are accessible, a combination of qualitative and quantitative methods will be used. Firstly, the evaluative research has commonly multiple purposes that need to be addressed under the most demanding conditions. Such a variety of conditions often requires a variety of methods. Secondly, when used in combination and with the same purpose, both methods can invigorate each other in a way that gives us perceptions none of them could be capable of separately. Thirdly, since no method is free from prejudices, one can only reach the underlying truth by using multiple techniques which will be used by the researcher to do the corresponding triangulations. (p.11)

Participants

Samples on which the data collection has been focused are:

First of all, $n_1 = 5$ teachers, from the Elementary Schools of Torrox, aged between 30 and 40 (4 women and 1 man). Sampling type was intentional: the teaching staff was chosen according to their teaching experience and for they know about the "Entre Todos" program.

Secondly, $n_2 = 135$ students from such schools. 5th and 6th grade students were aged between 10 and 13. 56.7% of the sample were males and 43.3% were females. The sample means the group of young people between that range of ages, schooled and living in the town of Torrox.

Tools

Three main tools were employed for data collection: participant observation, semi-structured interviews and questionnaires.

The participant observation was developed in parallel to the program's development. Furthermore, observation resulted in a great usefulness when doing the interviews and answering the questionnaires, thus, it constituted an efficient support to analyze and evaluate the information obtained.

The participant observation is the process that empowers researchers to learn about the activities of the people subject of study and their environment, at

the same time. This is done through observation and by taking part in their activities. It provides the context for developing sampling guidelines and interviews' samples (DeWalt & DeWalt, 2002).

Observation was focused on knowing the implementation process of the programs in the classroom during the sessions that were set in the planning. To this effect, the following checklist containing the observation's dimensions and indicators was made:

Table 1
Observation's indicators about the program's development

Dimensions	Indicators
Program's scope	<input type="checkbox"/> Courses where the program was implemented <input type="checkbox"/> Student's average percentage attendance
Activities	<input type="checkbox"/> Total number of activities implemented <input type="checkbox"/> Number of activities by content block <input type="checkbox"/> Inclusion of some activities. <input type="checkbox"/> Elimination of some activities. <input type="checkbox"/> Modification of some activities. <input type="checkbox"/> Total number of activities successfully completed. <input type="checkbox"/> Meeting moments.
Length (Space-time coordinates)	<input type="checkbox"/> Number of designed sessions/number of performed sessions <input type="checkbox"/> Number of planned spaces/number of used spaces <input type="checkbox"/> Frequency of use <input type="checkbox"/> Number of activities performed in the scheduled time <input type="checkbox"/> Decrease/increase in the time scheduled for the activities <input type="checkbox"/> Activities started on time <input type="checkbox"/> Finalization on time
Resources	<input type="checkbox"/> Adequacy of resources regarding participants <input type="checkbox"/> Number of designed resources/number of used resources <input type="checkbox"/> Frequency of use
Methodology	<input type="checkbox"/> Number of used methodological strategies (variety). <input type="checkbox"/> The methodology favored active participation. <input type="checkbox"/> The attitude of those involved was the one expected <input type="checkbox"/> The center was predisposed to the implementation.
Obstacles and contingencies	<input type="checkbox"/> The center's organizational structure allowed the implementation <input type="checkbox"/> Possible adaptations in human resources, materials, length, activities and audience were foreseen

4 women were subjected to 5 semi-structured interviews as well as one man, each interview lasting for 30 minutes approximately. Open-ended questions were raised with the objective of knowing their opinion as professionals about the

implementation of the program in their classrooms. Through the interviews, the aim was to take a step forward and make a more complete evaluation of the constituent element of the program (program's design). To do so, a category system was developed using a mixed categorization system through deductive categories, that derived from the program's design and *ad hoc* categories (inductive) made from the own participant observation of the intervention program's development. So categories were obtained through the development of the program's design phases and implementation. At first, certain dimensions were established, which were used as precategories, to make the definitive categories that would make up that interview (Figure 1).

Table 2 details the dimensions and pre-categories present at the study that allowed the drafting of the interview's script.

Table 2
Categories system for the program's evaluation

Dimensions	Precategories
Program Structure	Contents
	Activities
	Methodology
	Resources and materials
	Length
Program planning	Adequacy to the context's characteristics and needs
	Obstacles' and contingencies' control in the program
	Availability of the center's structural elements
	Foresight of adaptations to the program
Program's satisfaction	Responsiveness
	Interactive participation
	Attendance
	Use of time
	Acquisition fo knowledge

Therefore, from the analysis of the program's design and the data collected in the participant observation, the category system was made, which allowed to write the answers that made up the interview's script:

- Do you believe the resources/materials used are adequate or enough?
- Do you consider the contents and activities to be correct and dully sequenced?
- In your opinion, has the drug subject been treated in a much subtle way? Do you believe it would be important to explicitly talk about it?
- In your own view, are the program and the contents adequate for the audience's ages?

- Do you think the methodology used with the children is correct? (participative)
- Regarding time and length: is it enough, in your opinion?
- Do you think that having lost some instruction time of an essential subject is a problem? (“Time loss”)
- Do you consider the planning was well done and was adequate to the context where the prevention was imparted?
- Having a prevention session once a week has hindered the Center’s normal operation? (or in the same day when it was imparted)
- Would you modify anything from the program that has not been previously mentioned?
- Would you repeat it next year or recommend it to other centers?

Questionnaires are the quantitative part of the research. The questionnaire used was handed in by the Proyecto Hombre Association and is organized in three parts, which allowed to evaluate this program’s design. 135 were used with students aged between 10 and 13. The main purpose was to know the students’ vision about the program's design and its implementation and efficacy. Questionnaires which had an open-ended questions part and close-ended questions.

The questionnaire contains a first part that includes the age and gender variables and the motivation degree to take part in the program.

In the second part, 14 items were included, divided into “Quality of service” (items 1-9) and “Prevention team” (items 10-14). Items, included below, had the following score: 1= No; 2= Yes, partly; 3= Yes, generally; 4=Yes, totally. Some of the items were not adapted to the sample, so it was necessary to explain their meaning during the questionnaire until it was clear that the person understood the meaning of every question.

- Do you think that the information you have been given about the prevention activities has been correct?
- Have you found the kind of service you were looking for?
- To what extent have your needs been met thanks to our program?
- Would you recommend our prevention program?
- To what extent are you satisfied with the information you have received?
- With the training you have received. Do you think you are capable for carrying out prevention actions?
- In case you are considering to implement this training in your classroom or working environment Do you think it has been efficient? (Item for the teacher)

- In case you are considering to implement this training in your classroom or working environment Do you think you have been given enough support? (Item for the teacher)
- Do you think the follow-up visits by the prevention team were enough?
- Do you think the prevention team treated you correctly?
- Do you think the program's contents have been adequate?
- Do you think the teaching staff was capable of and well-enough trained concerning the different subjects?
- Have the prevention technicians been available during the program?
- Has the program's manager been available?

The last part of the questionnaire included an open-ended question in which comments, suggestions, improvements, etc could be added. In this space, students could give their opinion about the different aspects of the program that they would improve.

Data analysis

The qualitative analysis of the interviews was made using the categories and subcategories classification. The presence and concurrence of the categories were considered to highlight the most substantive interpretation aspects among the interviewees. Text fragments and text citations were coded for the analysis (Tójar, 2006).

For the questionnaires' quantitative study, an analysis of frequencies and percentages was performed. For the study of the relationship between variables, the chi-squared or χ^2 test was carried out. To this effect, the SPSS Statistical Package (v.22) was used.

Results

Below is a summary of the analysis of the results obtained through the different collection techniques that were used.

Categories of the interviews

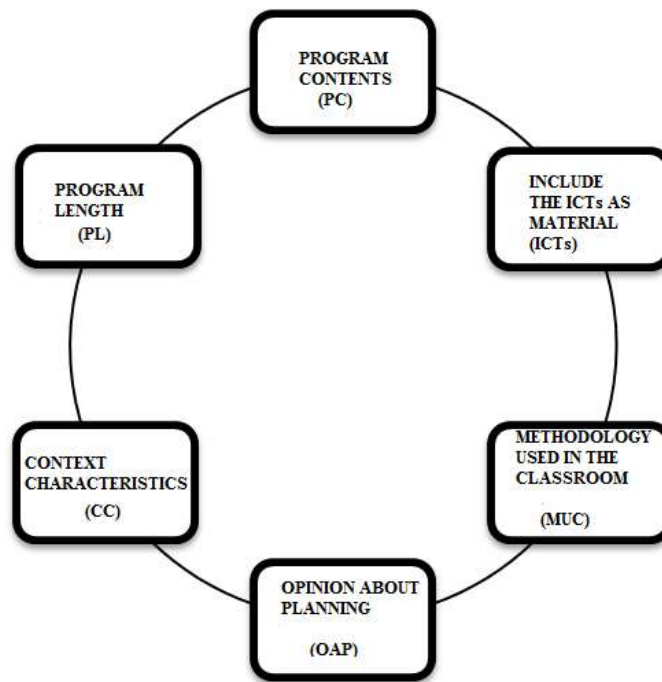


Figure 1. Categories extracted from the interviews

For the analysis, 6 categories and 12 subcategories were made. When the analysis deemed it appropriate, diverse selected citations were allocated to diverse categories and subcategories at the same time. Table 3 includes categories, with their code, and an example of a verbatim citation.

Table 3
Codes and examples of verbatim citations corresponding to each category

Code	Category	Citation example
ICTs	Include the ICTs as material	"...It would be very beneficial to use new applied technologies, since images are really helpful to improve understanding and, also, attracts the students' attention and motivates them." (E. 1, p. 2)
PC	Program's contents	"...It is not about giving information about the drug but about what we can do to not take the bait and not to become addicted to them or try them, isn't it?" (E. 4, p.13)
PL	Program's length	"...It should be a bit longer. Above all, regarding the number of sessions..." (E. 3, p. 7).
CC	Context characteristics	"...They are in an age in which they are starting with preadolescence stuff, as I call it" (E. 5, p. 16).
OAP	Opinion about planning	"...Planning has been complied with for it has took place the days that were planned and with a space of time between one another..." (E. 3, p. 8).
MUC	Methodology used in the classroom	"...They have been participative enough, really interested, as they were constantly asking what time the session was, when the person was coming" (E. 5, p. 16).

Include the ICTs as material

This category includes two subcategories that are: The Information and Communication Technologies - ICTs benefits in the classroom and the ICTs types they have asked for.

This category includes the teaching staff's opinion about the material resources of the program. Asking for the use of ICTs and stating that the resources used are insufficient. "...It would be very beneficial to use new applied technologies, since images are really helpful to improve understanding and, also, attracts the students' attention and motivates them." (E. 1)

Program's contents

This category was further divided into these subcategories: content and information about drugs, useful contents learned in the activities, missing contents, and positive aspects of the learned contents.

This is one of the most essential sections, since it has provided the study with valuable information. They stand out that working with contents like self-esteem has been very useful, but that there were some missing contents, as the mass media. Regarding looking drugs with a greater information, most of them agreed that they are too young to provide them with more information than the one they have access to. That is why they think the contents are quite well adapted to the age.

"Speaking of drugs, I think children these age have not still bumped into them. So I believe it is much more important to focus on making the child be self-confident, strong and achieving that the children makes his own decisions rather than forcing oneself into educating the child about what he is going to bump into" (E.3).

Methodology used in the classroom.

This category is further divided into: Used participative methodology aspects and the Modifications they would carry out regarding the methodology.

In this category it can be stressed the fact that a participative methodology is used, since students have been able to interact with each other and with the person in charge of the activities. In addition, the idea of having included some dynamic or role-playing to make it more participative is outlined. "...Something else may be included, such as some game, simulation...Because you did it so well for you gave them many examples but in my opinion that maybe, it could be turned into scenes or they could take on the role another way". (E. 2).

Program's length

This category includes two subcategories: Negative aspects of length and the improvement proposals regarding length.

Another key point in this analysis appears, for the teaching staff requires the need for extending the number of sessions and the length of each session. The reason was that with such length, some interesting topics could not be treated in depth. As the following citation demonstrates:

“I think the length is short, just a few sessions. Honestly, given the importance of these topics, that are the talk of the town and that we can see everywhere, and since they are really motivating for the students, sessions could be a bit longer and there could be more sessions” (E. 4).

Opinion about planning.

This category mainly includes the positive aspects of the planning. It was underscored that there was a previous organization of the program and that everything stated in the programming was complied with. “Nothing from what we had planned has been missing, am I right? It didn’t feel like the sessions were very long... everything was good.” (E. 5).

Characteristics of the context

This category includes the benefits of the context where the program was carried out. The most remarkable aspect was carrying out this prevention with children these ages, for they were close to the adolescence and for it is considered to be the change from the school to the high school. “...I think their age was right for carrying out the program. First, because they are already entering the preadolescence and, secondly, because they are going to high school next year, where there will be much older students...” (E.3).

Tables and graphics from the questionnaires

Below are the results obtained through the statistical program SPSS basing on data extracted from the 135 questionnaires. They can be read in the tables and figures.

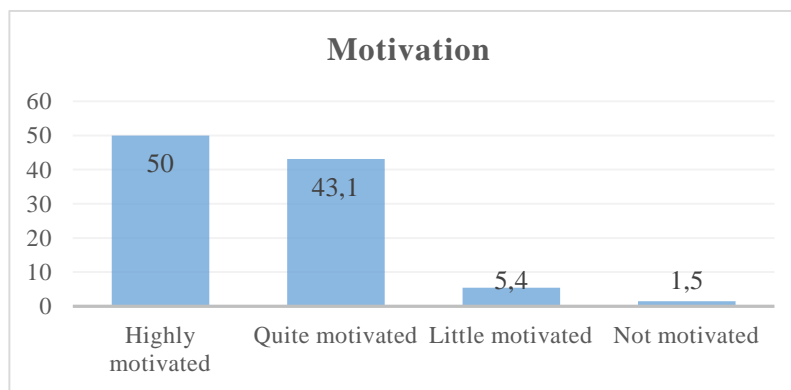


Figure 2. Students' motivation

As it can be seen in Figure 2, the students' motivation has been high, grouping 93,1% in the values “Really motivated” and “Quite motivated”. In this way, a 6,9% remains, corresponding to the low-motivated students. In this second group, it could be said that 1.5% attended the prevention sessions against their will, due to the schedule planned for the sessions.

Table 4
Questionnaire's items

Items	1f (%)	2f (%)	3f (%)	4f (%)	Average	SD
1	0 (0)	5 (3.7)	18 (13.3)	111 (82.2)	3.79	0.49
2	2 (1.5)	6 (4.4)	39 (28.9)	88 (65.2)	3.58	0.65
3	3 (2.2)	12 (8.9)	41 (30.4)	79 (58.5)	3.45	0.75
4	1 (0.7)	1 (0.7)	21 (15.6)	112 (83)	3.81	0.46
5	1 (0.7)	3 (2.2)	51 (38.1)	79 (59)	3.55	0.58
6	6 (4.4)	3 (2.2)	34 (25.2)	92 (68.1)	3.57	0.75
7	1 (0.7)	8 (6)	47 (35.1)	78 (58.2)	3.51	0.65
8	0 (0)	2 (1.5)	45 (33.8)	86 (64.7)	3.63	0.51
9	48 (35.6)	16 (11.9)	26 (19.3)	45 (33.3)	2.50	1.28
10	1 (0.7)	2 (1.5)	4 (3.0)	127 (94.1)	3.92	0.39
11	0 (0)	5 (3.7)	37 (27.4)	93 (68.9)	3.65	0.55
12	6 (4.5)	24 (17.9)	42 (30.6)	63 (47)	3.20	0.89
13	0 (0)	8 (6)	8 (6)	118 (88.1)	3.82	0.52
14	1 (0.7)	2 (1.5)	4 (3.0)	127 (94.8)	3.92	0.39

Note: *The items' description is included in the "Tools" section

As Table 4 proves, almost every item has a high score, except for item 9, which will be explained later. The most valued (Average=3.92 and SD=0.39) items are 10 "Treatment received" and 14 "Manager's availability". In the same way, so is item 13 "Technicians' availability", obtaining a similar result (Average=3.82, SD=0.52) to the result obtained in item 14. Other highly-scored values are item 4 "Recommendation level" and item 1 "Adequate activities". The most heterogeneous opinions (SD=1.28) are gathered in item 9 "Length satisfaction", that collects a great variety of opinions.

Bivariant analysis of the questionnaires

Below are the cross-matched data of some significant variables from the questionnaire used in this research.

Table 5
Course and Motivation Variables

Course	1f	2f	3f	4f	Total
5 th Grade	0	2	6	28	36
6 th Grade	2	5	50	37	94
Total	2	7	56	65	135

Data in Table 5 comparing the "Motivation" and the "Course" variable verify how 5th grade students are even more motivated than 6th grade students regarding their participation in the program. The difference is statistically significant when the χ^2 test results in a value of 16.51 (p=0.001, with 3 g l).

Table 6
Age and Item 13 “Technicians’ availability” Variables

Age	1f	2f	3f	4f	Total
10	0	5	3	13	21
11	0	1	3	53	57
12	0	2	2	44	48
13	0	0	0	3	3
Total	0	8	8	113	129

In Table 6, when performing the Pearson’s χ^2 test ($p=0.007$, with $\chi^2=17.54$ with 6 g l) it can be outlined that the 10-year old ‘s student body considered that the technician in charge of teaching the program was less available. This was caused by the fact that the program in 5th Grade was taught by joining two classroom groups corresponding to the same school year, which consequently resulted in a higher ratio of students per classroom, in comparison with the rest of the courses. Them this hindered the possibility to give the student a personalized service.

Discussion and conclusions

From the work that has been carried out throughout this research, it can be concluded that the general objectives have been met. It evaluated the Drug Addiction Prevention Program “Entre Todos” from Proyecto Hombre Association. As well, some possible improvements have been detected.

This section gathers a global evaluation of the results on which the researched was based, standing out that, in spite of having an interpretative approach, it can bring to light key data that may be applicable to other drug addiction prevention programs. Evaluating this kind of programs, with the aim to check if the objectives are met and the impact they produce in the target population may be useful for their possible implementation, with any needed modifications, in other educational centers (Jiménez-Iglesias *et al.*, 2010).

Through the sample and the used data, the objective of finding possible improvements in the program has been met. These aspects are:

Concerning the resources used during the program, Information and Communication Technologies - ICTs could be included in the classroom in order to make more dynamic and motivating sessions.

In relation to the length, it would be necessary to extend the program’s length and considering it as a constant during the academic year. In this way, the program’s implementation would be more effective and would be sustainable in the long term. Moreover, the population would be aware about the importance of the addictions’ problem, demonstrating that education can make resources available to solve it.

About the contents and subjects talked of with the students, it is concluded that extending them would constitute a possible improvement. In this regard, more

current topics should be included, related to the mass media and new technologies. The aforementioned is related to what was mentioned about the program's length, since it is actually complicated to deepen in the variety of proposed topics in the original program's planning in only 4 sessions.

As the results show, joining two groups in the same classroom should be as well changed, for it prejudices the students' personalized service and causes that the contents cannot be understood clearly, consequently decreasing the program's effectiveness.

In addition, another improvement that could be interesting would be training the teaching staff that is to teach such contents and eases the development of activities similar to this one, promoting the program's sustainability in the long term. In the current classroom's dynamics, the teaching staff has limited resources and schedules as to dedicate the required time to this kind of socio educational activities.

With reference to the methodology, even though the students have been motivated during the program, it is true that it would be required to include more activities in which they can interact with each other and with the technician or teaching Staff in charge of teaching the prevention sessions.

An essential point would be that the program includes a specific section to exclusively work with the families of students who are following the program. Since family and non-formal education play an essential role with connection to creating an addiction (Muñoz, Sanstede & Kimenko, 2016; Pinazo & Ferrer, 2001).

By carrying out this research, the need for addiction prevention programs in educational centers is evinced again (Sierra *et al.*, 2017; Jiménez-Iglesias *et al.*, 2010).

In conclusion, educational prevention should not only be restricted to providing information but it should seek for a change in the established behaviors and the search for values that favor the individual's development, for it is through these factors that one can reduce or alleviate the difficulties and personality issues addicted people and, concretely, adolescents present (Becoña, Rodríguez & Salazar, 1995).

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INCLUSIVE EDUCATION THROUGH CHILDREN'S LITERATURE: READING TO INTERIORIZE DIFFERENCES

Lorena Pulido-Mantas

Susana Ruiz-Seisdedos

Universidad de Jaén

Abstract. The meaning of Inclusive Education throughout the history of education in our country, has been taking different meanings and multiple forms. We are in a continuous process of change and it is necessary to train teachers with new skills, capable of facing what the word inclusion really means. The purpose of this review is to take a path of Inclusive Education and propose new pedagogical practices that provide experiential and enriching experiences. The concept of Children's Literature will also be studied; from the difficulty it presents as such to the importance of the story as a resource to address the diversity of the classroom. Finally, an "inclusion proposal" is proposed that combines both aspects, on the one hand, the importance of educational inclusion and, on the other hand, the possibility of improving that situation through children's literature. The methodology was based on analyzing the content of stories that talk about characters with functional diversity and once the theme and the "disabilities" were determined, those whose text spoke of functional diversities that were associated with an ephemeris worked in the school were selected. This proposal focuses on highlighting the knowledge and discoveries made about inclusion in current years and the intrinsic value of literature in the classroom. It concludes with the idea of a didactic proposal that allows us to check and study in detail if the works are adequate to treat the inclusion in the classroom.

Keywords: Functional diversity, educational inclusion, children's literature.

EDUCACIÓN INCLUSIVA A TRAVÉS DE LA LITERATURA INFANTIL: LA LECTURA PARA INTERIORIZAR LAS DIFERENCIAS

Resumen. El significado de Educación Inclusiva a lo largo de la historia de la educación en nuestro país, ha ido tomando diferentes significados y múltiples formas. Nos encontramos en continuo proceso de cambio y para ello se hace necesario formar a docentes con nuevas competencias, capaces de afrontar lo que verdaderamente significa la palabra inclusión. La finalidad de la presente revisión es hacer un recorrido por la Educación Inclusiva y proponer nuevas prácticas pedagógicas que proporcionen experiencias vivenciales y enriquecedoras. También se estudiará el concepto de Literatura Infantil, desde la dificultad que presenta éste como tal hasta la importancia del cuento como recurso para atender la

diversidad del aula. Por último, se plantea una “propuesta de inclusión” que combine ambos aspectos, la importancia de la inclusión educativa y la posibilidad de mejorar esa situación a través de la literatura infantil. La metodología se basó en analizar el contenido de cuentos que hablan sobre personajes con diversidad funcional y, una vez determinada la temática y las “discapacidades” que trataban éstos, se seleccionaron aquellos cuyo texto hablara de diversidades funcionales que se asociaran a una efeméride trabajada en el colegio. Esta propuesta se centra en poner de manifiesto los conocimientos y los descubrimientos realizados sobre la inclusión en los últimos años y el valor intrínseco de la literatura en el aula. Se concluye con la idea de una propuesta didáctica que nos permita comprobar y estudiar en detalle si las obras propuestas son adecuadas para tratar la inclusión en el aula.

Palabras clave: Diversidad funcional, inclusión educativa, literatura infantil.

Introduction

Throughout history, many derogatory terms have been used to designate people with functional diversity (FD): impaired, disabled, handicapped, etc. However, this situation has been changing thanks to several documents that focus on the person, not on his/her limitations. Documents such as “the text of the United Nations Convention on Rights of Persons with Disabilities”; the Royal Legislative Decree 1/2003, of December 3, which approves the Codified Text of the General Law on the rights of persons with disabilities and their social inclusion; or more recently, the Organic Law 8/2013, of December 9, on the Educational Quality Improvement (LOMCE), for which the basic principles are now taken into account: quality, equity, educational inclusion, flexibility, not discrimination and educational participation.

In general, as it can be seen, the need to meet the requirements of people with FD is a remarkable aspect in the recent laws. However, it is common that the current educational reality in such centers is quite distant from what it should be. Therefore, it is necessary to propose solutions that “will help in the education, the learning, the development of various capabilities, the discovery and the subsequent use of multiple intelligences” (Flórez, 2016, p.60).

It therefore expresses the need to establish children’s literature as a way of inclusion for all individuals. Through stories whose protagonists are people with FD, we may delve into the lives of these people and develop values, feelings of empathy and a connection with the world that surrounds us. Children’s literature has its most valuable role in providing entertainment and enjoyment by itself, but on the other hand, it is also an excellent means of providing, through a language of symbols, satisfactory answers to a child’s existential problems during his development. In addition to all of this, it is necessary to emphasize its contribution regarding reading and writing skills, to expand the imagination, to provide general or specific social attitudes, and to inculcate values as well, and help address certain topics and issues that seek a solution to a problem.

Lastly, we conclude with the idea of an “Inclusion Proposal” that combines both aspects; the importance of educational inclusion and the possibility of improving said situation through children’s literature, with the tale as a pedagogical resource.

Inclusive Education

From Special Ed toward Inclusive Education: life in Spain.

The Special Education sprang to define a type of education that is different from the one practiced with individuals whose development followed what was considered 'normal' patterns. What the US intended throughout this operating process, as a system parallel to the regular teaching, was to compensate for shortcomings and solve specific learning problems so that people with FD could achieve autonomy and personal independence.

The society that we live in is a dynamic one, and is currently undergoing a profound change, by which it is necessary for today's education to provide an innovative response, and for teachers to consequently prepare themselves for said educational innovation. They must break from traditional teaching practices and move toward new approaches in the construction of knowledge, learning and the forms of school organization, as demanded by the current system.

Looking at the different periods and models by which society has gone through, we will identify the evolution of the educational attention given toward these people.

Ancient Societies

People with a "deficiency" suffered rejection and segregation from society, condemned to live without any type of advancement. The demonology model predominated first, and subsequently gave rise to the biological model.

The Middle Age or the Psychiatric Obscurantism Period

People with DF had few options for progression and usually ended up as either jesters in palaces, or as beggars on the streets. The church's efforts in various fields also stand out: defending human dignity for the sick, charitable action for the most disadvantaged and marginalized individuals of society and putting an end to infanticide.

Psychiatric Naturalism

Mental illness began to be related as something inherent in human nature during the Renaissance. Thus begins the so-called psychiatric Naturalism and humanistic ideas. The first experiences of educational care also arise, but there are differences depending on whether the person has physical or mental disabilities. In Spain, the figures of Ponce de Leon and Juan Pablo-Bonet in the 16th and 17th centuries should be noted; the creation of a class for the deaf in 1800, sponsored by the City of Barcelona; and the Royal School for the Deaf in Madrid in 1802.

The 20th century: the era of institutions: The medical model predominates, which considers a disabled child as a sick individual who should receive medical attention. On the other hand, a sick child was considered as not able to decide for himself; by which these institutions became organized into boarding facilities. The fundamental aim was to keep disabled people separated from society.

In Spain, the first section for "abnormals" is created in the "School for the Blind, deaf-mute and abnormals" (1911, Barcelona). In 1914, the "National Board for Abnormals" is created, which would later be divided into three sections, giving rise to the "National Institute for the Deaf, Blind, and Abnormals" (1921).

SE in Specific Centers

A network of special schools begins to appear for students who, for some reason, could not be in the regular system; dealing with the "deficit" in specific centers and differentiated classes.

In Spain, it was not until 1945 and the enactment of the Primary Education Act of 17 July that the elementary education of the “mentally retarded” was contemplated once more, recognizing the Public Administration as the creator of Special Ed schools. With the creation of the “Spanish Society of Pedagogy” (1949), the first epidemiological studies on mental disability were carried out in the country. In 6 March 1953, the “National Board of Abnormal National Education” is created.

During the 1960s, an economic progression occurs in Spain that has an impact in the field of education, which saw the increase in the construction of schools. In 1965, 16 October 2925 Decree is enacted, which regulates the activities of the Ministry of National Education for Special Ed (first official document on the management of Special Ed).

In 1964, the first Therapeutic Pedagogy courses in Spain (16 November) are convened to train teachers in the Special Ed as required in those centers that were being created. Later, the General Education and Financing of the Educational Reform in 1970, introduces Special Ed for the first time within the General Education System, and places it under the General Direction of Vocational Training and Educational Outreach, creating the Office for Continuing and Special Education; enrolling students with FD to Special Ed schools and creating specific classrooms within ordinary schools when such problems are milder.

In 1970, the Social Service for the Recovery and Rehabilitation of the Disabled (SEREM, *Servicio Social de Recuperación y Rehabilitación de Minusválidos in Spanish*) is created under the Ministry of Labor, to deal with those tasks related to assessing and determining aid and treatment. In 1978, its name is changed to the Social Service Institute (INSERSO, *Instituto de Servicios Sociales*), known today as the Institute for Social Services and the Elderly.

The National Institute for Special Ed (1975) is subsequently created as a result of the implementation of the General Education Act. Years later, this produced the National Special Ed Plan (1978), with the document being considered the Magna Carta of Special Ed in Spain, as placed within the socio-political context of the time, after the enactment of the Spanish Constitution (1978).

This document will promote the implementation of School Integration and the progression of the Normalization process in Spain, as it introduces the principle of service normalizations and school integrations for the first time. It incorporates, in turn, the principle of individualization and sectorization.

However, the compliance with the National Special Ed Plan would have to wait until 1982, when the Social Integration for the Disabled Act would be promulgated, picking up issues relating to personal aspects, health, education and work related to the integration of these people.

Through this Act, Spain adheres to the Declaration on the Rights of Mentally Retarded Persons (United Nations, 1971) and the Declaration on the Rights of Disabled Persons (United Nations, 1975), laying down the foundations for school integration.

School Integration

This stage is dominated by the sociological model, which arises as a reaction to the disabled model which consider a disability as a disease. The “mentally disabled” person is treated as an individual capable of learning, and considers him to be a citizen with the same rights and obligations as any other.

This normalization assumes that people with FD should, to the extent possible, acquire the behaviors common to their cultural environment, developing a type of life that is as normal as possible while performing the same activities as all others do. Concerning public authorities, they understand normalization from the point of view that people with FD should also use normal public services; this implies schooling in ordinary schools.

The implementation of school integration in Spain is characterized by a long journey that begins with the country's democratization process. Since the 1960s, there was an attempt to provide schooling for people with FD in ordinary schools in place of specific centers, taking the process of normalization as a basis. However, due to the political, economic and social problems inherent to the dictatorship that Spain was immersed in, this educational approach was delayed (García Pastor, 1993, quoted in Arnaiz, 2003).

Spain joined the school integration movement in 1985, through Royal Decree 334/1985 on the Special Ed Decree and the Ministerial Order of 20 March of the same year, on the planning of Special Ed and the experimentation with school integration. It followed the United Kingdom approach, specifically what was picked up by the Warnock Report (1978), incorporating the concept of special educational needs, which was officially adopted under the LOGSE enactment (1990).

This fact was fundamental for the country, as was the recognition of people with FD to be taught in an as much standardized environment as possible. Many students were "removed" from closed off Special Ed classrooms so as to be integrated in regular classrooms.

Inclusive School or a "School for All"

The implementation of school integration seems to be encapsulated in a different world, reducing the attention paid to a very small number of students with special educational needs. This is due to the fact that an international movement was begun by professionals, parents, and people with FD themselves to fight against the Special Ed's idea that was taking place.

In the United States, the so-called "Regular Education Initiative" (REI) movement appears, which purpose will be the inclusion of FD children in ordinary schools. The inclusion movement appears (at the end of the 1980s and early 1990s), as a continuation of this movement within the American context and that of school integration movements in other parts of the world. In Spain, we must highlight the works of Arnaiz (1996), García Pastor (1993) and Ortiz (1996), quoted in Arnaiz (2003).

From here, schools are faced with the challenge of developing a pedagogy able to educate all children, regardless of their capabilities. To this end, the UNESCO Report, carried out by the International Commission on Education for the Twenty-first Century, proposes four basic pillars that should focus on education throughout a person's life (Delors, 2013): Learning to know, learning to do, learning to live together and learning to be.

On the basis of these statements and reports, we can see that the causes that encouraged the emergence for inclusion are essentially two: recognizing education as a right; and considering diversity as an essential educational value for the transformation of the centers.

However, it is necessary to work toward achieving this school, as only a bad interpretation of the “special educational needs” concept has materialized so far. What is established is an effective response to the student body diversity, quality education for all through transforming the curriculum, teacher training, effective leadership, modification of the school’s culture and organization, as well as a commitment to change (Marchesi, Palacios and Coll, 2005).

The Organic Law 8/2013, December 9, for the improvement of the educational quality (LOMCE), highlights the importance of the following concept: Students with Specific Needs of Educational Support (ANEAE, *Alumnado con Necesidades Específicas de Apoyo Educativo*). This establishes that it has to do with students who require from a different educational attention than the ordinary ones, for they have special educational needs, specific learning disabilities, ADHD, due to their high intellectual capacities, due to a late incorporation into the educational system, or due to personal conditions or school history (LOMCE, 2013). This implies that the educational centers must have the necessary means so that all students reach their maximum personal, intellectual, social and emotional development, as well as the objectives as set out in the Act.

In this sense, with the publication of the 8 March 2017 Instructions, the detection protocol, the ANEAE identification and the organization of the educational response are all brought up to date, which had been used until then for promoting greater inclusion.

Therefore, the challenge of inclusive education involves three key challenges: a reduction of inequalities to diminish educational and social disparities; respect for diversity, which involves taking the specificities of each group of people from each region, their cultural practices and the nature of the subject involved, all into account; and, the belief that it is necessary to educate for diversity in a pluralistic and democratic society, which means that it must lead to a respectful coexistence of differences, especially diversity as a corporate and positive value (Fontes, et al., 2006, quoted in Messias, et al., 2012).

New pedagogical practices: enriching experiences.

If we associate diversity with “inclusion”, we will be able to observe how the concept of diversity is internalized far from what it really means to be inclusive in today’s centers. A radical paradigm shift is needed in education that reflects and accepts these differences, becoming enriched by them, sharing spaces, activities, common lessons, etc., but if we are all different, why apply the same to all?

There is a need to move toward a more inclusive and cohesive society, and to do this we must not forget that INCLUSION is not a place, but an attitude and a value that should illuminate policies and practices that give birth to a fundamental right such as quality education, and a school practice with a need to learn within the context of a school culture that accepts and respects differences (Echeita, 2006).

Until now, it had been supported on an approach that was exclusively centered on individual issues, where all the strategies were addressed to the individual. This perspective has led to many negative effects, such as “labeling, the partial framing of answers, limitations to opportunities, the misuse of resources and a lack of commitment toward social change” (Vega Fuente, 2004, quoted by Gento, 2006).

The need for a more effective and inclusive school is, therefore, imminent if it seeks to provide an educational response to each and every one of its students. In this

way, a reform process must be set in motion that affects the conception, curricular and organizational reality of such centers and classrooms, as well as its methodological strategies. Though we live in the 21st century, we are surrounded by 20th century schools, thus we can no longer be anchored to the past. We must abandon said static situation and move toward a more dynamic attitude, allowing us to carry out innovative processes to adapt to the changing reality.

This reality poses one of the fundamental challenges of inclusion referring to the training of teachers. The teaching staff must adopt new commitments in their role, have a favorable attitude toward diversity, as well as adequate training for providing educational attention. In general, we see a lack of training today to deal with this diversity (Cooper and Kurtts, 2004; Dendra, Durán and Verdugo, 1991; García, García, García and Rodríguez, 1992, quoted by Gento 2006) in spite of teachers' positive attitude before said inclusive philosophy (Chiner-Sanz, 2011; Jiménez, Rodríguez, Sánchez and Rodríguez, 2018).

With regard to this last idea, it is necessary to train teachers to gain knowledge in various academic disciplines, enabling them to understand, assume, plan, justify and reflect on their own practices and ways of performing (Pérez, 2010, quoted by Arnaiz, 2012). A different training to address a change in mentality and the use of strategies so that each student experiences as much as possible, with the result of being projected beyond educational institutions (Parrilla, 2007, quoted by Arnaiz, 2012).

It is necessary to “rethink the school from a new educational model” (Chaves, Do Nascimento y Castellar, 2018). The best way to overcome any obstacle in this sense can be through experiential learning, where all students progress through exploring, creating, discovering and experiencing their surroundings. Learning through experience and the senses is a learning process that has no beginning and no end, as it is always present every day, while also having the great advantage of being within everyone's reach. Promoting respect toward others should be the basis for classroom inclusion. The fact that everyone understands that being different is the best that can happen to us.

Children's Literature

Concept and history of “children's literature”.

The words “children's literature” are not exempt from being debated, since there is no international unanimity with regards to the gender. It is, thus, important to delimit and clarify each of these words, and how to delve into them. Hence the need to create a historical frame of reference that would clearly illustrate the main creative and ideological flows when writing for children (Hernández, 2006).

For Freire, as quoted by Sáenz, 2005, literature is “one of the fine arts that expresses beauty by means of the word” (p.10). According to writer López, quoted by González, 2015, children's literature is the one that “is appropriate for human development without renouncing the universality of subjects” (p.29). Lastly, Soriano, quoted by González, 2015, conveys the idea that literature is “a literary and historical communication, in other words, it is located in time and space between an adult speaker or writer, the sender, and a recipient child, being the receiver, and who by definition, only experiences part of the reality and the linguistic, intellectual, emotional, etc. structures that are characteristic of adulthood” (p.29).

The concept of children's literature is determined by its claim of globalization, by which all productions that carry the word as its main vehicle with an artistic or creative touch, with a child as intended receptor, should be admitted under this construct (Clarkson, 1989). However, although this type of literature is now increasingly becoming popular, it lacked literary quality and conditions in past years, likewise denying the need to introduce certain qualifiers (for children) to this concept, ignoring the existence of a wide range of literary productions whose main characteristic was to have a child as recipient. It is important to remember that just because it is "for children", it does not cease to be literature, and so its specific name should be given recognition in the same way as a detective novel or women's literature.

An issue of concern is that children's literature as a discipline of study does not exist in Literature, Pedagogy nor in the Psychology faculties. In the best of cases, we can find it as a part of a subject within the Teaching of Literature or the History of Literature. How will future teachers learn about children's literature to address further learning based on the student's interests? And what is worse, how will they put it into practice, so that their students are able to benefit from the experiences this can offer? This absence has contributed not only to a lack of awareness of children's literature, but also contribute to it being discredited. It is discredited in such a way that it ends up out of the classroom and, consequently, the child's beginnings in literature is done through those intended for adults.

If we embark on a journey through the history of literature, we can see that the first creations to which children had access were traditional literature, composed of subjects that did not appear to be suitable for them, even if they are no different than comics, television and film productions nowadays (Hernández, 2006). In the 18th century, as a resulting concern for children, a publishing production intended exclusively for children was created, which would mark the historical starting point for children's literature. These were the so-called "lessons" or "morals", disseminated through fables and stories, establishing the principles for these types of publications.

With time, certain productions began to be considered suitable for children, though their original intention was not as such. This was the case of Jean de la Fontaine and his cultured fables, full of didactic purposes, even becoming the end-of-year award for students in the 19th century. During this period stands out the force of the romantic movement that gave rise to the second great moment in children and youth's literature, with the publication of *Children's and Household Tales* (1812) by Jacob and Wilhelm Grimm. Later, around 1835, Hans Christian Andersen's children's stories were published in Denmark, becoming the third milestone for children's literature. Although Andersen wrote many plays, novels and travel books, he was best known for his more than 150 stories written especially for children, thus creating a style of much influence (20th century).

Subsequently, there is much awareness in Europe that asserts that "children" are a real public that must be addressed. Since then, a greater interest was placed on writers and publishers to meet the new needs demanded by an increase in children's literacy rates and the gradual change in family models.

From the second half of the 19th century, there was a multiplication of European authors who thought of children and young people with such works as: the two volumes of Alice (*Alice in Wonderland* and *Alice Through the Looking Glass*) by Lewis Carroll; many of Oscar Wilde's stories; *Treasure Island* by Robert L. Stevenson; *The Jungle Book* and other titles by Kipling; *The Adventures of Pinocchio* by Collodi; and the large

collection and first great editorial boom of the genre, *Five Weeks in a Balloon* (1863), by Jules Verne.

In Europe, children's books for sole educational purposes begin to appear with the arrival of the printing press, and it is not until the twentieth century when authors pursue them once more. However, many of the published works are from teachers, full of good intentions but with poor writing skills, who still referred to early childhood as a period required to be quickly overcome. The second half of the 20th century marked the beginning of children's literature at the global level.

The tale as a resource for addressing classroom diversity: selection criteria.

One of the most used resources for teaching culture in a society is the tale. Through the oral story of different facts and events, people build their own history, identifying and becoming a part of it. For this reason, the story becomes an important resource for transmitting information from one person to another and is especially effective when used with children, since they are captivated from the first moment by the way in which it is told, they even identify themselves with the characters, while stimulating their creativity. It can be said that the tale is essential for gaining knowledge in a dynamic and playful way (Fonseca and Sánchez, 2014).

When defining the tale, we find ourselves with a multitude of authors who have different ways of describing it. For Pelegrín (1989, quoted by González, 2015), "the tale has an immensely wonderful power, since everything that the child learns through it gains momentum, acting in unrealistic, magical and even absurd ways that fill their mental universe with cathartic and evocative nuances" (p.30).

For his part, writer Guillermo Cabrera (2001) points out that:

The tale is as old as mankind. Perhaps more ancient still, since primates could have told tales grunting, which is the origin of the human language: one grunt being good, two grunts being better, and three grunts forming a sentence. But before that, whether sung or written, there were tales made from prose: a tale in verse is not a tale but something else: a poem, an ode, a narrative with metrics and perhaps with rhyme: a sung but untold occasion, a song. (p.12).

For Bosch (1999, quoted by Fonseca and Sánchez, 2014), a tale is the story of a fact that has unquestionable importance and which must be compelling to general readers. On the other hand, Reina (2012, quoted by González, 2015), described it as a short story of imaginary facts, with a single character, for moral or recreational purposes, which stimulates the imagination and awakens a child's curiosity. While for Burgos and Llor (2009, quoted by Fonseca and Sánchez, 2014), the tale is a short story written in prose, which tells fantastic or fictional facts, in a simple and concentrated way, as if it had happened in reality.

In this way, the tale is established as a short and brief narrative, which may be based on actual facts, but lies within the realm of fiction. It is characterized by having an exposition, climax and resolution, with the participation of several characters, who create a plot through their actions.

The tale has many classifications, as many as authors, however, none of these classifications expresses a clear concept that defines where to include a book addressing

people with FD. Since children come to learn anything in a playful manner with a tale, why not explain the differences between people through this method?

In this way, they will better understand those differences that shape us as people, why their schoolmate does things differently than they do, or even talks differently.

Children can be educated on the diversity through the story from two perspectives; from classic tales that address “disability”, and from the current stories undertaking this concept from a broader perspective. Whatever the adopted method, a number of criteria should be taken into account when selecting those stories to work on diversity:

- Clear and simple language.
- Vocabulary and scope according to the reader’s age.
- Books that provide sensory experiences (visual, auditory, tactile, kinesthetic) and that invite the reader to participate.
- Interesting stories, with natural non-artificial language, whose topics are rich and inventive.
- Original and non-stereotypical artwork, broadening aesthetic sensitivity, rich in meanings, consistent, sequential in the creation of its environments and characters, and extending the book’s meaning.
- Illustrations can even be used without words to invite children to tell their own stories basing on ingenious approaches.

The magic of stories and the moral values they hold, enable to subtly create awareness about FD. Not only does this achieve in introducing the concept of “disability” to students, but it also enables a better understanding of this collective (Sandoval and Carpena, 2013).

Proposal for working on the inclusion of students with functional diversity through children’s literature in first year primary education: tales.

Introduction/Justification.

Attention to diversity is the great challenge of the education system, and being demanding, of society as a whole. An adjustment is required of the educational intervention for the real needs of students in schools, so as to ensure quality educational action, which itself requires the important task of reflection and teamwork from facilities and the faculty. There is still a long way to go in today’s society. Minority groups are consistently discriminated and excluded from both learning and participating in society.

Education and society, therefore, go hand in hand, as one depends on the other. The changes created in society are experienced by education, and vice versa. This is where the importance of creating changes resides, and what better way for a teacher to do this than from his own classroom, with the support of the entire teaching staff.

If we want to be fairer, more inclusive, where we once saw “incapacity” and change that into “capacity”, it is necessary to begin with this group; with children in the classroom, making an early intervention in understanding diversity and preventing

social exclusion. When reviewing research on the topic sought to be accomplished, we see that this is certainly scarce. Many speak of inclusion and diversity, but how do we truly encourage the required change?

The aim is, therefore, that this proposal works the FD in the classroom through children's literature, raising the student's awareness about each and everyone's possibilities and limitations in this way, while respecting them as well. Tales draw the children's attention by definition and have always been present throughout history, but apart from transmitting knowledge, they also transmit culture, which is a compelling reason to take them into account as a means of achieving the proposed goal. The child experiences, feels, lives, and puts himself in someone else's shoes through a tale; therefore, by working on values, feelings and emotions, we make the student grow as a person, understanding his world and respecting those around.

Dr. Margaret Chan (2011) of the World Health Organization, said in a press release: "We must do more to break the barriers which segregate people with disabilities, in many cases forcing them to the margins of society". We must pay attention to the person and not the "disability" as, otherwise, apart from being a negative aspect for the child, it would deprive society of all that the person would have to offer.

Objectives.

- Develop communication as a facilitator of interaction.
- Improve interpersonal relationships.
- Identify "functional diversity" as presented by characters in stories, and think about how we may help them.
- Encourage creativity and interest.
- Accept and respect the abilities of the individual.
- Remove barriers for students with specific needs of educational support.

Content.

- Functional diversity.
- Children's tale.
- Reading, writing and oral expression.
- Emotional well-being: mental stability, absence of negative feelings, satisfaction and self-concept.
- Interpersonal relations: positive and rewarding social relationships.
- Personal development: education, learning opportunities, functional skills.
- Self-determination: autonomy, goals, and personal preferences, decisions and choices.
- Social inclusion: participation, integration and support.
- Rights: knowledge and defense of human rights, privacy and respect.

Recipients

The group of people for which this proposal is intended would be any group-class of first-year elementary school (6-7 years old). To properly adapt the proceedings with the children from this age group, it is necessary to take into account the psycho-evolutionary features of this group in all areas of development (Trianes and Gallardo, Delval, 2012; 2011; Palaces, Marchesi and Coll, 2013; García, 2014).

Methodology: proposal development.

The established inclusion proposal is designed to be worked on during an academic year. It will take place within a classroom, with some sessions being carried out in the school yard or in the space assigned for physical activity. It will also count on the support of the center's management and all its teachers, conducting collaborative and cooperative work in order to achieve the effective inclusion of all students, hoping that it can be extrapolated to the rest of society.

All members of the class must act as active agents with participation from the teacher, interacting with students and intervening constantly. Explanations by the teacher should be brief, clear and concise, justifying each activity and offering students the reasons why they are carrying it out. The rules and procedure will be explained.

On the other hand, we will ensure that all students carry out the activity correctly during the sessions, taking their different views into consideration so as to create respectful habits for the opinions of others, fostering motivation and participation.

The main aim of education is the person's integral development. In order to achieve progress toward said path, we will therefore use a methodology that takes the different paces of learning into account, fostering the ability for independent learning while promoting teamwork. Such will be the teaching styles used: task assignment, reciprocal teaching, guided discovery, problem solving and cooperative learning, enabling participation, promoting socialization, applying cognition, promoting creativity and encouraging individualization. To this end, activities will be carried out through tasks, working in small and large groups.

Before the start of the proposal, a record will be carried out to observe exclusion behaviors that students of the classroom may submit other colleagues to, as well as any violent behavior or verbal violence. Once this is done, the sessions will begin. The proposal will consist of integrated didactic units and will always follow the same methodology; it will begin by brainstorming ideas to make way for the content to be worked, and will always conclude with a photograph of the group and what was worked on during the day. The session will be assessed through direct observation and control.

The reason for the proposed book selections to be used for the session is determined by the relationship between the book subject and the ephemeris worked on at the school, since they represent both the social and cultural history as a series of values that create our identity. Below is a list of stories related to the ephemeris, their timing and the number of sessions:

- *Four Little Corners* by Jérôme Ruillier: This story teaches important values such as solidarity, search for solutions, acceptance, integration and teamwork. Work with the book will coincide with the International Day of Peace. Week of September 21 (5 sessions).

- *The Black Book of Colors* by Menena Cottin and Rosana Faría: Through this book, we can understand how colors are perceived for a blind person, inviting us to know how sight is transformed into thousands of smells, tastes, sounds, and emotions. Work with the book will be done in conjunction with the International Day of Sight on the Week of October 10 (5 sessions).
- *Los zapatos de Marta* by Meritxell Margarit, with illustrations by Marta Montaña: To understand the difficulties that a person with motor disability may face and what his needs might be, we only need to spend a day with Marta. We will understand why some people use canes and special shoes for walking, in addition, we will also learn such values as friendship and respect. Work with the book will coincide with the International Day of Spina Bifida. Week of November 21(5 sessions).
- *El Caso de Lorenzo* by Isabelle Carrier: Through this story we will understand that everyone is different, that each one of us has some characteristics that make us peculiar, unique and unrepeatable. Work with the book will be done in conjunction with the International Day of Persons with Disabilities. Week of December 3 (5 sessions).
- *Butterfly Ears* by Luisa Aguilar, with illustrations by André Neves: We will understand certain inappropriate behaviors, such as the verbal violence some children are subject to because of their peers. Work with the book will be done in conjunction with the School Day of Non-Violence and Peace. Week of January 30 (5 sessions).
- *The Day when Saida Arrived* by Susana Gómez Redondo, with illustrations by Sonja Wimmer: We will read about such values as friendship, tolerance, respect and multiculturalism, highlighting the beauty of learning from one another. Work with the book will coincide on the Day of Love and Friendship. Week of February 14 (5 sessions).
- *Man of Color!* by Jérôme Ruillier: This story reflects the values of friendship and multiculturalism in the face of prejudice and xenophobia in a surprising and suggestive way. Work on the book will coincide with the International Day for the Elimination of Racial Discrimination. Week of March 21 (5 sessions).
- *Pink Monster* by Olga de Dios: This book shows us the value of difference, making us understand diversity as an enriching element to our society. We will use the adapted version from Arasaac's pictographs (Aragonese Portal of Augmentative and Alternative Communication) to understand the way people with autism spectrum disorders communicate. Work with the book will be done in conjunction with the World Autism Awareness Day. Week of April 2 (5 sessions).
- *Elmer* by David Mckee: We end our proposal with this book, speaking once more about diversity, of difference as an added value that enriches us all and helps us be good people. We will also do so by introducing the essential resource that is music. Through it, we express a multitude of emotions and feelings in a spectacular way, helping us to become uninhibited and better display our qualities. Work with the book will be done in reference to the European Day of Music. Week of June 16 (5 sessions).

The sessions will have a duration of fifty-five minutes a day during the established week. These hours will vary each day according to the content to be worked on, for example: if we want to carry out a small interpretation of the book, it may be done during the Artistic Education hour; if we want to encourage cooperative play, we may do so during the Physical Education hour. All the activities carried out in the different subjects, will go hand in hand with the story theme for the week.

The resources that will enable the desired actions will be, among others:

- Human Resources: teaching staff, classroom teacher, a teacher specialized in an area, educator and psychologist.
- Material Resources: prints, consumables, audiovisuals, ICTs, three-dimensional models, specific material to the areas, etc.
- Of Time and Space: the school, classrooms, playground, fitness centers and sport fields, etc.
- Lastly, it is necessary to establish some general teaching guidelines to encourage inclusive education:
- Encouraging a barrier-free environment at the methodological, behavioral, organizational and social level. Meaning setting aside a rigid curriculum.
- Commitment and cooperation from the entire educational community, as well as those that comprise the interactive groups among the different members.
- Use of a specific methodology that enables interaction between all students, as for example: Project Based Learning (PBL), flipped classroom, interactive resources to facilitate experiential learning, multiple intelligences, gamification in the classroom, design thinking, and thinking based learning, etc.
- Assume a professional research-action role, where the teacher studies their students' learning process.
- Eliminate the idea of using the student's evaluation results (qualification) as a criterion, as this could lead to the student's failure at school. It is preferable, instead, to focus on addressing the process.

Lastly, if the educational proposal is carried out and we would like to know its effectiveness, it would be advisable, once the intervention is applied, that a meta-assessment be done with such questions such as:

- Are the task objectives motivational?
- Does the proposal create learning contexts?
- Is there an improvement on social inclusion in the classroom?
- Is it gratifying for the teacher?
- Does it also develop the professional and personal competencies?

Before the start of the proposal, the classroom teacher will carry out a systematic observation and record the behaviors of students that are not considered to be inclusive. During the sessions' course, the teacher will have an observation sheet, by which he will make an overall record on the knowledge that the students during the session are supposed to have gained at the end of every week. A report will be drawn up with both pre and post observations.

Conclusions

We have lived through a long period of ups and downs to reach what today seems to be fair and quality education for all, going from exclusion to inclusion in little more than two decades, while all fields of knowledge want to be a part of this history and provide their own perspective on the “problem”, which has perhaps created so many disagreements.

But real life is far from what we assume we have reached with regards to inclusion. Failure, marginalization or exclusion is what is still experienced today in many schools, particularly in students categorized as requiring from specific needs of educational support, supposedly protected by the laws in force.

If UNESCO already stated in 1994 that schools must find a way to successfully educate all children including those with severe disabilities, why is there a feeling of failure, of not having achieved enough? Society needs to find a path that is more fair and inclusive, which should begin in schools, as they know how to create a formidable motor for a change.

To believe that change is possible, apart from dreaming it, we must work on it. Schools can mean a great contribution. We must commit ourselves to new inclusive practices, to enable the change from our schools and our peers. Today, we know more about the conditions, processes and practices that can guide us toward an effective transformation. We must not be satisfied with the assertion that a person’s development is conditioned by social and personal determinants that can lead to failure or exclusion. The result of our student body is not predetermined, but is being constructed through the interaction with their peers and teachers. It is precisely the school community’s consistency of values and goals that enables us to make the journey toward improvement, as a complete system to be mobilized toward a common ideal.

It is therefore necessary for today’s schools to accept a paradigm change in education, where differences become an enriching opportunity, without schooling in centers or specialized and differentiated classrooms, and without rigid patterns that everyone must follow. On the other hand, the lack of teacher’s education to address this diversity is of concern, so, there is a need to train new pedagogical practices to gain knowledge in various academic disciplines, enabling teachers to understand, assume, plan, justify and reflect on their own practices and ways of acting, in order to be able to respond to any need required by a student without exception.

In this sense, teamwork from the entire teaching staff is of particular importance. Therefore, since we have a wide range of specialists in education, we should take advantage of this resource, moving toward a cooperative work where the professional may provide guidance to other teachers and students in the regular classroom without the need to “isolate” a child. If we continue to relegate children who are supposedly “incapable” and send them into specific centers and classrooms, then we are reinforcing the social isolation that we want to eliminate. We must pay attention to the emotional dimension and the personal welfare of everyone, as this is one of the fundamental aspects and topics for improved learning.

And by taking into account the emotional dimension and personal well-being, a proposal was put forward for inclusion through a resource available to all, such as literature; we can use it to create a change of perspective within our classrooms.

Literature is imagination, expression of emotions and feelings, understanding...this is definitely social, emotional, and cognitive development. Over the years, the education has focused on contributing to the education of critical, responsible and interactive individuals in society, and we are therefore going to take advantage of the values conveyed by moving to an alien world to achieve all of this. Said world is the one that reveals to us the stories where knowledge is presented in a fun and dynamic way, so that we may address a book that deals with people's FD, and so better understand the differences that shape us, to enrich each other while forgetting the difficulties.

In conclusion, it is necessary to emphasize that, although everything discussed aims to create new "levers for change" (Echeita, 2013), there are still inconveniences, however, that must be overcome once and for all. Some teachers usually reject the implementation of new methods, since they imply a change in the habits and traditional planning, and, as we already know, this is always a problem. A change of regulations may be inconvenient, as well as the development of projects that train teaching staff in all education areas and skills necessary to deal with any adversity, any challenge, since a large investment on the government's part would be required. However, is education not one of the basic pillars of the welfare state?

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THE CURRENT FRANKFURT'S PERSPECTIVE FOR THE CHALLENGES OF INCLUSIVE EDUCATION FOR AN EQUABLE WORLD

Victor Hugo Oliveira Pinto
Universidade Federal Fluminense (Brasil)

Abstract. This article deals with the analysis of Frankfurt's theorists, especially Adorno, Marcuse, Walter Benjamin and Horkheimer, and their relevance in relation to education. Motivation, faced with a world in which extreme-right values and religious fundamentalisms are promoted, such a scenario motivates us to question the role that education plays in combating extremism and intolerance. Scope of relevance. This article is directly related to the philosophy of education. Justification and relevance. This topic is justified because it deals with teleological aspects of the function of education. In the sense of questioning the teleological character of education based on philosophical concepts that seek the autonomy of the subject instead of just the human being to what is settled. As a methodology, it resorts to bibliographical studies and critical reflections on education and its political character in the construction of an emancipated social conscience of values that legitimize oppression. Results and discussion. A study on Critical Theory of Adorno, Horkheimer, Benjamin, Habermas and Marcuse was conducted as contributions to the construction of an education that, in addition to seeking inclusion, also seeks to be a political instrument to combat prejudice, which is nowadays alive again with the rise of religious fundamentalisms, xenophobia and the rise of extreme-right political ideas. Conclusion. It is concluded that the school has the political purpose to educate for a world of solidarity and respect for differences.

Keywords: Education, inclusion, citizenship, diversity, equity.

LA ACTUALIDAD DE LA PERSPECTIVA FRANKFURTIANA PARA LOS DESAFÍOS DE LA EDUCACIÓN INCLUSIVA PARA UN MUNDO ECUÁNIME

Resumen. El presente artículo aborda el análisis de los teóricos de Frankfurt, especialmente Adorno, Marcuse, Walter Benjamin y Horkheimer, y su actualidad en relación a la educación. La motivación, ante un mundo en que ascienden valores de extrema derecha y fundamentalismos religiosos, este escenario motiva a cuestionar cuál es el papel que la educación realiza para combatir extremismos e intolerancias. Ámbito de pertinencia. Este artículo está directamente relacionado con la filosofía de la educación. Justificación y relevancia. Se justifica este tema por tratar de aspectos teleológicos de la función de la educación. En el sentido de problematizar el carácter teleológico de la educación a partir de conceptos filosóficos que buscan la autonomía del sujeto en lugar de sólo adecuarlo a lo que está puesto. Como metodología recurre a los estudios bibliográficos y reflexiones críticas sobre la educación y su carácter político en la construcción de una conciencia social emancipada de valores que legitiman opresión. Resultado y discusión. Se realizó un estudio sobre teoría crítica de Adorno, Horkheimer, Benjamin, Habermas y Marcuse como aportes para la construcción de una educación que además de buscar la inclusión, busque también ser un instrumento político de combate a los valores de prejuicios, que hoy son reavivados con el ascenso de fundamentalismos religiosos, xenofobia y ascensión de la extrema derecha. Conclusión. Se concluye que la escuela tiene una finalidad política de educar para un mundo de solidaridad y respeto por las diferencias.

Palabras-clave: Educación, Inclusión, Ciudadanía, Diversidad, Equidad.

Introduction

The contemporary world reveals itself as doubtful and extremely fluent concerning its values, postmodernity is marked by the elimination of every ethical and moral foundations that served as pillars for society in this period (Bauman, 2007, 2001). In this sense, there is the perception that the contemporary society is marked by the atomization of individuals through extremely modern ideals (Charles, Lipovetsky, 2004) that cause people to lose their narrative ability. According to Benjamin (1987) history is not a straight line nor is it presenting stages towards progress, instead, it often shows some setbacks. In a world where technology far exceeded ancient mega constructions, technological inventions took centuries to be consolidated, now deadlines are short, with month intervals (Engels, Marx, 2008) human setbacks can be observed.

The contemporary world is marked by the rise of big information technologies, on contrast, the presence and rise of extreme right-wing and ultraconservative movements is increasing all around the world, be the cause fascists taking power in Ukraine in 2014 or the extreme right-wing taking power in the United States, even the evangelist wing in Brazil which is looking for substituting the constitutional ethics by the moral in the Bible. Before historical facts, it can be stated that technological development does not necessarily entail human progress. Basing on the Benjamin's analysis, the aim is to understand the alienation phenomena in education from the evidence of a teaching mechanism that is technical and just talk. Twenty-eight years after the World Conference on Education for All, held in Jontien in 1990 by UNESCO, the world keeps finding high illiteracy indexes. In accordance with the CIA World Factbook, close to 76% of the 789 million of illiterates in the world are grouped in ten countries (in decreasing order): India, China, Pakistan, Bangladesh, Nigeria, Ethiopia, Egypt, Brazil, Indonesia and the Democratic Republic of the Congo. Women represent three quarters of adult

illiterate around the world. The extremely low literacy indexes are grouped in three regions: South Asia, Western Asia and Sub-Saharan Africa. In those same countries, dictatorships and fundamentalist systems (theocracies) take power. In Europe, the same happens, in spite of illiteracy indexes being very low or even equal to zero, the rise of anti-immigrant movements, xenophobia and racism can be seen, as in the case of the neonazi march that took place in 2017, extremists honored Hitler on the streets of Berlin.

Before the contemporary context, the following is questioned:

Did technology guarantee human development and the rise of solidarity, equality and altruism values?

Does education format or educate people to reproduce certain value systems?

Despite every effort made in education for constructing population's citizenship, it did not guarantee that extremist values gained hearts and came to dispute hegemony in the contemporary society. For such reasons, it can be confirmed that homophobic, racist values and xenophobia continue to gain hegemony. In view of this socio political context, education at the present time is reassured as a key element to reach respect for diversity as well as to fight against discrimination and oppression (Adorno, 2012).

Methodology

Methodology and technique used for this research consisted of the bibliographic analysis of philosophers that were trying to understand in a critical way the school's political role in the emancipation of precepts through an education whose principle in education for diversity. For this reason, the present paper looks for answers in the Frankfurt School theorists, specially Adorno (2012) and Marcuse (1968), for their diverse reflections on the education's role in a world in which promises of a modern future of "Clarification, progress and prosperity" failed (Bauman, 1998). This research begins with the motivation to understand the current theories of the Frankfurt school about education, for the contemporary world remains marked by the advance of religious, ethnic fundamentalisms and extremisms.

In light of fundamentalisms and barbaric scenarios, authors like Adorno, Marcuse and Benjamin claim education has as its main political function to avoid values that justify barbaric actions from disappearing. From this pre-assumption, the paper looks to elucidate the current reflections on the education's political function to fight against prejudices and fundamentalisms through the critical analysis of the political, socio-economic and cultural setting of contemporaneity brought by contemporary authors like Žižek, Bauman, Debord y Lipovetsky. The choice of such authors is made due to that they deal with the superficialization of human relationships and the atomization of people as an element that makes it possible for extreme positions to advance. From the critical reflections brought by such authors, the paper critically analyzes the role and function of school has had as an instrument for the reproduction of power relationships that legitimize and justify social inequalities, but also signals the school as a place that needs to assume the political function of promoting emancipation via education for diversity and the mutual respect as a guarantee to avoid fundamentalism. The research is framed within the philosophical, historical, and political-social analysis of this topic.

The multifaceted approach is based on diverse analogy prisms (political, philosophical, cultural, socio-economic) and it is characterized for it is a qualitative research and aims to elucidate the current critical theory of the Frankfurt School for an emancipating education via this diversified analysis about the topic.

Justification and relevance

Inasmuch as the school is the first public place people have access to and construct narrative and interact with each other, it is necessary to understand:

The school is an essential agent to constitute who we are and its speech can legitimate other senses about who we can be when introducing other narratives for social life which are less limiting and more creative for our stories, guided by social justice. This is especially important if we think school if one of the first public spaces children have access to, that can contemplate alternatives to the private world of family or other institutions (church, for example) about who they can be (Lopes, 2008, p.134).

Basing on this type of argument, reflecting about the education's character becomes key, for it is an essential tool that helps construct subjectivity. Hence, one must wonder:

How has the education contributed to the emancipation and to the alienation of (prejudices) and to construct people's empowerment?

Is education capable of contributing to the individual's political and social emancipation? How is this process carried out by the education centers?

Exactly because a problem has been made out of this socio-political character of education this research can be justified, since education is not just a transmission of contents, for otherness and extracurricular values are fundamental as well to constitute education and its objectives, that is so because education is also constructed by people who are made up of values, ideas and a perception of life and the world. Reflecting about the values that are built at schools and their theological perspective is relevant and has a sustained reason to contribute to a critical reflection about the education's role in constituting subjects and their role in building a society.

Results and discussion: Human condition, existence and conditioning.

The results dealt with in this section were achieved thanks to the reading and critic analysis of the relationship between education, the role of the school space to maintain and keep unequal power relationships from the philosophical analysis brought by Bayman and the problem of the human condition as an starting point to understand the alienation phenomena present in post-modernity. This analysis is seen in the philosophical debate about the cultural and political aspects of contemporaneity, the maintenance of inequalities via mechanisms that keep and reproduce the doctrinal aspects of an education to adequate the subject to the dynamics of the production means and the search for emancipating alternatives by mans of an education against barbarity (Adorno, 2012).

It is necessary to understand the human condition from the existential perception in which the human nature goes from being thought to the idea that there is a human nature, nevertheless, this nature "is not a self-trusting nature, but an intimidating, insecure and helpless condition"

(Sartre, 2014, p.56). It is the perception of this condition what is conceived as post-modernity or contemporaneity: non-existing values and foundations of the modern society in which:

“Markets without borders” is a recipe for injustice and the new world disorder in which the well-known Clausewitz formula has been reversed, in a way that now it is the turn for politics to continue with war by other means. Deregulation, that turns into the planetary anarchy, and armed violence feed each other, as well as reinforce and reinvigorate each other. As stated by another ancient warning claims, *inter arma silente leges* (when arms talk, laws silence) (Bauman, 2007, p.14).

Nonetheless, it is not only coercion that sustains the social inequality system and the meritocracy that legitimates it, there is a whole ideological and doctrinal system present at the micro-relationships building consensus regarding the maintenance and convention regarding the naturalization of the integration, adequacy, castration and segregation processes that keep inequality via meritocratic speeches, falsified by social liberalism and “equality” “freedom” and “fraternity” mottos, since people who are unequal in terms of material will not be equal in opportunities nor in rights. The reason for that is that it is of high relevance to guarantee the existence of an inclusive education which can contribute to repair this still existing inequality. However, it is not a religion or a fate that legitimates all of this, but the ambition for power and expropriations made by humanity the ones that generate the inconveniences humanity experiences nowadays, in other words, humanity must assume the consequences of its failures and learn by using its memory. Though, in a media world, filled with stimulus and propaganda, there is a perception that:

Nothing eases more memorizing the narratives that the restrained concision that saves them from psychological analysis. The greater the natural way in which the narrator quits psychological subtleness, the easier the story will fix in the listener’s mind, the more completely will the person assimilate it to his personal experience and the more irresistible such person will be inclined to tell the story any time. This assimilation process happens in really deep areas and requires from a relaxed state that is increasingly weird (Benajmin, 1987, p.204).

For such reasons, the value of experience is key to maintain sensitiveness and a mechanism to fight the brutalization process from value and recognition of experience as an integrating and ontological part of the social being (Lukács, 2010, 2012, 2013). From the aesthetic point of view, the dehumanization process is observed in a way in which “the general irrationality leaves room for the representation of pathological degradation, mental alienation as an illness deriving from mental alienation” (Menezes, 2001, p.82), thus:

Marxist criticism encounters the bourgeois traditionalist critics in its opposite end, in the confirmation of the human aspect deterioration in the modernist artistic production. Some nihilism in such works makes that other more traditionalist critics, linked to philosophy, feel dehumanization that is stressed when there is a loss of the artist, partly, in romance and in lyrics. With the fragmented narrative and the

deformation of description made by the narrator's individual optics and ideas, the descriptive narration is abandoned and the story is no longer aimed at having a moral conclusion, hence resulting in the deformation of spirituality (Menezes, 2001, p.83).

In view of this data, there is the perception of an acceleration in the way people look to constitute themselves and interact, however, such acceleration has the responsible for the narrative's poorness, in a way that, in the contemporary world, everything would be summed up in the ideas that "the less the future is predictable, the more it needs to be changing, flexible, reactive, permanently ready to change, really modern, even more than in heroic periods" (Charles, Lipovetsky, 2004, p.57). Such an aspect can be observed in education inasmuch as:

The role of education in every political utopias, from ancient times, shows how natural it looks to start a new world with those that are brand new by birth and nature. In connection with politics, this obviously implies a serious mistake: instead of joining equals, assuming the effort in persuasion and the risk of failure, there is also a dictatorial intervention, based on the adult's total superiority, and the attempt to produce what is new as a *fait accompli*, in other words, as if what is new already existed (Arendt, 1972, pp.224-225).

Such trivialization of stories and experience is followed by the entertainment society who subtly imposes an alien happiness dictatorship that medicalizes life, therefore, not only bodies but also subjectivities become modeled in accordance with the market's hegemonic interests (Debord, 2011). Thus, this brutalization process legitimates the skepticism before huge changes, this results in making indifference and segregation natural facts, as imposed by colonizers. This acceleration only assumes the consumption's character, but meaning the movement's emancipating sense, that is to say, the subject's autonomy expansion, the human being goes from being artisan and subject of himself to be a passive viewer and who is comfortable with capital, according to Fukuyama (1992). Hence, the hyper-modern human being is devoid of experiences, for he responds to so many stimuli he is not capable of assimilating them all and begins to live as an automaton, where nothing is as invariable as the variety of things, he is alienated and atomized by his lack of experiences and for losing the value of narrative, and it is precisely this what naturalizes and conditions his brutalization.

The contemporary man is a human that reproduces hyper-consumption in his subjectivity and behaviors, a man who made of consumerism something natural, accepting that his freedom and dignity are linked to consumerism, before that, the man goes from advertising himself and living a constant self-affirmation, which is why so many emphasize the *Self*, to constantly uploading personal pictures to the social media, it is like people were looking for a meaning in what is virtual in order to believe in what is real, that is to say, polarities have been reversed on behalf of the social subject's condition tripod: produce, reproduce and consume, now the population start from abstraction to concreteness, not from facts to ideas. The human being's virtualization and consequent atomization results in depression and existential loneliness, completed by the nihilist behavior of the media, which is always inducing non-prudent consumerism, since:

It is what makes any collective work to tend to homogenize and brutalize, to “conform” and “depoliticize”, etc. that I described, to perfectly be convenient, even if nobody is the subject, proportionally speaking, even if he is never thought of and desired as such by anyone. This is often seen at the social world; phenomena nobody wants occur, but that phenomena may have been wanted (“it is done for”). Here is where simple critics are dangerous: it releases all the work that needs to be done to understand phenomena such as the fact that, without it being anyone’s intention, without people who are financing having to intervene that much, that is the “tv diary”, convenient for everyone, confirming things that were already known and above all that reach intact mental structures (Bourdieu, 1997, pp.63-64).

In this way, we become not only executors of reproducing an order, for we were born with a fate, that is, to comply with a socio-economic role: settling for the unequal reality as it is and focusing only in individual success (Fukuyama, 1992). We reproduce through our production in favor of reproduction for consumerism. This process is directly associated with a collapsing scenario of modern society and the industry’s obsolescence (Sibilia, 2015) The society becomes virtual, the idea of prosperity becomes substituted by the right to access, nothing lasts more and the man goes on to always live unsatisfied because of consumption, always a programmed obsolescence, the idea of durable ceases to exist and leaves room for hedonism’s consecration and *Carpe diem* (Charles & Lipovéstrski, 2004), but the idea of solidity that is increasingly fluid and liquid brings social discomfort, hence the reappearance of totalitarian regimes or religious fanaticism, for it is really hard for the human being to cope with his ever changing condition that:

As it can be observed, a direct relationship between every component’s qualification and the group’s mission. Individual qualifications, their correct adequacy to the reserved role and its efficient performance are essential, one of the most general characteristics of Social Pathology is the disintegration of every component of the group’s roles (Rosa, 1978, p.52).

In this manner, contemporary society is a society that is lacking of references, and favors the immediate, hedonist and predator consumption. Because of this, this is the era of extremisms, fundamentalisms, since the idea of narrative, experience and exchange of values and ideas was replaced by the virtualization of relationships and the subject was transformed into a consumer and executor in the consumer society, which implied a loss in the meaning of life, for values and principles were changed by the *status quo* self-affirmation.

Production means and their link to education.

Before the defenseless existence of meanings, where it is us the ones who give a meaning through our jobs (Sartre, 2008), the political-economic reality is expropriation since 13% of the world population still lives in extreme poverty, 800 million people are starving and 2,400 do not have access to basic sanitation. Data is included in the first report on the Sustainable Development Objectives released in July 19, 2017. According to the document, the world is barely beginning its journey to the global objectives, while there are critical challenges to conquer such objectives. From this data, it can also be perceived that economic inequalities are

directly linked to world economic polarization between countries that are considered to have a low HDI and high income and countries considered to have high HDI and low income. Such inequality is caused by an entire process where:

Hyper-consumption modified life and human relationships in depth. “Nonstop shopping” made that key individual vectors and groups lost, totally or in part, their original meanings and gained new ones, always aimed at consumption of goods in a higher quantity than what would be normal and necessary (Colombo, 2010, p.30).

This inequality scenario is also observable in the production means, since:

In the industrial sphere, any manufacture or fabric constitutes the comprehensive coordination of a great material property with a number of and differentiated intellectual capacities and technical competences for the common purpose, that is production. Where the law keeps the vast agricultural property, the surplus of a growing population is sent to the workshops, and so the industrial field is where the majority of the population who is an owner is agglomerated (Marc, 2006, p.89).

The political order finishes serving the unequal economic order that, in turn, is observable in the educational character, for there is an education whose aim is to train people to work their technical abilities and another education for people who want to work as managers or top managers in society. Nowadays, with the spread of capitalism, the expropriation relationships are institutionalized and transformed into a settling culture inasmuch as:

A huge investment is included in this process. Everybody lives in a social and cultural structure with certain values and opportunities. This structure prescribes costs for certain actions and benefits for others. But you must live within it. (Chomsky, 1999, p.125).

Before a world where atomization is normal and “only a law governs - the law of power” (Camus, 2017,p.61), this government that is wanted to be omnipotent arises from the power’s bipolarization and, consequently, the end of the balanced relationship of the political-economical forces, in this way results in:

Submitting the national sovereignty to the universal government is an act that introduces inequality by itself, for the world is divided into two State groups: those which can do whatever they want in their territory and in any other (members of the Security Council that have the right of veto) and those which, same as those who are poor in spirit or young children are under the first group’s guardianship and will be punished for any violation to the rules (Todorov, 2012, p.72).

Nevertheless, it is not only through coercion that the financial system keeps its hegemony, since there is an entire educational system that legitimates it. In this case, education ends being a reproduction, adequacy and settling mechanism in accordance with the social and political-economic order in force. This case is notorious when the World Bank and the Organization for Economic Co-operation and Development (OECD) dictate the milestones that education needs to meet as to reach levels considered as “satisfactory” by the new world education managers: The World Bank and the OECD. In a world where labor’s qualification, specialization and scientific-technical work turn to watch as a pillar for work’s structure, education turns to be a sort of a trainer for the labor working at industries, companies and manufactures. Before these reasons, it is key that education can contribute to the fact that:

Basing on what has been said, it is clear that the individual’s true spirit richness depends on how rich his personal relationships are. Only in this way will individuals be freed from the diverse national and local barriers they encounter, by being in contact with the production -even spiritual of the entire world, and in such conditions that allow them to acquire the ability to be the usufructuaries of the many production forms in the world (mankind creations) (Engels & Marx, 2006, p-64).

In conclusion, education needs to bring back the value of experience as a possibility to emancipate from the naturalization process of the alienation constituted by the consumer and entertainment society (Charles & Lipovétsky, 2004; Debord, 2011).

Psychosocial experience, social psychoanalysis, current critical perception and construction of an education towards sensitiveness.

The contemporary world conquered a great technological advance, nevertheless, this technological progress did not guarantee the human development, for the technological progress did not prevent human and human rights setbacks from appearing “to historically articulate the past does not entail knowing it as it really was. It means making a reminiscence yours, as it flashes in the moment of danger” (Benjamin, 1987, p.2). It is from this ownership that we have in our minds a way to avoid past mistakes from being repeated. In the current state, human setbacks are formed by a set of a disciplined educational process that adapts and trains people so that they reproduce the idea that:

The rational-legal exercise and the attainment of discipline also entail some force. Such force can be in turn active or institutional (in other words, the deliberate exercise of violence made by social agents, via adequate and specific tools) and structural as well (implied in the given situation, present in the constitution, permanence, change of shape and content of the economic, social, cultural and political relationships). The State, therefore, “contains” a “summary” of the accumulation of force (or power in terms of its “practical nature”) and the centralization of its predisposition and effect of employment (Dreifuss, 1993, p.56).

The society’s experience points at structuring a singularization process inasmuch as “in the current singularization process demands, without losing sight of the relationship between the

society's history and the actor's biography" (Martuccelli, 2010, p.21). As the result of a complex society structured in a production and subject mass process, it is perceived that "as a response to this possibility of freedom by the inhabitants of anonymity of the megalopolis, they feel as helpless as never before, for in such a desire for that freedom, they found themselves in the middle of the concrete" (Silva & Tfouni, 2008, p.189). This powerlessness process of the subject is confirmed by the fact that:

As symptom of the change from liberal capitalism to monopoly, there is the evolution from telephone to the radio: the first id "liberal", because it allowed participants to be subjects. The radio is "democratic", since it transforms the old speakers into just audience, "to handle them into the hands of the radio station's shows". "Democratic" here denotes, naturally, not the right of having the population's right to speak and vote, but the fact the technological devices used by the culture industry make possible communication mass (Duarte, 2003, p.52).

In this line, keeping the alienation process generated by capitalism is directly linked to "not of a general power will or from a technological domination will, but of a structure that is inherent to the capitalist reproduction, that can only survive due to its nonstop expansion" (Žižek, 2012, p.149). This expansion of capital that grows without any barrier, that balances the forces' correlation, happens because of the presence of a naturalization and reproduction process of the social relationships' dynamics in which:

To apprehend that changing nature of violence, short circuits must be divided into different levels, let us say, between power and social violence, an economic crisis causing devastation is lived as an uncontrollable power that is almost natural, but be lived as violence (Žižek, 2015, p.234).

In a social violence situation combined with alienation, an education that makes the individual stay away from alienation, so that he himself is able to reach autonomy of reflection/action in the society and context in which he lives, in this way, the subject becomes the protagonist of the reality instead of being a viewer, for "clarification corrodes the injustice of the past inequality" (Adorno & Horkheimer, 1985, p.27). It is in this sense that the education's teleology needs to consider that clarification begins with the action of an education in which the main problem consists of "showing the humans behind anonymous objects and present the possibility of man's victory over them, without remarkable slogans or excessive optimism" (Fischer, 1963, p.237). Human being's anonymity and its lonely existential experience are directly linked to the idea that:

The moral concepts of modern times are carved to recognize the individuals' subjective freedom. On the one hand, they are based on the right of the individual to discern as valid what he must do, on the other hand, on the demand that every person

persuades the individual welfare end in accordance with everyone else's welfare (Habermas, 2002, p.27).

Breaking up with the atomization and alienation process, education needs to assume a political function as to stop barbarism, and this has resulted in the most urgent topic in education currently. The issue is to know if something decisive can be transformed, in connection with barbarism, by means of education" (Adorno, 2012, p.155). The culture of oppression and aggressiveness lived in the contemporary world is based on the fact of submitting the senses to the reasoning and logic of industrial teleology, that is to say, constituting and conforming individuals, thus brutalizing and keeping the alienation and atomization process of the individual through the reproduction of power relationships (Goldberg, 2004). Emancipation and autonomy are conformed when reasoning and the senses converse, therefore constituting the individual's ability to reflect in a holistic way and act as the protagonist of reality, so, education has a political role in understanding that:

What is pursued is solving a "political" problem: freeing the man from the inhuman existential conditions. Schiller claims that, in order to solve the political problem, "it needs to go through aesthetics, since beauty is the path that leads to freedom". The ludic momentum is the vehicle for such freedom. The momentum's goal is not to play "with" something, before, it is the play of life itself -beyond beliefs and external compulsions- the manifestation of an existence without fear nor anxiety and hence the manifestation of freedom. Man is only free when free from coercion, be they external and internal, physical and moral - when he is not repressed by the law not is he by the need (Marcuse, 1968, p.167).

Before the search for the consciousness' emancipation, it is the teaching's duty to recognize its importance as an organizer of possibilities to build new social relationships and world political perceptions as a tool to overcome the repressive society model we live in, since the teacher in "the society" in fact offers the challenge to join the public debate with its critics, as well as the opportunity to getting involved in a much necessary self-criticism regarding nature and the objective of teachers' training" (Giroux, 1997, p.157). Education takes on the role to formulate "a dialectic understanding of what is needed and can be done basing on the trends of reality that is objectively developing" (Mészáros, 2015, p.131). In connection with this, Mészáros (2008) states that:

What is at stake is not just the contingent deficiency of the economic resources that are available, to be overcome sooner or later, as it has been unnecessarily reversed, but the inevitable deficiency in structure of a system that operates through vicious circles of waste and scarcity. It is impossible to break the vicious circle without an effective intervention made by education, capable of, simultaneously, establish priorities and define real needs, via a free and complete deliberation of those individuals involved (p.74).

Before such issues, education and the school's function need revision from the philosophical recovery of education and its emancipation task, in this period of capitalism's remarkable contradictions, it is essential to understand that "the new image of teaching and education must be founded on not reproducing the same injustice and banalities found in society in general inside the classroom" (Silva, 1989, p.26). For such reasons, society's emancipation is built from education, for "political practice leans on the truth of power, and educational practice does so in the power of truth (knowledge)" (Saviani, 1989, p.97). Hence, the society's emancipation process can only happen from an education which is committed to the individuals' political emancipation to overcome a conditioning and repressive culture to build a culture based on exchange and respect for diversity as the foundations for a joint and constant learning.

Conclusions

After conducting this study, it is determined that the issue of building an education against barbarism via the timeliness and validity of the Frankfurt School theories is an issue that is not separated from the complex social contradictions that keep marking the contemporaneity. This issue directly goes through a conforming and legitimization process of oppressive and discriminating values that have been internalized by western society from more than ten centuries ago. The study notes that education needs to take on the political role of reeducating people from a logic of an education whose main principle is mutual respect, solidarity and respect for diversity as the pillars of humanity.

As said by Mészáros (2015) This is the mountain that needs to be reached, that is, the complexity of the relationships that constitute the extreme contradictions between barbarism and what was agreed upon to name "civilization", which in practice is the consumer society. In light of this group of related socio-economic interests, the theological character of education is directly and interdependently connected with the political and economic interests that prevail in front of a global financial system, as the understanding of bodies such as the OECD and the UNESCO is understanding education as the unique pillar for improvement for the job world.

This perception maintains the brutalization of philosophical and social problems of the contemporary society, because the educational understanding of social relationships and the subject's training is limiting, since the lesson is only seen as "subject of assessment" and people are seen as needed from being "adjusted", "introduced", that is to say, adapted to the naturalization process of the power relationships as it has always been imposed. In this context, it can be observed that the greatest expropriation of people is not only the exploitation of gains as formulated by Marx (1983), but, essentially, the expropriation that sustains keeping the relationships' unequal status, and consequently, the brutalization resulting from inequalities is in the people's expropriation of humanity, due to the reification of human relationships in favor of the production means' relationships. The naturalization of this process has been responsible for the construction of a whole process that naturalizes barbarism and segregations in favor of meritocracy. Overcoming the current production models, that have been successively exhausting natural resources and human life on Earth, essentially needs from a pedagogical transformation process that promotes the society's reeducation.

Society's reeducation is made through an education that is committed to the task of the social consciousness' emancipation, in favor of building equality as an alternative for the liberal model of education policy that failed to overcome social contradictions. Such education needs to be prescribed as an education for sensitiveness and life, instead of shaping people as to just fit into working methods or to adjust to the social environment. Educating transformational agents who are protagonists of concrete and objective reality must permeate the role of an education that is committed to a critical reflection of the society that will be present in people's subjectivities, it is the ability to reflect and knowledge the ones that are able to educate people who are not manipulable.

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THE ABILITY TO LEARN FROM FEEDBACK AND ITS IMPACT ON THE PERCEPTION OF LEARNING

Nidia Giorgis

Universidad Mariano Gálvez de Guatemala

Abstract. The study described in this article is part of the PhD research work “Model to develop the ability to learn from feedback and improvement in the performance of students in higher education in Guatemala”, conducted in a private university in Guatemala. It is important to highlight that this article is part of a series of articles. Several studies, such as Hattie and Timperley (2007) that emphasize that effective feedback is the most powerful factor to achieve learning, motivate the present study whose aim is to analyze the effect on the learning of professors when applying the Hope Model, proposed by the author as part of her PhD research. This model focuses on reducing the discrepancy in a task from its comprehension, its execution and the obtained performance, against the learning objectives and competencies to be achieved, through the feedback that the professor provides to the student in a planned and intentional manner. The Hope Model was applied in a virtual course with a group of volunteer university professors. Upon completion, they were surveyed to evaluate their experience with the Hope Model. The correlation between the different variables was analyzed. The highest correlation index is between the ability to learn from feedback and the perception of learning. There is evidence of a strengthening of the ability to learn from feedback, which is related to the perception of learning.

Keywords: Feedback information, ability to learn from feedback, learning.

LA DESTREZA DE APRENDER DE LA INFORMACIÓN DE RETORNO Y SU IMPACTO EN LA PERCEPCIÓN DEL APRENDIZAJE

Resumen. El estudio descrito en este artículo forma parte del trabajo de investigación doctoral "Modelo para desarrollar la destreza de aprender de la información de retorno y la mejora en el rendimiento de los estudiantes en la educación superior en Guatemala", llevado a cabo en una universidad privada de Guatemala. Es importante resaltar que este artículo es parte de una serie de artículos. Diversos estudios, como Hattie y Timperley (2007) que resaltan que la retroalimentación efectiva es el factor más poderoso para lograr el aprendizaje, motivan el presente estudio, cuyo propósito es analizar el efecto en el aprendizaje de los profesores al aplicar el Modelo Hope, propuesto por la autora como parte de su investigación doctoral. Este modelo se centra en la reducción de la discrepancia existente en una tarea desde su comprensión, su ejecución y el rendimiento obtenido, contra los objetivos de aprendizaje y

competencias a alcanzar, por medio de la retroalimentación que el profesor proporciona al estudiante de forma planificada e intencional. Se aplicó el Modelo Hope en un curso en modalidad virtual con un grupo de profesores universitarios voluntarios. Al terminar el mismo, fueron encuestados para evaluar su experiencia con el Modelo Hope. Se analizó la correlación entre las diferentes variables. El mayor índice de correlación se da entre la destreza de aprendizaje de la información de retorno y la percepción del aprendizaje. Se evidencia un fortalecimiento de la destreza de aprender de la información de retorno, la cual tiene relación con la percepción de su aprendizaje.

Palabras clave: Información de retorno, destreza de aprender de la información de retorno (feedback), aprendizaje.

Introduction

Through different consultations with authorities from Guatemala's Higher Education and other related institutions, there is a proneness in professors to use the teaching-learning model focused on themselves, based solely on summative assessments, with little or no feedback information favoring the student's learning. According to Killian (2017), the factors with the greatest impact in learning are those related with the professor's role in providing information feedback, and the student's behavior for evaluating such information, as well as the self-regulation and self-control elements for their own learning.

Barrios & Uribe (2017) consider that the SRLP (self-regulation of the learning process) is a psychological construct that refers to the process through which students configure their activity and organize their environment, seeking to achieve the objectives suggested from the feedback, or before an academic activity, in an autonomous and motivated way.

Torrano, Fuentes & Soria (2017) reported that *self-regulated learning* not only produces better academic results, but also greater autonomy and motivation, as well as the main idea in the learning process and a necessary capacity for transfer before different real-life situations.

A low cost feedback model, implemented by stages and easy to understand, is considered to have a tremendous impact on the student's academic performance within a short time, being useful for their professional future.

Studies that highlight the fact that information feedback enables students to self-regulate their learning and correct their plan of action in terms of achieving their educational intentions, as well as the professor being the one who regularly offers the information feedback to the student –as with Ferrell (2012)–, encourage the present study, whose aim is to analyze the effect of the professor's learning when the Hope Model is applied as a tool to guide students through feedback in order to achieve excellence in the performance of the different tasks requested to demonstrate their learning, since professors must learn to provide feedback in an efficient manner. This model focuses on facilitating professors with providing students the feedback that will enable them to reduce the existing discrepancy in a task, from its understanding, implementation and the performance obtained from it when it is executed, against the learning objectives and competencies to be achieved.

The study is intended to demonstrate the effect on the professor's learning perception as a result of the implementation of Hope Model as a tool for guiding students by using feedback in order for them to achieve performance excellence in the

different tasks requested to demonstrate their learning. To reduce this gap in the expected performance, the student will be required to work and look for new strategies to accomplish the corresponding task. The professor his/herself must make an effort in providing challenging goals, assistance through strategies and feedback for improving the student's performance. To this end, effective feedback must answer three questions: Where are they headed? How are they doing? What path are they following? When providing feedback, the professor must consider and keep each of the following levels in mind: Task, Process, Self-regulation and Personal Consideration.

What is the difference between this model and the existing ones? Why starting from this one? It is focused on understanding everyone involved in the process, students, professors and academic-administrative staff, of why it is important to provide effective feedback in order to produce true learning. In addition, the relevance of believing that everyone can improve and that there is always the possibility and opportunity of doing so. How to continue in it? It is not enough in knowing the reasons why feedback should be provided. That is why the model presents how to offer feedback, from the design of programs, careers and courses. It must be intentional. If we know our destination from the very beginning, everyone will focus on it. It will provide a driving force of intrinsic motivation for the community to achieve its goals and objectives. The model provides effective tools and techniques for feedback and self-regulation.

Research taken into consideration in the Hope Model

The competency that was sought to be strengthened throughout the course for professors was: Designing the course program based on the Hope Model so as to provide effective feedback of the learning process and the student's performance in higher education. See the appendix for the competencies and achievement indicators of the course.

One of the research with the greatest contribution included in the study is that of Hattie and Timperley (2007), which states that feedback is related to three questions and four dimensions; the questions are the following: Where am I headed? What are the objectives? How am I doing? How is my progress toward my goal? Where to? What activities should be taken into consideration to demonstrate progress? Each question has an impact on the level of the dimensions: Task performance, task comprehension processes, self-regulatory or meta-cognitive process, and the person as such. Based on the previous sentence, it is highly relevant to include the feedback dialog into the proposed feedback model: With the goals: Where am I headed?; With the progress: How am I doing?; With the improvement: What should I do? In each of the proposed dimensions. These comments help in reducing the gap between understanding the current performance and the learning's objective.

The study from Lake, Boyd, and Hellmundt (2017) presents a model of immediate feedback assisted by computer. The conventional feedback process model is presented, where the student has the support from the professor, the pedagogical mediation and the activity to carry out, so as to complete the learning process, and achieve competence in this way. It also presents the conventional delivery, which is supported by a feedback process for improvement. Lastly, they propose immediate feedback via computer assistance, which through a survey, includes a broadening of the classroom activity that enhances the student's understanding through a database, ensuring the implementation's success. The results of the study support that feedback is an important process, and that comments assisted by computer, which become

opportune for each question, help students to become more competent and confident, entrenching the self-assessment abilities of their own learning processes. Given these results, it is considered that the addition of immediate feedback makes it possible for the proposed model to provide a standardized way of feedback assisted by computer, when carrying out feedback based on the following questions: Where am I headed? How am I doing? What follows? For each moment of it.

Marchena and Martínez (2016) present a study that analyzed the students' perception in the use of survey-type gamification tools with mobile devices to enhance their learning, when used for facilitating feedback after having concluded their work sessions in the classroom. Its aim is to analyze the characteristics, advantages and possibilities offered by Kahoot and Socrative, two gamification tools.

Crommelinck and Anseel (2013) conducted a review of the literature, using a self-motivation framework. They concluded with six practical recommendations for medical educators on how to encourage openness behavior for feedback seeking behavior. In addition, they provided practical recommendations for medical educators on how to encourage behavior in the search for feedback. To get a better understanding of feedback seeking behavior, the authors applied a self-motivation framework. They defined feedback seeking behavior through this conceptual lens, and revised its antecedents and consequences. They provided an overview of the key findings and answered a series of unresolved issues in the literature. In the end, they presented six ideas based on evidence for encouraging feedback seeking behavior in practice. They also presented a self-motivation framework for solving these problems and stimulating future research. These six ideas were the keys to define the strategies for the model to encourage or strengthen the ability to learn from feedback, where feedback seeking behavior is essential.

What pedagogical principles should govern the proposed model? What are the didactic methodologies for its application? What is the conception of the teaching-learning process?

For Hattie and Timperley (2007), effective feedback is the most powerful element for achieving learning. Students focused on picking up those signals as to what will be included in the test and study accordingly, perform much better than those who do not. Students often realize that this form of study is not the same as studying as a professor, in other words, understanding and applying the course material. Students prefer courses that include a significant component, the feeling that these courses provide them with more practice and feedback and a more justly evaluated. The feedback is related to three questions and four dimensions. The questions are the following: Where am I heading? What are the objectives? How am I doing? What is my progress toward my goal? Where to? What activities should be carried out to demonstrate progress? Each question has an impact on the level of the dimensions: Task performance, task comprehension processes, self-regulatory or meta-cognitive process, and the person as such.

Mayer and Alexander (2016) propose the visible learning model that emphasizes mindsets, the value of encouraging students to see the power of teaching others.

Lake, Boyd, Boyd and Hellmundt (2017) reported that professors can choose a certain amount of learning activity evidence, which are basic for achieving the course competencies and so design an immediate feedback survey supported by computers.

The benefits identified by this study, will also enable the process of delivering the feedback information to be accelerated.

Morales (2010) presents a model focused on visualizing the professor and student role as a starting point, since it links the evaluation's power of conditioning.

Thomas and Arnold (2011) propose an algorithm for providing feedback. They likewise highlight the importance of determining the right amount of information, addressing how this affects the receiver and preparing a plan for the next steps. This is based on the effect of emotions and the difficulties of providing feedback, as well as the necessary communication abilities.

Stone and Heen (2014) present tools to provide and receive information feedback.

Cho and Heron (2015) explain how motivation –in particular, self-efficacy for learning– significantly contributed to explaining performance.

Shrivasta, Shrivasta and Ramasamy (2014) identified five key aspects for the behavior of openness in the search for information feedback: the method used to obtain feedback, the frequency of the feedback seeking behavior; the time and the characteristics for the feedback seeking behavior and the subject within which it is being sought after.

Crommelinck and Anseel (2013) proposed practical recommendations for medical educators on how to promote openness behavior toward feedback seeking behavior.

Anseel, Beatty, Shen, Lievens and Sackett (2015) in relation to the openness toward FSB (feedback seeking behavior) present strategies for encouraging feedback seeking behavior, for example: defining the learning and performance objectives, providing external and frequent feedback, applying well-established intervention programs so as to increase self-efficacy and self-esteem, and model a transformational leadership style.

Broquet and Punwani (2012) conclude that recognizing any anxieties that students may have, encourages a learning culture that values feedback as an important and expected part of all programming, ensuring that all students (and supervisors) are trained in feedback techniques and configuring the elimination of expectations, may improve the feedback reception experience.

Ferrell (2012, p. 7) points out the principles that reflect thought and have influenced projects within the REAP program (RE-Engineering Assessment Practices Principles). See their proposals with regard to the assessment tasks in Table 1.

Table 1
Proposals with regard to the assessment tasks

The student spends enough time and effort of study within and outside of class.	Facilitates the development of reflection and self-assessment for learning.
Distributes the student's efforts evenly through topics and weeks.	Delivers high-quality feedback to students: so that they may correct themselves.
Engages students in activities of profound learning and not just	Encourages dialog around learning (peers and student-tutor).

superficial learning.	
Communicates clear and high expectations for students.	Encourages positive motivational beliefs and self-esteem.
Provides information that professors can use to help shape their teaching.	Provides opportunities to act in accordance with the feedback information.
Clarifies what good performance is (objectives, criteria, standards).	

Note: Source: Ferrell (2012, p. 7).

Merrill (2002) handles five principles for promoting learning: 1. Students participate by solving real-world problems, 2. Knowledge is activated as the basis for new knowledge, 3. The new knowledge is demonstrated to the student, 4. The new knowledge is applied by the student and 5. The new knowledge is integrated into the student's world.

Gibbs and Simpson (2004) provide keys for being a better receiver of feedback information in their study: The amount and distribution of the student's effort, quality and level of effort, amount, timing and quality of feedback.

Contreras-Perez and Zúñiga-González (2017) assert that the educational system must have a standardized criteria for evaluating, designing and implementing an adequate system for collecting information and establishing information communication strategies for students to learn via a better way. They will therefore be considered in the proposed model.

Boud and Molloy (2013) compared the traditional model, where the improvement process was done by the professor through comments that provided the students with information about the gap between their performance's actual level and reference level, versus the feedback model as a sustainable model which seeks to involve the student as the center of the process, develop the capacity to assess their own learning, develop abilities that will help their continuous learning and implementing evaluation tasks to facilitate their commitment. To do this, the student's profile must be taken into account, as well as any prior knowledge that they have and integrate the study to promote a successful learning process. They also indicate that verbal feedback during practice deviates considerably from the principles of effective practice, and conclude that the feedback is often not well done in education, being it unlikely that ignorance of the principles of effective practice is the main cause for the reported deficiencies.

Nakanishi (2007) recommends stimulating feedback between peers, self-assessments and by the professor.

Nicol (2011) proposed co-evaluation between peers to develop or strengthen self-regulation abilities through the feedback made about the works of other colleagues.

Ion, Silva and Garcia (2013) proposed the use of a technological tool that not only enables professors the possibility of detecting errors to correct them, but also anticipate them so that they do not occur. Connecting as well the learning tasks with the general and specific professional abilities to achieve.

Sadler (2013) suggests establishing and revising the feedback and abilities vocabulary for them to evaluate themselves and understand the feedback information.

Martínez-Rizo and Mercado (2015) mention that a key obstacle for the successful implementation of the feedback process is the lack of weakness in the competences of professors to provide feedback that includes identifying the gap between actual and expected performance. They propose integrating the design of learning evidence tasks with a high cognitive demand to the proposed model; this enables an effective feedback process, which requires the professor's training for them to be able to provide it.

Cabrera and Mayordomo (2016) stated that in order for the feedback process to be transformed into an improved future performance, it must be a sustainable system where the students achieve to obtain quality results, develop their self-assessment abilities, the capacity to establish objectives and plan learning processes, becoming interested and committed to the assigned task to make of the model a sustainable system that includes technological support that ensures effective feedback.

Methodology

The study described in this article is part of the PhD research work, whose overall objective is to establish the design of a model for strengthening the learning abilities from feedback information. One of the specific objectives of the PhD research work is to implement, execute and validate the designed model. It describes part of the work carried out for implementing and executing the proposed Hope Model. It is important to note that this article is part of a series of articles, and for this reason, the conclusions refer only to the specific topic.

It was selected an intentional sample of 25 professors from the School of Education from the Mariano Gálvez University's Faculty of Humanities, with undergraduate and graduate students who met the input profile, out of a total of 71: 34 graduates and 37 undergraduate students. 25 professors were invited to participate in the Hope Model course, of which 19 accepted. 17 volunteer professors completed the course of five weeks' duration, in virtual mode to implement the HOPE model with their students. 18% of the sample were males and 82% were females. The majority of professors are within the age range of 51 to 60 years old (47%), in each of the ranges: of 21 to 30 (6%), 31 to 40 (12%), 41 to 50 (18%) and 61 to 70 (17%). Refer to Chart 1 for the distribution of professors by gender and age. All professors have at least a Master's Degree in Education.

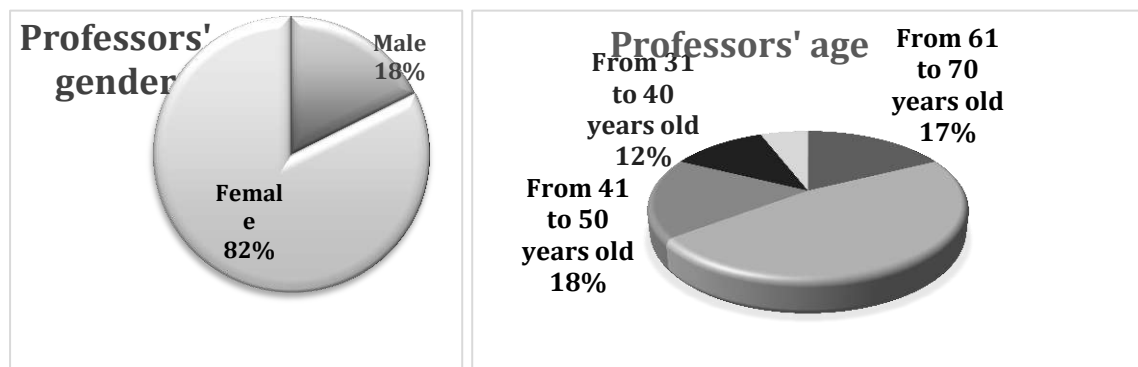


Figure 1: Distribution of professors by gender and age

Note: Source: Own source

The Hope model was the basis for the design and implementation of the course, and for the learning and application mediation with each group of students in charge of such professors. The model's implementation was worked through a project as a product of learning. Partial progress deliveries about the project were programmed in each week, corresponding to the course's design and the implementation of each of the model's stages.

When completed, a questionnaire was delivered to evaluate the professors' experience with the Hope Model, focusing on the feedback and feedback information received. This questionnaire consisted of 20 questions based on the Assessment Experience Questionnaire (AEQ) submitted by Núñez and Reyes (2014) and the definition as proposed by Crommelinck and Anseel (2013). To get a better understanding of the feedback seeking behavior, these authors applied a self-motivation framework. They defined feedback seeking behavior through this conceptual lens, and revised its antecedents and consequences. Two questions were added, one related to the satisfaction about their learning, and the other with their satisfaction with their performance. Review the questionnaires in the appendix, which used a Likert scale from Strongly agree (5), Agree (4), Neither Agree nor Disagree (3), Disagree (2), Strongly Disagree (1).

The questionnaire assessed two dimensions: the ability to learn from the feedback information, and the cost of the feedback information. This was measured through questions 1 to 9 of the questionnaire. See Table 2.

The cost of the feedback was measured through questions 10 to 16 of the questionnaire, with a negative weight, in other words, the scale was reversed. See Table 3.

The perception on learning was measured through questions 17 to 21. Refer to Table 4.

A grade was assigned (0 to 100) to the tasks carried out during the course of the Hope Model. Rubrics and different tools were used to evaluate the achievement levels for the competencies by way of the achievement indicators. The results obtained by the professors during the course of the Hope Model and in the feedback information experience questionnaire were subsequently statistically analyzed.

Table 2

Questions 1 to 9 measure the Abilities to learn from the feedback information

Num.	Question
1	I valued the feedback information received as a way for improvement
2	The feedback information I received reduced uncertainty in relation to the tasks and my learning
3	Carefully analyze the information received from the feedback information
4	I answered my doubts with regards to the feedback information as a way of improving my future performance
5	I planned for future actions based on the feedback information received
6	I acted in accordance with the plan to improve my task
7	I reviewed having covered all aspects to be improved upon reviewing the task

	again
8	I connected the feedback information received with my performance in future tasks and in my professional practice
9	I will apply the lessons learned from the feedback information received to my professional practice

Note: Source: Based on the Assessment Experience Questionnaire (AEQ) submitted by Núñez and Reyes (2014).

Table 3
Questions 10 to 16 measure the Cost of Feedback

Num.	Question
10	I believe that I can't change my performance
11	I think that it requires little or no effort to achieve good performance
12	I believe that asking for feedback damages my image before others
13	I am only interested in the grade
14	I believe that the grade is a good performance indicator
15	I found it difficult to accept negative comments about my performance
16	The feedback information was of no use to me

Note: Source: Based on the Assessment Experience Questionnaire (AEQ) submitted by Núñez and Reyes (2014).

Table 4
Questions 17 to 21 measure the Perception of learning

Num.	Question
17	I believe that my performance in the course was excellent
18	I believe that I learned a lot during the course
19	In general, I am satisfied with my performance in this course
20	In general, I am satisfied with what I learned in this course
21	I believe that I learned from the feedback information I received

Note: Source: Based on the Assessment Experience Questionnaire (AEQ) submitted by Núñez and Reyes (2014).

Results

Analysis of the Pearson correlation coefficient were carried out between the variables: The ability to learn from the feedback information, the cost of feedback information and the perception of learning during the course and the grade received, whose results are presented in table 5. An analysis on the groups by gender and age was also carried out.

Table 5
Pearson correlation coefficient between the variables

Variable x	Variable y	R ²
Ability to learn from the feedback information	Cost of the feedback information	0.08745726
Cost of the feedback information	Course grade	0.0936404

Ability to learn from the feedback information	Course grade	0.1295789
Course grade	Perception of learning	0.26518739
Cost of the feedback information	Perception of learning	0.27276445
Ability to learn from the feedback information	Perception of learning	0.47411825

Note: Source: Own source.

By way of analysis, the correlation is 0.087 between the ability to learn from the feedback information and the cost of the information feedback, which is why it is considered to be a positive correlation.

Between the cost of the feedback information and the course grade, the correlation is 0.093, by which it is considered a positive correlation.

There is 0.129 between the ability to learn from the feedback information and the course grade, by which there is a positive correlation.

Between the course grade and the perception of learning, the correlation is 0.265, by which there is a positive correlation.

Between the cost of feedback information and the perception of learning, the correlation is 0.272, by which there is a positive correlation.

Between the ability to learn from the feedback information and the perception of learning, there is a correlation of 0.474, by which there is a positive correlation.

We can conclude that the highest rate of Pearson's correlation occurs between the ability to learn from the feedback information and the perception on learning of 0.6886 and its square of 0.4741. Note chart 2, where we can see that both charts are almost identical.

As seen in chart 3 and 4, the course grade is not closely linked to the ability to learn from the feedback information nor with the perception of learning.

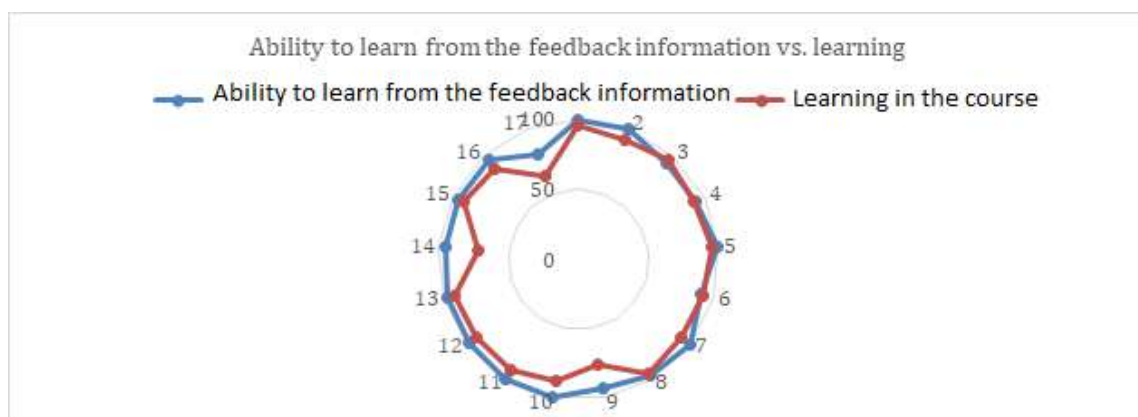


Figure 2. Ability to learn from the feedback information vs. perception of learning.

Note: Source: own source.

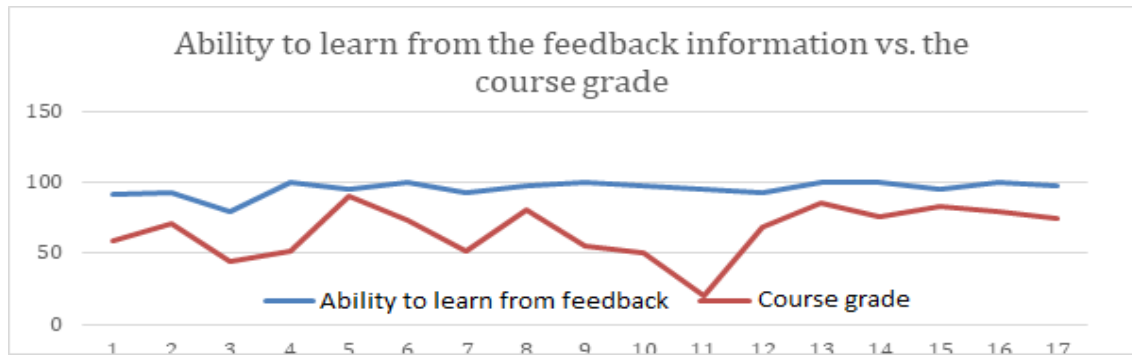


Figure 3. Ability to learn from the feedback information vs. the course grade

Note: Source: own source

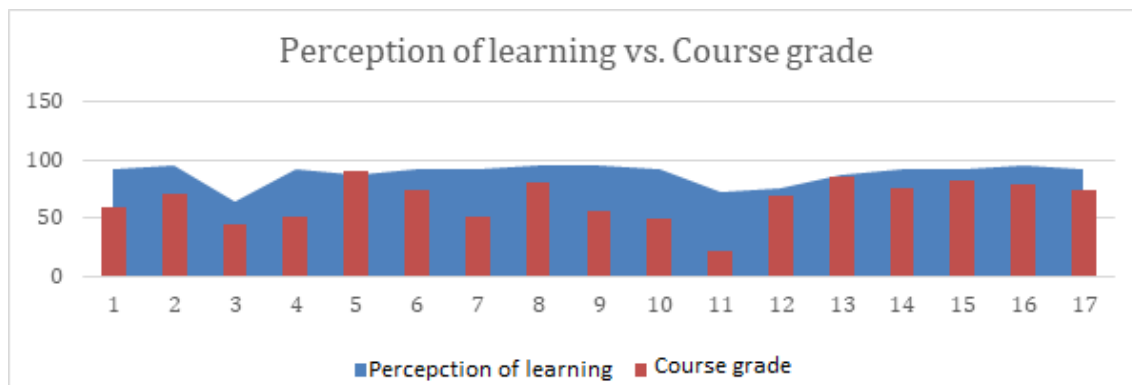


Figure 4. Perception of learning vs. course grade

Note: Source: own source.

It was therefore decided to determine the significance of the correlation coefficient between the ability to learn from the feedback information and the perception of learning, through the formula:

$$t = \frac{r_{xy} - 0}{\sqrt{\frac{1 - r_{xy}^2}{N - 2}}}$$

$$t = \frac{0.6886 - 0}{\sqrt{\frac{1 - 0.4741}{17 - 2}}} = 3.6774$$

We searched the t Student table, to determine the significance of the correlation coefficient for $\alpha = 0.05$ and $17 - 2 = 15$ degrees of freedom, obtaining 2.131. Given that $3.6774 > 2.131$ the null hypothesis is rejected with a risk (maximum) of error of 0.05. The correlation is not from a population characterized by a correlation of zero. It is therefore concluded that both variables are related.

Discussion and conclusions

Below is the analysis for the results of the questions that support the article. Refer to Table 6, which contains questions directly related to the ability to learn from the feedback information and the perception of learning. Questions 1 and 9 received 100%, that is to say, the maximum grade by all participants. It can be concluded that all participants appreciate the feedback received for improving, and wish to apply what they have learned into their professional practice. In addition, question 18 obtained a 98%, in other words, participants felt that they learned a lot during the course, and question 21, a 95%, for their perception of learning from the feedback received.

Table 6
Questions with the highest grades

Num.	Question	Average over /5	Percentage
1	I valued the feedback information received as a way for improving	5	100%
9	I will apply the lessons learned from the feedback received into my professional exercise	5	100%
18	I believe that I learned a lot during the course	4.88	98%
21	I believe that I learned from the feedback information I received	4.76	95%

Note: Source: Own source.

Refer to Table 7. Questions 12 and 13 received the lowest grade, 1.88 of 5 (38%). They are related to the cost of receiving feedback. This denotes that the participants valued the feedback information, but the cost for receiving it is low, demonstrating their ability to learn from the feedback information.

Table 7
Questions with the lowest grade (Cost of feedback)

Num.	Question	Average Over /5	Percentage
12	I believe that asking for feedback damages my image before others	1.8824	38%
13	I am only interested in the grade	1.8824	38%

Note: Source: Own source

In this group of professors, the grade from the course did not necessarily predict learning during the course, measured from the perception of learning by the same professor. In addition, it had no impact on the perception of their learning, in other words, those that perceived greater learning did not necessarily obtain higher grades.

The cost for the feedback information did not have a strong correlation neither with the grade for the course nor with their perception of learning. This might be

explained due to the fear of showing ignorance of a subject before their peers, or other fears.

We can see a development or strengthening of the ability to learn from feedback, which is related to the perception of their learning.

We analyzed the comments in the questionnaire made by the professors. To the question: What would you like to do with the way in which the feedback received was helpful in your learning during the course? 100% of the surveyed expressed their intention to apply it with their students.

To the question: What would you improve about your performance if you could retake the course? 53% of participants said they would devote more time. 30% indicated that they would improve aspects of their own implementation of the model, such as “Connecting the *feedback* and *feedforward* processes with the competencies, indicators, tasks and assessment tools.”

Within the strategies that professors could apply to improve their performance for implementing the model, is for its implementation to be planned based on the course’s design; this will enable them to strengthen learning through the feedback information, since they will have clear and focused learning goals.

It is evident that the participants feel fear of expressing a mistake, which they can strengthen through feedback focused on the development of the staff working on the model.

The concluding comments were aimed at personal reflection and the opportunity of reviewing their practices so as to improve the process of providing feedback to the students, and implementing it in all courses.

Multiplying the model so that other professors may benefit from this knowledge was demonstrated as being important, since it motivates them to become better, enabling them to achieve the evident high performance. They mention that they will seek further supporting information to improve the model’s implementation and provide a more detailed follow-up of the learning processes.

The Hope Model is under construction, with other aspects having being worked on to better calibrate it, though this study shows its effectiveness to some degree.

In the implementation of a new virtual course cohort for professors, its duration should be assessed so as to enable enough time for its implementation, reflection and continuous improvement.

Conclusions

- The course grade does not necessarily predict the learning process.
- Participants value the feedback information received for improving their performance, and wish to apply what they have learned in their professional practice.
- The course in which they have participated and received feedback information from, enabled learning to be carried out in a better way.
- Participants value the feedback information because the cost of receiving it is low and also demonstrates their ability to learn from that feedback information.

- The results show a development or strengthening of the ability to learn from feedback, which is related to the perception of their learning.
- The participants showed motivation for better understanding the model so as to implement it in the best way possible in all courses.

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Annexes

Annex 1. Course objectives and content

Learning Competence

Designing the course program based on Hope's Model so as to provide effective feedback of the learning process and the student's performance in higher education.

Achievement indicators

Week 1: The professor:

- Knows the HOPE model.
- Applies feedforward as a part of the feedback process when executing the tasks assigned to the students, by which they may connect the student's present with their future.

Week 2:

The professor:

- Applies strategies to encourage the student's mindset growth.
- Uses appropriate language to perform effective feedback.
- Understands the language used in the feedback and acts accordingly.

Week 3:

The professor:

- Links the competencies and achievement indicators with the feedback process to achieve expected performances.
- Uses the assessment tools assigned to the course tasks as a fundamental part of the feedback and improvement guidance process of these, and in the student's performance.

Week 4:

The professor:

- Links the competencies and achievement indicators with the feedback process to achieve expected performances.
- Uses the assessment tools assigned to the course tasks as a fundamental part of the feedback and improvement guidance process of these, and in the student's performance.

Week 5:

The teacher delivers the final draft of the practicum developed during the training.

Contents

The contents worked on during these 5 weeks to embark on the path of the HOPE feedback model are:

- What is the HOPE model?, How do I connect the students' present with their future to motivate them to improve their performance? Feedforward

- How do I encourage growth mindset in my students? Growth mindset, Feedback Language
- Assessment and feedback (professors)
- Assessment and feedback (professors)
- Final project presentation
- Course closure

Distribution of hours per week for the student

This course will be carried out in virtual form and will require the student's participation of at least 12 hours per week, 2 daily from Monday to Saturday. This is the minimum time required for reading, reading tasks, participation in forums and preparing the practicum project.

Annex 2. HOPE Model: Contextualized questionnaire

Ability to learn from the feedback information questionnaire

Complete Name:

Professor Code: Gender: Age:

Select the column from each item in accordance with the learning assessment experience that was achieved in the course:

Num.	Item	I totally agree	I agree	Neither agree nor disagree	I disagree	I totally disagree
1.	I valued the feedback received as a way of improving					
2.	The feedback I received reduced my uncertainty in relation to the tasks and my learning.					
3.	I carefully analyze the information received from the feedback information					
4.	I resolved my doubts with regards to the feedback information received as a way of improving my future performance					
5.	I planned for future actions based on the feedback information received					
6.	I acted in accordance with the plan to improve my task					
7.	I reviewed having covered all aspects to be improved upon reviewing the task again					
8.	I connected return information received with my performance in future tasks and in my professional exercise					
9.	I will apply the lessons learned from the feedback information received to my professional practice					

Num.	Item	I totally agree	I agree	Neither agree nor disagree	I disagree	I totally disagree
10.	I believe that I can't change my performance					
11.	I think that it requires little or no effort to achieve good performance					
12.	I believe that asking for feedback damages my image before others					
13.	I am only interested in the grade					
14.	I believe that the grade is a good performance indicator					
15.	I found it difficult to accept negative comments about my performance					
16.	The feedback information was of no use to me					
17.	I believe that my performance in the course was excellent					
18.	I believe that I learned a lot during the course					
19.	In general, I am satisfied with my performance in this course					
20.	In general, I am satisfied with what I learned in this course					
21.	I believe that I learned from the feedback received					

Comments that you would like to make about the way in which the feedback information received was useful for your learning during the course, or what you would improve in your performance if you could retake the course.

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MORAL DEVELOPMENT AND CORRUPTION: AN EVALUATION INSTRUMENT PROPOSAL¹

Christian Jacobs-Ardines

Lidia E. Santana-Vega

Luis Feliciano-García

Universidad de la Laguna

Abstract. Corruption is one of the biggest problems that the Spanish society faces nowadays, hence the need to create tests and questionnaires that assess the degree of moral development among the population. Moral dilemmas are widely used in the context of many investigations and among different disciplines, but concretely they are popular among the social sciences. Most of them have the aim to achieve measurements related to moral development or moral judgment and therefore they are very useful in order to predict future actions of the test-takers. Many of the negative phenomena that affect our social model are in connection with the moral decisions and dilemmas that individuals face. One of the biggest problems that we face today in our country has to do with political corruption, since in the political framework moral decisions and dilemmas take on a transcendental importance, impacting on the welfare of all citizens. The studies of Lawrence Kohlberg related to moral development, are the theoretical framework used to build those tests, being the Defining Issues Test of James Rest the most renowned, validated and adapted to different circumstances. The present paper will try to describe the background and content of a questionnaire, developed from the DIT, whose main goal is to study the moral development of law students in Spain and, in particular, the moral development related to political corruption.

Key words: Moral values, moral development, evaluation, ethic education, political corruption.

DESARROLLO MORAL Y CORRUPCIÓN: PROPUESTA DE UN INSTRUMENTO DE EVALUACIÓN

Resumen. Uno de los problemas que más preocupa a la sociedad española es la corrupción; de ahí la necesidad de crear instrumentos que evalúen el grado de desarrollo moral de los sujetos. Los cuestionarios que incluyen

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dilemas morales se utilizan en investigaciones sobre el tema en diversas disciplinas de las ciencias sociales. El objetivo es medir el desarrollo moral o juicio sobre problemas morales para predecir una eventual conducta en una situación futura. Muchos de los fenómenos negativos que afectan a nuestro modelo social están en conexión con decisiones y dilemas morales a los que han de enfrentarse las personas. Uno de los mayores problemas de nuestro país tiene que ver con el fenómeno de la corrupción política, ya que es en el marco político donde las decisiones y dilemas morales cobran una importancia trascendental, repercutiendo en el bienestar de todos los ciudadanos. Los estudios de Lawrence Kohlberg siguen sirviendo como marco teórico para el diseño de instrumentos que evalúan el desarrollo moral. Entre estos instrumentos, el Defining Issues Test (DIT) de James Rest es uno de los más utilizados, validados y adaptados a las circunstancias que las investigaciones requieran. El presente artículo describe los antecedentes y el contenido de un cuestionario diseñado a partir del DIT para la investigación sobre el desarrollo moral de los estudiantes del Grado de Derecho en España en relación con el fenómeno de la corrupción política, y ofrece orientaciones sobre la elaboración de este tipo de adaptaciones.

Palabras clave: Valores, desarrollo moral, evaluación, educación ética, corrupción política.

Introduction

Corruption is a pressing problem for the 21st century Spanish Society; it is therefore advisable to take up the task of finding a solution or a preventive means of avoiding its appearance.

Corruption revolves around social decay. Spanish society was so familiarized with corruption that its citizens were not willing to waste time struggling for their interests, or the community's interest, while their own personal things were going well. The 2008 crisis produced a paradigm shift, and today, after numerous cases of political corruption, citizens have begun to wonder what is acceptable and what is not in society.

Understanding what leads a politician to become corrupted, is to decipher the scenarios that make this possible to begin with; however, while the internal values of political organizations do not suffer the paradigm shift that society has already begun to undergo, the corruption problem will not be able to be tackled.

Corruption is an endemic wrong, but it is possible to prevent it via the dynamics of political parties, eliminating the self-legitimization of the corruption phenomenon, up to personal ethics, by educating citizens on such moral values as honesty, integrity and transparency.

It is impossible to address the problem of corruption without first having a thorough and complete understanding of the phenomenon; a research work was therefore necessary that enables us to: a) unravel the operational mechanisms of corruption systems, b) define the corrupt subject's etiology, c) help prevent/avoid the social construction of the phenomenon, and d) dismantle what it currently exists.

Oscar Bautista, a PhD from the Universidad Complutense de Madrid, asks in his publication, *How to Address Corruption?* (Bautista, 2016) the way forward to locate and address the problem. Through this way, we understand corruption as a global issue that affects specific job posts and structures within the political system, likewise being present in the administrative field, university and even private entities. It is also necessary to give corruption the importance it deserves, as a transversal problem that affects the whole society. It is necessary to locate the problem within space and time, understanding its genesis and contextualizing it. It would be beneficial for the author to assign a team responsible for the study of corruption, which is distant to the public system. An approach must be chosen for

addressing the problem, most likely prevention through the strengthening of public ethics would be more convenient.

Preparing a State policy developed through laws and regulations would be interesting as a means of preventing corruption. Although a future Comprehensive Law against corruption is in the works, Spain currently has no rules that attempt to prevent this phenomenon, contrary to what happens in other surrounding countries (Santana Vega, 2013).

According to Bautista (2016), knowing the state of the issue is necessary for overcoming corruption; this has to be done through various approaches to understand the problem in its various dimensions. Education in values is crucial for overcoming the corruption phenomenon; this can be carried out not only with traditional teaching resources, but also with other more innovative ones, such as the cinema, which reflects the values and disvalues present in our environment (Santana Vega, 2007; 2015). Educating in values is also the responsibility of society as a whole; as an African proverb says, “It takes a village to raise a child”, teaching the value of honesty at home, in the community and in school is an effective antidote against future corrupt behaviors. In addition, according to Bautista, (2009), it is very important to educate citizens in so-called public ethics, which constitutes the set of values and, therefore, behaviors found within the law and the general principles of law, as well as all those values considered as universal and inherent to human beings.

The relationship between developing morality, moral judgment, a person’s values (which are the social characteristics of cognitive-evolutionary mechanisms) and corruption is undeniable (Jovani, 2012; Bautista 2006 and 2009). Lawrence Kohlberg was an eminent psychologist and remains today one of the major exponents in the study of moral development. His research, in particular his theory of moral judgment, is still being analyzed in numerous universities around the world. Thought, ethics, the internalization of values, and the physical development of individuals was what Kohlberg called Moral development. It is necessary to establish links between moral development and the problem of corruption, as well as analyze the implications that education in values may have for solving the problem.

Within the context of educational research and innovation, we must explore the possible applications of the moral development theory through tools that serve us to decipher the phenomenon of corruption. James Rest, among others, was one of the psychologists of the past century that invested the most amount of time into the practical application of Kohlberg’s postulates, which is now the well-known DIT (Defining Issues Test) questionnaire, (Rest, Cooper, Coder, Masanz and Anderson, 1974) one of the best adapted works to inquire about the moral development and the behavioral intentions of individuals within the various areas of their lives.

The serious problems currently faced by developed societies and developing countries is due in large measure to a crisis of values, of morality, and thus a poor development of judgment and morality, as well as a deficit of socialization regulations. This should be solved through the study of social problems via the perspective of morals and values, developing a radiography of the state of the issue through the proposition of plans and specific actions.

The objective of this work is to track the background and describe the contents of a questionnaire designed based on the DIT so as to investigate the moral development of students from the Law Degree in Spain in relation to the phenomenon of political corruption, and provide guidance for the development and/or adaptation of this type of tool.

Corruption and Education

The corruption phenomenon constitutes a serious and complex problem for modern democracies, because of its detection and prevention difficulty. Corruption distorts the normal way functioning of democratic institutions and causes serious harm to society in terms of:

- Financial cost for the State
- Distrust against public representatives among citizens. This social mistrust undermines a citizen's participation and commitment with eradicating corruption; it can even lead to imitating the corrupt behavior and the legitimization of the corruption phenomenon.

Despite having lived truly critical moments throughout Spain's history, especially when it comes to consolidating democracy in the country, democratic participation remains highly questionable (Ganuzá Fernández, 2006; Colino and Pino, 2014), it has even come to be regarded as "low intensity democracy"; the corruption phenomenon has its share of responsibility in this situation. Therefore, not only is it necessary to develop snapshots of the country's corruption panorama, it is also convenient to uncover the problem's etiology.

There is a series of legislative texts in Spain, which have led to the emergence of the corruption phenomenon, especially of an urban nature (Romero, Fernández and Villoria, 2012); however, far from responding to a purely legal status, the genesis of corruption lies in a crisis of values and morality from our public representatives (Moreno, 2017), a sort of political alienation, where they have lost any conception of the social contract and the universal principles that enable us to live together in peace.

Spain does not have a built-in anti-corruption strategy for the different areas of the lives of its citizenry and political representatives; nor are there any channels for the citizen to participate in the fight against corruption. Added to this is the disregard for preventive mechanisms and the expansion of a punitive solution (criminal punishment) against the corruption phenomenon, which is exacerbating the problem (Villoria, 2015). There exist in the country mechanisms such as pardoning, which, coupled with the politicization of justice, do not contribute in creating and ensuring the functioning of a democratic state, but on the contrary, create the illusion that those who commit morally reprehensible acts do not pay for their crimes (Santana Vega, 2016).

There are several strategies designed for curbing corruption based on the joint action of the State's judicial power, to even legislative proposals that are left in the air. Education in values is one of the paths to follow as an indirect strategy for fighting corruption based on higher education (Kravchuk, 2017; Martínez and Serrano, 2017; Sekirina Mukhametzhanova, 2016; and Hauk and Saez-Martí, 2002), therefore, we must ensure and be fully aware of the contents of knowledge, attitudes, and values disseminated in universities (Cheung and Chang, 2008).

There are currently many problems related to the unethical (or dishonest) behavior of many students that develop throughout their university life, such as plagiarism or copying tests; corruption seems to go beyond the purely political (Chapman and Lindner, 2016).

The development of values that guide our behavior, and in the end, our moral judgment, increases the capacity for abstraction and empathy in decision-making; thus, values must be taught in higher education (Robina Ramírez, 2017).

As has been pointed out, the origin of corruption stems from a crisis of values or moral sensitivity in political positions, which makes such individuals more likely to commit morally reprehensible practices when exercising their responsibilities. Education in values and in

good democratic practices is not broad enough to strengthen universal principles that guarantee a healthy coexistence in society.

Corruption needs brakes, which can be the values and principles with which people count upon (Bautista, 2016). The educational sector must develop the approach of education in democratic values for preventing corruption (Marco and Nicasio, 2014); therefore, it is necessary to determine the citizenry's moral sensitivity toward corruption.

Moral development in Social Science research

Research in the Social Sciences is and always has been a determining factor for those nations that seek to play a relevant and active role within the knowledge society; however, the research work and publications from higher institutions have not always been supported.

Since the middle of the last century, scientific research has begun to play an active role within modern societies, many of them for research and development, firmly believing that it is possible to improve societal coexistence through the scientific method.

Therefore, it is an obligation for those of us who are part of the higher education system to contribute to the knowledge society with rigorous, relevant and systematic research, with a practical-applicable scope to seek answers for social problems. It is necessary to have in-depth knowledge of the most innovative research methods that are best suited to the nature of the problems that are the study objectives for the Social Sciences. Thus, a broad understanding of the studied phenomena will be required, which will determine the methodology that the researchers will carry out.

One of the issues that has taken particular importance in recent years within the study of Education Sciences and Psychology has to do with moral development in young people, since higher education institutions have realized the relevance that this sector within the population holds for society's regeneration (Lepage, 1995; Gozávez, 2000; Rest, Narváez, Thoma and Bebeu, 2000; Barba, 2001; Barba, 2002).

American Psychologist Lawrence Kohlberg is one of the precursors and authors on moral development research, and has dedicated his life to studying it. Kohlberg's research still continues to inspire the design of measuring tools related to development and moral judgment (Linde, 2009; Narváez and Gleason, 2007). These tools are intended to examine sensitivity or moral development, and include a series of moral dilemmas that individuals must overcome; scores are derived from their answers, which enable us to determine the level of their moral development (Linde, 2006 and 2007). Questionnaires developed throughout history, such as the Defining Issues Test (DIT) from Rest, the CC-P from Martorell or even more modern versions like the PROM (Carlo et. al., 2015), include these types of moral dilemmas.

The DIT is perhaps one of the most important tools used for measuring the moral development of individuals, with its validity being demonstrated on numerous occasions, (Rest, 1975; Schaepli, Rest, Thoma, 1985; Basinger and Gibbs, 1987; Rest, Thoma, Edwards, 1997). Adaptations of the DIT are usually developed to adapt its original structure to the needs of the study to be carried out. (Guerrero Martelo, 2004; Pérez-Olmos and Dussán-Buitrago, 2009). These adaptations require certain procedures during its preparation to ensure their validity, as well as subsequent follow-up tests that confirm it.

Lawrence Kohlberg's Cognitive-Educational approach

To examine the moral sensitivity of individuals and, in general, their social-moral development (that is, the degree of internalizing certain values legitimized by a particular society) several approaches have been tested, however, the most accepted is the cognitive-evolutionary one. This is the approach adopted by authors such as Jean Piaget or Lawrence Kohlberg. The relationship between the cognitive and evolution is given as an active construction, in which the individual is related with the environment throughout their developing years, overcoming different levels of social-moral development (Piaget and Inhelder, 2015).

Different researches demonstrate that moral consistency is the result of the thought developments from subjects, which acquires complexity over the years, resulting in a more advanced "morality" (Kohlberg, 1992; Kohlberg, Power and Higgins, 2008).

Piaget was one of the first evolutionary psychologists in pointing out that development is the result of an adaptation to the environment undergone by an individual; adaptation comes along with the development of knowledge, making its understanding more complex each time. Piaget establishes a series of evolutionary stages where the individual will develop more complex and abstract ideas related to moral judgment (Piaget, 1984).

Lawrence Kohlberg, a disciple of Jean Piaget, developed the theory of conceptualized moral development, what we know today as "moral judgment", defining a judgment of values about people and "duty" (Kohlberg, 1992; Revenga, 1992). Moral judgment is studied through numerous researches, presenting moral dilemmas where the subjects should issue a moral verdict.

Through his research, Kohlberg succeeds in identifying a pattern in the general population that relates moral judgment with age and maturity, concluding that throughout an individual's life, moral judgment and, therefore, moral development becomes increasingly complex (Hersh, Reimer and Paolitto, 1984; Quintana, 1995).

Kohlberg describes three levels of moral development (Linde, 2010). The first level is the "pre-conventional", in which the subjects do not have clear social rules nor authority. The behavior of individuals at this level remains governed by the direct consequences of their actions (in other words: "As a public servant, I will not accept gifts in exchange for favors because I could be sent to prison"). This is the classic position of the subjects that do not yet have 10 years of age, in which they do not understand why they are punished but understand that their actions carry reproach.

The next level is the "conventional" one, where individuals act in a dyadic manner under the *quid pro quo* paradigm, better understanding their roles within the social system, and what authority means. Kohlberg points out that the vast majority of the population find themselves in this position, which develops after ten years of age.

Lastly, Kohlberg describes the so-called "post-conventional level", developed by very few people, usually after twenty-five years of age. At this level, individuals understand the rules of society and are able to go beyond, since their thinking is guided by values and principles built by themselves in their eagerness to achieve a better society for all.

Although it may seem surprising, the approach most commonly used for the study of moral development currently remains the one developed by Kohlberg, related to the moral judgment of individuals through the presentation of moral dilemmas. (Linde Navas, 2009; Narváez and Gleason, 2007).

At this point, it is not difficult to anticipate the relationship that can exist between what Kohlberg called “moral judgment” and the problem of corruption. Public representatives and political powers face moral dilemmas day after day, and it is their social-moral development, which will determine an answer one-way or the other.

The Defining Issues Test (DIT) from James Rest

As it has been previously mentioned, the DIT of Rest et al. (1974) is a questionnaire designed for measuring moral development. This tool is one of the most used and one of the most worked on, but it is necessary to explain the theoretical fundamental that it encompasses.

For Jean Piaget, moral development is nothing other than an adaptive mechanism of the individual toward the environment, modifying their attitudes and behavior based on a cognitive-evolutionary model; this is, the individual develops psychological structures as they grow. For Piaget, the morality phenomenon should not be decoupled from the cognitive (Piaget and Inhelder, 2015). Moral judgment represents a cognitive process that is also developed under the influence of the individual’s environment (Piaget, 1984; Hersh, Reimer and Paolito, 1984). Piaget developed a series of levels, assigning a certain degree of moral development to each of a person’s evolutionary stage.

Kohlberg, subsequently, developed Piaget’s idea, developing a more sophisticated model than his predecessor, specifying six positions and three stages of moral development. Kohlberg also specified the ages at which people go through these stages. According to Kohlberg, the individual’s interactions with their environment are the ones that will develop their moral reasoning, based on cognitive structures of parallel reasoning (Rest, 1979).

An individual facing a moral dilemma will act and take decisions related to their mental schemes (cognitive dimension); these schemes will help them prioritize the values that serve as the basis for their behavior.

One of the first tools created as a theoretical work of Lawrence Kohlberg, which was developed by himself: the Moral Judgment Interview, with Rest later designing the DIT.

The DIT was created in the early 1970s by Rest, Cooper, Coder, Masanz and Anderson (1974), and its main objective was to avoid Kohlberg’s long Moral Judgment Interview. The DIT is an alternative in questionnaire format that required less time and dedication. Despite not sharing the original structure, the DIT retains Kohlberg’s principles as referred to the methodology, with its development focused on moral dilemmas.

Interviewees should answer these moral dilemmas through a series of considerations. These considerations represent the stages established by Kohlberg, with each one answering to a different view of the subject regarding moral dilemma. In this way, those considerations with less developed content located in the lower levels of reasoning correspond to lower moral development.

Once the subjects point out the considerations in the DIT that most resemble their way of morally conceiving and prosecuting dilemmas, the statistical treatment of the data is carried out (most chosen considerations, means, medians, differences between the sociometric sample, among others). The P index will also be calculated, by which it will identify those students who chose considerations from level 5 and 6 of moral development to be the most relevant, which is the most moral complexity.

Over time, there have been numerous empirical and DIT validating studies that confirm the questionnaire's ability to determine the degree of moral development through the scores obtained (Rest and Narvaez, 1994; Rest, Narvaez, Bebeau & Thoma, 1999; Thoma, 2006; Thoma, Bebeau, Dong, Liu, & Jaing, 2011).

The DIT has currently changed much in its more than thirty years of history, especially in the questionnaire's score measuring system, having developed new indexes such as the N2; it is nonetheless considered one of the most indicative tests for measuring the *kohlbergian* scheme of an individual's moral development, serving as a theoretical model and as a strategy for research on people's moral judgment.

Social-Moral and Corruption Development Questionnaire (SCDQ)

Within the course of the study on moral development, which is part of a broader research project, several of us researchers have decided to adapt Rest's DIT and redirect it toward the corruption phenomenon, which is the objective of the project financed with public funds. Preparing the SCDQ is based on the DIT, replacing the six original dilemmas with three other new moral dilemmas related to corruption. The same DIT principles has also been use in other research, reducing the dilemmas to three of the six original ones, obtaining a high reliability rate.

The "SCDQ" is a tool that finds its foundation in the moral development theory (Kohlberg, 1984; Colby and Kohlberg, 2017). Kohlberg proposes 6 stages (and three levels) of development for an individual's moral judgment: level 1 or pre-conventional (Instrumental/individualistic), level 2 or conventional (Interpersonal/Social System), and level 3 or post-conventional (Social Contract/Ethical Principles). It is necessary to clarify that the design of our questionnaire is geared toward college students from the Law Degree, adapting the content and difficulty of the moral dilemmas, since that has been the target population in the context of our study.

The "SCDQ" is composed of three moral dilemmas in the form of brief accounts related to corruption. Accompanying these dilemmas are three sections for assessing the subjects' social-moral development:

- The first section includes Yes/No/I Don't Know answers, so that the subject responds to the dilemma's central question, for example, *Should Pete accept the commission?* This section will help the subject define a clear position with respect to the action that should be taken by the moral dilemma protagonist.
- The second section includes 6 moral considerations related to each of Kohlberg's 6 social-moral development stages. Each one of the considerations is accompanied by a Likert scale, preferentially indicated for the analysis of the psychometric variables of attitude, value or personal guidance type (Lewis, 2003). The subject should point out on the Likert scale the importance of every consideration for adopting a particular decision; this is, what is the guiding criterion of their moral judgment.
- In the third section, based on the assessment of each of the 6 considerations' relevance, the subject must order the 4 estimated considerations as the most relevant considerations from highest to lowest priority. We can highlight two of the results obtained with regard to the "SCDQ":

- The first is obtained from the initial question of every dilemma, where students must decide how the moral dilemma's protagonist should act, responding affirmatively (yes, they should undertake such a corrupt behavior) negatively (no, they should not do it), or, expressing their doubts (I don't know).
- The second result has to do with the statistical analysis of the chosen items as the most important when making a decision about the moral dilemma. A descriptive study will be carried out on the chosen items, and of the moral development levels to which they correspond. The P index will also be calculated by adding the individual scores from those items chosen as the more relevant for making a decision about the moral dilemma, and whether these correspond to conventional levels of post-conventional moral developments (Rest, 1979; Rest, 1986; Rest, Thoma, Narvaez and Bebeau, 1997).

Cronbach's Alpha is proposed for use, so as to demonstrate the test's reliability. We believe that if the value obtained exceeds 0.7, the test can be estimated as being reliable, otherwise the items or stories would have to be readjusted.

Regarding the interpretation of the results, we emphasize that an individual has a high development of social-moral judgment (a P score) when their thoughts/deductions are guided by universal values and principles (higher levels of moral development), where the rational individual recognizes the fact that people are ends in themselves and not means. These subjects act according to respect, dignity, justice and equality. This vision of moral development coincides with the concept of human dignity that Kant and Habermas developed.

The above results will measure the development of moral judgment related to corruption. This moral judgment is linked to attitudes and behaviors, *ergo*, with a possible eventual behavior of the analyzed subject with respect to corrupt situations.

In psychological terms, we want to explore the individual's tacit knowledge (implicit, dependent on values-principles), causing them to assess a situation-assumption; having chosen those considerations more suited to their perception of the moral dilemma enables us to determine the level of morality with respect to the corruption phenomenon.

Conclusions

The problems that currently concern the world do not cease in having purely social origins, a crisis of values and poor moral judgments, lacking humanity and an understanding of the world. The individuals concerned with the corruption phenomenon must think and reflect on their own actions and that of others, always from a democratic point of view, in order to be able to understand and act according to reality. To eradicate the great problems plaguing societies, it is necessary to educate, investigate and carry out actions and policies aimed at promoting public ethics.

The objective for this work was to: 1) trace the history of the Defining Issues Test (DIT); 2) describe the contents of a questionnaire designed based on the DIT to research the moral development of students from the Law Degree in relation to the political corruption phenomenon, and 3) provide guidance on the development and/or adaptation of this type of tool.

One of the causes for corruption is the poor moral development of public representatives, therefore it is necessary to analyze its relationship with the moral development of individuals, as well as carry out a pedagogy focused on the cognitive-evolutionary development established by Kohlberg; perhaps in this way, we may prevent

some of the social ills of post-modernity. The DIT is currently one of the most powerful tests for analyzing the *kohlbergian* scheme of moral development. Over the last decades, this test has been an essential tool for researching people's moral judgment. Empirical studies that employ the DIT have demonstrated its validity as a tool for analyzing the degree of moral development in subjects.

At present, the DIT has changed a great deal in its three decades of history; its different versions enable researchers to analyze individuals' moral development in a simple way as of Kohlberg's perspective. The research teams must ensure the measurement systems' design and development to ensure the validity and reliability for measuring the analysis objective construct (moral development). We must reflect on the topic for designing and redesigning tools, such as the DIT, in function with the needs for the moral development research; in this way, we may debug said tools.

Within the context of the Social Sciences research methodology, there are numerous tools and techniques for collecting information available to the research teams. These tools enable us to obtain information on social phenomena from different perspectives; however, they are not being used due to their complexity.

We cannot limit ourselves to carrying out long questionnaires or boring tests. It is necessary to create and produce, be original and create precedence not only at the bottom of a research, but in its way as well. We should advocate for innovation in research methods within the Social Sciences context.

The fundamental objective of education must be to achieve the full training of all the players that make up society so as to ensure peace and coexistence, promoting those values derived from freedom, equality and solidarity. It is necessary to form free and critical thinking that reflects on these values and principles as a basis. According to Marina (2006), educating basically consists in socializing, in other words, developing the capacities, assimilating the values, acquiring the skills not only to live, but for good living in a given society. The way that society conducts itself will depend on the policies of education in values that generations to come will invest on. Education will be a determining factor in the success or failure of the purported, expected, and highly appointed quality of democracy. We need to regenerate the social fabric by educating citizens in civic values; combating the corruption phenomenon in this way. Research focusing on the diagnosis of the ills that most affect our societies should be established from universities, to try to respond to questions about the aetiology, the prevalence and incidence of such evils. Universities should promote the analysis of the corruption phenomenon from a multidisciplinary approach, as well as propose strategies for ensuring comprehensive solutions that respond to a problem of great social significance.

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**MOBILE LEARNING: SUPPORT IN CREATING A DATABASE
FOR ELEVENTH GRADE STUDENTS FROM GIMNASIO
CAMPESTRE SAN RAFAEL**

Duver Rene Acosta Orijuela

Manuel Sierra

Universidad Manuela Beltrán

Abstract. In the society in which we live, technological advances and the need to be in constant communication with information are inevitable. Applications and mobile devices to support education have become important tools: the content of this document focuses on research on learning supported by ICT tools, specifically, in the databases subject taught to eleventh grade students from Gimnasio Campestre San Rafael. This strategy aimed to design a learning scenario with which it is possible to reinforce topics seen in class and interact with students via the mobile device, make academic inquiries through websites, specific documents and video tutorials and interact with the teacher regardless of the place or access time. The study was carried out using a quantitative approach, based on pre-test and post-test data, with an experimental-type scope; defined by two contexts, an experimental group and a control group. The study is correlational in nature, since it allowed for the analysis of the relationship degree between the dependent variables and the independent variables. It is concluded that the use of apps is of great importance, since it is clear that, with the mobile application, students achieve an improvement in their academic performance and motivates them, which allows to reinforce the contents of the subject and promote communication between students and teachers. It should be noted that this research is relevant to implementing mobile learning to future research.

Keywords: Mobile devices, e-learning, m-learning, Virtual Learning Object.

**APRENDIZAJE MÓVIL: APOYO EN LA FORMACION DE BASE
DE DATOS PARA ESTUDIANTES DE GRADO ONCE DEL
GIMNASIO CAMPESTRE SAN RAFAEL**

Resumen. En la sociedad en que vivimos, los avances tecnológicos y la necesidad de estar en constante comunicación con la información son inevitables. Las aplicaciones y dispositivos móviles como apoyo a la educación se convierten en una herramienta importante; el contenido de este documento se enfoca a la investigación sobre el aprendizaje apoyado con herramientas TIC específicamente en la asignatura de base de datos a estudiantes de grado once del Gimnasio Campestre San Rafael. Esta estrategia pretendió el diseño de un escenario de aprendizaje con el cual se pueden reforzar temas vistos en la clase e

interactuar con los estudiantes desde el dispositivo móvil, realizar consultas académicas por medio de sitios web, documentos específicos y video tutoriales e interactuar con el docente sin importar el lugar ni el tiempo de acceso. El estudio se realizó mediante un enfoque de tipo cuantitativo, basado en datos pre test y post test, con un alcance tipo experimental; definido en dos contextos un grupo experimental y grupo control, el estudio es de tipo correlacional ya que nos permitió analizar el grado de relación existente entre las variables dependientes y las variables independientes. Se concluye que el uso de las APP es de gran importancia ya que se evidencia que el estudiante consigue una mejoría en su rendimiento académico, genera motivación la cual permite reforzar los contenidos de la asignatura y favorece la comunicación entre estudiantes y docentes. Cabe resaltar que esta investigación es relevante para implementar el aprendizaje móvil en futuras investigaciones.

Palabras clave: Dispositivos móviles, e-learning, m-learning, objeto de aprendizaje virtual.

Introduction

The Gimnasio Campestre San Rafael, located at Tenjo, in Cundinamarca, Colombia, presents one problem that was at the same time the motivation for this study. The subject “IT and Technology” taught in eleventh grade, is only taught for one hour a week, as established in the syllabus, which means it does not count on much class hours due to the fact that other subjects enjoy more class hours, such as Math, Spanish language, English language, Chemistry, Physics, English lab, Natural and Environmental Sciences, Dance, Gymnastics, Theory of Knowledge, Recreational activities.

Consequently, the few class hours dedicated to the IT and Technology subject (50 hours per week) and the fact that sometimes there is no continuity between lessons, leads to difficulties in the adequate acquisition and understanding of knowledge and abilities to develop the databases’ contents, in the theoretical and practical branch.

Time interval is limited, sometimes it is not possible to work with the computer, then the student cannot put the knowledge into practice, for example, developing MySQL Workbench¹ databases, thus, the syllabus cannot be completed and so knowledge fails to be constructed, developed and settled.

One of the strategies applied to the subject is the theory training taught at class, which is carried out with the support of an IT tool, which makes it more appealing and interesting for the student, since the results can be seen in the theoretical aspects, however, due to the lack of hours and lack of student-teacher communication and interaction, such aspects do not go beyond class.

At Gimnasio Campestre San Rafael, learning about databases is conceived to be happening under a theory-practice component, particularly related to the study of databases managers (as it is the case for MySQL Workbench), and hence put what has been learned into practice.

To teach the databases subject, the teacher needs to deal with important topics both in theory and practice, but time is limiting the learning planning; subjects as databases foundations, databases types, download and installation of MySQL Workbench, basic databases concepts, internal structure of a database, types of data

¹ MySQL Workbench is a graphic tool thought for design, administration, maintenance, integrating software development, for the MySQL database
<https://www.mysql.com/products/workbench>

managed with MySQL², databases properties, tables, files, constants, variables, expressions, functions, queries, table relationships, data update, forms, reports, primary keys, foreign key among others, lessons are agreed upon the achievements and indicators established in the syllabus, for a strict chart must be met because of the short class hours.

In this way, through a pedagogical strategy that includes the use of mobile technology, to which you can access from any part of the world and at any time, both theory and practice of the lessons taught in class can be strengthened. Considering the recognition of the benefits that researchers have given to cellphone technology in education, it is possible to mention the writing called M-learning and smartphone in the IT and Technology class from Compulsory Secondary Education (Mosquera, 2017), another research project “Mobile devices in Education and their impact on learning” by Camacho (2016), M-learning: learning through mobile technology, from the higher education students . Instituto de Estudios Superiores de Tamaulipas–Red de Universidades Anáhuac, 2015 (Róman, 2015) and “Current trends on the use of mobile devices in education” developed by Cantillo (2012), mobile technologies have restructured the educational panorama, giving education not only mobility, but also connectivity, ubiquity and permanence, that are characteristics of the mobile devices. It is very likely that the student finds new spaces, free time and is more motivated to learn in It and Technology and, concretely, to learn about the download, installation and development of databases. In the report MINTIC (2018) By the end of the fourth trimester of 2017, the total number of accesses to mobile Internet was 15.177.943, a figure composed of third generation 3G accesses (8.856.897), followed by fourth generation 4G accesses (5.212.602) and second generation 2G accesses (1.108.444)”, shows the growth in the use of mobile devices, As a matter of fact, together with educational applications, students will benefit because they will be able to access to mobile learning and training both measured by the ICTs.

This is how the next research question appears: how does the use outside class of an app strength learning about databases in the subject IT and Technology offered to eleventh grade students from Gimnasio Campestre San Rafael?

There are multiple learning models on which the educational process is based using diverse approaches. When this research process started, it was found that many focus on technology and on how to include the contents and information in a mobile application, but when analyzing other approaches, it was observed that they are focused on purely pedagogical aspects where what is sought is the way to carry out these interventions, the user-app interaction and the way students are going to interact with the machine, the contents, the tutor, their peers and everything that has do to with the mobile app context in education.

In a mobile learning process aimed at a group of students it is necessary to keep in mind different aspects that must obligatorily condition the relationship between the teacher the student(s) and the mobile app content, these personal spaces will be possible if the students’ specific circumstances are taken into account, the spaces in which the learning is produced, the motivation to learn and the way how learning develops with regard to the students’ academic performance.

A learning plan must be well structured, following the individual, group, context, social and technical learning, with the aim that the student learns and

² MySQL is a database management system that is relational, based on structured queries language (SQL)

understands the subjects, since the information's treatment, time, place, abilities in the handling of resources are present in their teaching-learning process via experience and practice.

From the traditional learning theories, in accordance with Mosquera (2017) "Mobile learning, or m-learning, has its origin in its predecessor, the e-learning", hence, mobile learning or M-learning, (Otero, 2014) is defined as the use of mobile devices to improve quality and ease the access to resources and services, as well as to achieve the exchange and collaboration among the knowledge society via mobile Internet, mobile devices or laptops starting from two fundamental elements, that are, what is learned and how that is learned. Keeping in mind the previous concept, it is clear that mobile devices or laptops have a great evolution, in software (operating systems and mobile apps) and hardware (dimensions, weight, screen, internal memory, processor, main and secondary webcam, audio, connectivity, sensors, battery, among others). Continuous improvement in these devices as well as in mobile apps increase daily and highlight the characteristics associated with mobile devices such as: portability, defined by the device's size, connectivity, which is made via wireless networks that allow any kind of communication, voice, chat, video conference among others, an ubiquity that can be defined as being able to use information at any place and moment and the adaptability of services and apps necessary for the user's work that the user may need.

Methodology

The study's objective is to analyze the acceptability of the use of app and mobile devices for the databases subject, taught to eleventh grade students of Gimnasio Campestre San Rafael.

Participants

For this research, the population are students from Gimnasio Campestre San Rafael, located at Tenjo, Cundinamarca, Colombia. Currently, the center has 18 eleventh grade students, that are distributed as follows:

Table 1
Number of students and ages

Students			Age		
Men	Women	Total	15 years old	16 years old	17 years old
12	6	18	3	14	1

Note: Source: Own source.

Design

Regarding the design, the experimental design was chosen, that, in accordance with Hernández (2014) it is established that the research design is done with the aim of answering the questions raised in the research and of meeting the study's objectives, for this research, the experimental design is used in two contexts: experimental group and

control group. The first are carried out under controlled conditions in which the effect of the internal invalidation sources is suppressed, as well as any other independent variables that are not manipulated or that are of no interest.

Naupas (2014) indicates the experimental design is a plan that is used to guide the researcher through the experiment. To Hernández (2014), experiments are somehow intervention studies, since a researcher generates a situation to try to explain how it affects those who take part in it with regard to those who are not affected.

From the previous literature and carrying out a deeper study, the research was based on two groups; the first was the experimental group, made up by students with a smartphone with Android as operating system, for the study, it could be observed that 72% of students used Android as the operating system, we need to clarify that the app is only developed for Android. Students from the experimental group need to download the app and install it in their cellphones via a QR code, then, they must interact with the app as to get to know it, the subject is, as it has been said before, databases. The second group was the control group, with students with iOS as the operating system in their cellphones, a percentage of students that is equal to 28%, it must be said that this group cannot download the app because the operating system is not compatible with the app.

Instruments

Instruments were used in accordance with the characteristics and approach were observation, survey and questionnaire, relevant information about the real use context of the mobile app in the learning processes was obtained.

As commented by Hernández (2014) “observing does not only mean seeing, it is about paying attention to much details or events, deepening in and a permanent reflection.” Observations allowed, in the first place, knowing the learning environment without the app and afterwards with the observation made with the app, as well as the students’ interest towards the adequate use of the APP outside class.

Among other characteristics and/or useful aspects for the research, this first instrument called “general survey” aimed at measuring the ICTs acceptance at class with regard to the second instrument for the research. The survey professor García (1993) defined it as a research carried out about a subjects sample that represents a greater collective, using standardized interrogation procedures with the aim of obtaining quantitative measurements of a great variety of objective and subjective population characteristics.

The second instrument’s goal, “Mobile devices” was to assess the mobile device that each one of the students use daily, in other words, the operating system, the installed apps and their user interaction.

The third instrument to carry out the research was the questionnaire, which was used with every eleventh grade students, Hernández (2014) defines it as the questionnaire consists of a series of questions linked to one or more variables to be measured. This evaluation instrument was focused on the app’s usability, it needs to be said that usability is considered as one of the most remarkable aspects of a software product’s quality. This Liker type survey was divided into three aspects (student performance, the App’s environment, contents structure and quality and the App’s environment).

Lastly, pretest and post-test tests were used, which measured the topics related to the IT and Technology subject and to databases.

Procedure

The way how this research was carried out concerning the data collection was divided into four phases: The first phase consisted of taking as a sample those students with a Smartphone with an Android operating system and students with iOS as an operating system in their cellphones.

Eleventh grade was chosen, a group made up of eighteen students that attend class-room based lessons, once the sample is chosen, we chatted with them, explaining the relevance of using the app for the lesson, we asked them if they were willing to take part in the study as the sample and if they had free time to use the data collection and instruments techniques (observation, survey, questionnaire, pre-test and post.-test).

The second phase was the design of the research instruments to collect the data, the observation, the survey and the questionnaire. It is necessary to clarify that the researcher developed the instruments.

To develop the surveys, the answers were written basing on the objectives and the research question, so the respective formats were developed taking into account the variables to be worked on. The chosen independent variable was “APP’s Implementation” which strengths the student’s individual and social. That is the learning in the databases which the student decides time and place to learn, in this way, meeting the proposed objectives in the experience of learning about databases. The chosen dependent variable was “the academic performance” which is such a relevant indicator for the research study since it allows to make evident the student’s interest in self-learning, studying the lessons, same as the improvement in the learning process.

Students rendered a great deal of information via the collection data instruments for this research. It is important to highlight the importance of the contents taught at class and how learning is in the lessons including ICTs, since this is the only teaching-learning way, initially.

The first questionnaire was general, with questions Likert-type, a process through which the ICT acceptance is measured was carried, with an emphasis on mobile devices in classroom-based lessons.

The second questionnaire was answered via the Google tool called forms, a Likert-like questionnaire. In that form, a bit more specialized answers were included about mobile devices that each student uses daily. The information obtained was reviewed via a careful reading and codification that led to the identification of important points for the research.

During the observation, relevant data such as the app’s download, date, used material, topics worked on, the app’s use of information in the lesson's development and the conclusions for the research.

Finally, the fourth stage consisted of the analysis and interpretation of the data, for that reason, a usability questionnaire called “Cellphone’s trustworthiness and validity” was used (Ryu, 2006). With this study, the goal was to determine the psychometric quality of the usability’s questionnaire, via this process, the results obtained were studied as to write the study’s conclusions. The data collection process (observation and interviews), data analysis results and conclusions of the research that was carried on for months.

In accordance with the classroom-based lesson about databases in the IT and Technology subject, a pre-test and post-test quantitative scale measurement were

carried. This scale has a range from 0 to 5 to grade the test assigned to the academic performance, with 1 being the lowest grade and 5 the highest.

Through a diagnostic test (pre-test and post-test) the students' pre-concepts were studied, about the foundations in databases. This test was used with both the experimental and the control group. It is necessary to clarify that the test was used after teaching foundations in databases in a master class. Afterwards, the app is uploaded to a web page, where the control group according to the research conditions does not receive the mobile app, while the experimental group does. Subsequently, a second evaluation takes place, where from the results and statistical analysis such as the average is developed with the support of IBM SPSS software. The IBM SPSS program is a computer statistics program developed by IBM that is widely used in social and applied sciences, and so it is by market research companies all around the world. Software is used and associated with work and efficacy in the use of technological tools and their relevance to strength and ease the topic's learning process, additionally, this phase compiles, analyzes and links the quantitative data to describe how the training processes designed with the ICT implementation do favor or not the IT and Technology class in Gimnasio Campestre San Rafael.

The pre-test and post-test are multiple choice; students choose one answer. These kind of tests belong to the structured and written type tests, these are answers with multiple options from which one is correct and the rest are distracting, or all the answers are partially correct. These tests are used to measure simple learning outcomes: (knowledge) or complex learning outcomes:(understanding, use, interpretation...) the test is made up of 10 questions and the grading scale id 1 to 7.

Results

Below are the results of the grades obtained for every test for the control and experimental group, as well as their average score:

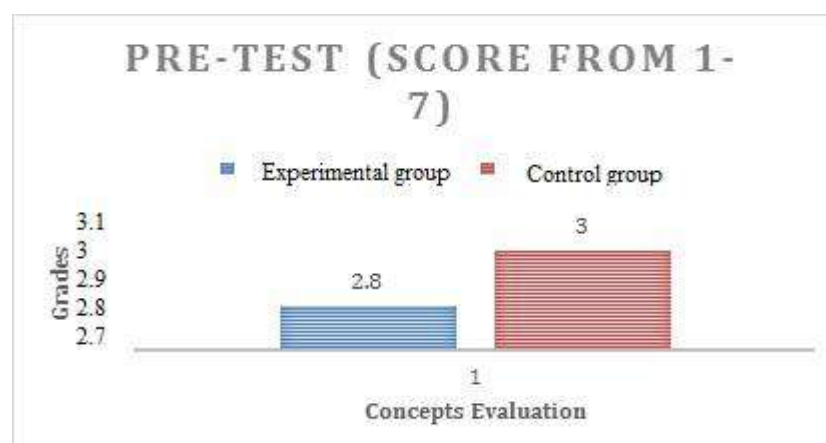


Figure 1. Pre-test comparative, average score

As it can be observed in Figure 1 "Pre-test comparative, average score" the pre-test average score for both the control and the experimental group is similar, so it can be

stated that they both have the same concepts on databases, with an average of 2.8 in the experimental group in contrast with the 3 average score out of 7 as a maximum score.

After class and having used the app in the experimental group, every student rendered the post-test individually, same as the control group, that did not used the didactic strategy. It was clear that there was a general improvement in the grades for the experimental group, in comparison with the average obtained in the pre-test. Results are shown in the figure below.

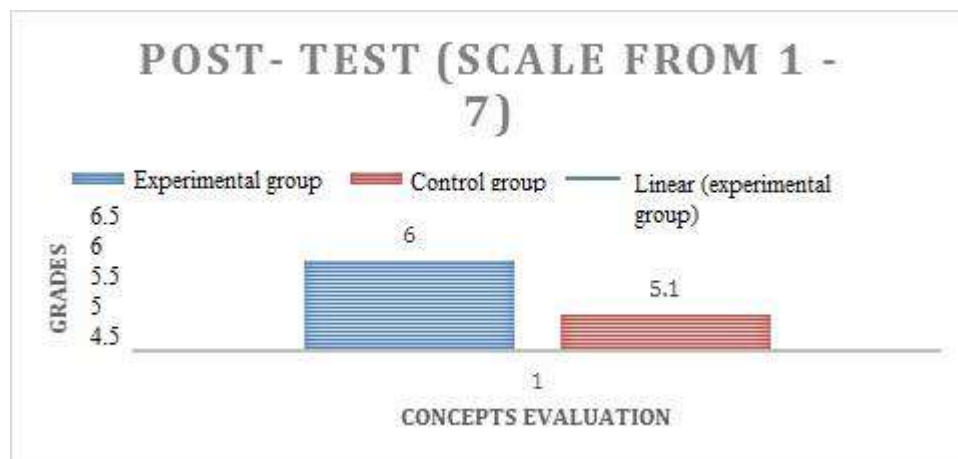


Figure 2. Post-test comparative, average score

Figure 2 shows that the experimental group with an average of 6 had a significant improvement in the grades in comparison to the control group, with an average of 5.1. Likewise, it was observed that each one of the test components (concepts evaluation (pre-test, post-test)), the experimental group obtained a better average after having implemented the mobile app in contrast with the control group, that only learned the classroom concepts, the experimental group, regarding the concepts evaluation component, changed from 2.8 in the pre-test to 6 in the post-test and the control group changed from 3 in the pre-tst to 5.1 in the post-test.

Experimental group pre-test and post-test comparative

The second analysis is a comparative of the results in the pre-test and post-test in the experimental group, with the objective of determining if the experimental group’s results improved post-test, since this will allow to establish if the didactic strategy did improve the cognitive competences in databases in students who used that strategy.

The following table of descriptive statistics shows a comparative of the pre-test and post-test averages in the experimental group.

Table 2
Experimental pre/post-test descriptive statistics

	N	Minimum	Maximum	Average	Standard Deviation
Pre-experimental	12	5.0	7.0	6.000	.8528
Post-experimental	12	5.00	7.00	6.0000	.85280

Valid N (according to student list) 12

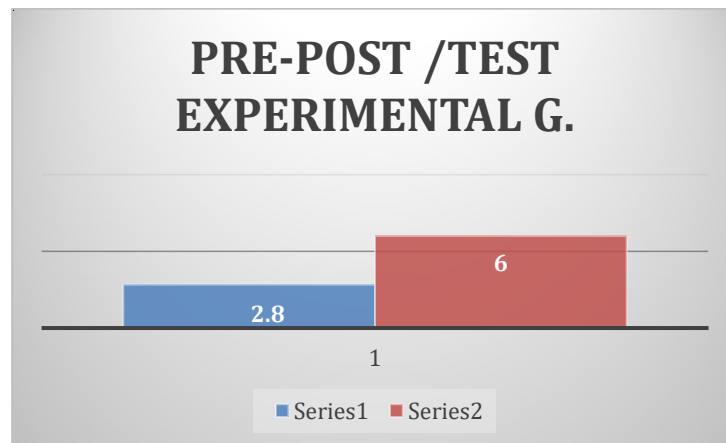


Figure 3. Experimental Group PRE-POST/TEST

Figure 3 (PRE-POST/TEST) shows evidence that the standard deviation measures the data group variations with regard to the average. Basing on that, according to the previous table, it was found that the results of this analysis proved that the average score in the pre-test is 2.8 ± 0.85 and 6 ± 0.85 in the post-test. Having concluded that standard deviations of the samples are reasonably similar, it is not inappropriate to say that the population's standard deviations are equal.

Figure 3 (PRE-POST/TEST) shows the experimental group's grade average in the pre-test and post-test. It clear that post-test average grades improved if compared to the pre-test average grades.

To corroborate the previous statement, the following hypotheses are stated

Hypothesis definition:

Null hypothesis:

H_0 =The experimental group the scores average in the pre-test and post-test are significantly equal.

Alternative hypothesis:

H_1 =The experimental group the scores average in the pre-test and post-test are not significantly equal

Normality Test

H_0 =The "grade" variable has a normal distribution

H_1 =The "grade" variable does not have a normal distribution

The Kolmogorov or Shapiro-Wilk normality test indicate whether a null hypothesis must be rejected. For this case the normality with the Shapiro-Wilk test will be contrasted according to the sample, that is less than 50 data.

The significance level is established to decide to what extent we consider the values are too high to doubt that they do not belong to the population in the null

hypothesis. The significance level established for this research is 0.05, that is to say, <0.05.

Table 3
Normality Test

	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistics	Gl	Sig.	Statistics	gl	Sig.
Pre-Experimental	.213	12	.139	.811	12	.012
Post-Experimental	.213	12	.139	.811	12	.012

The previous table (Table 3, normality test) shows a significance figure in the Shapiro-Wilk test that is equal to 0.12 in the results obtained for the experimental test in the pre-test and for the same group in the post-test, the result is equal to 0.12. Since the significance level established is 0.05, that is to say, <0.05. The results of the experimental group's pre-test variable presents a higher value than 0.05 compared to the significance level, hence, the null hypothesis is accepted, in other words, the grades variables present a normal distribution, in other words, a skewed distribution.

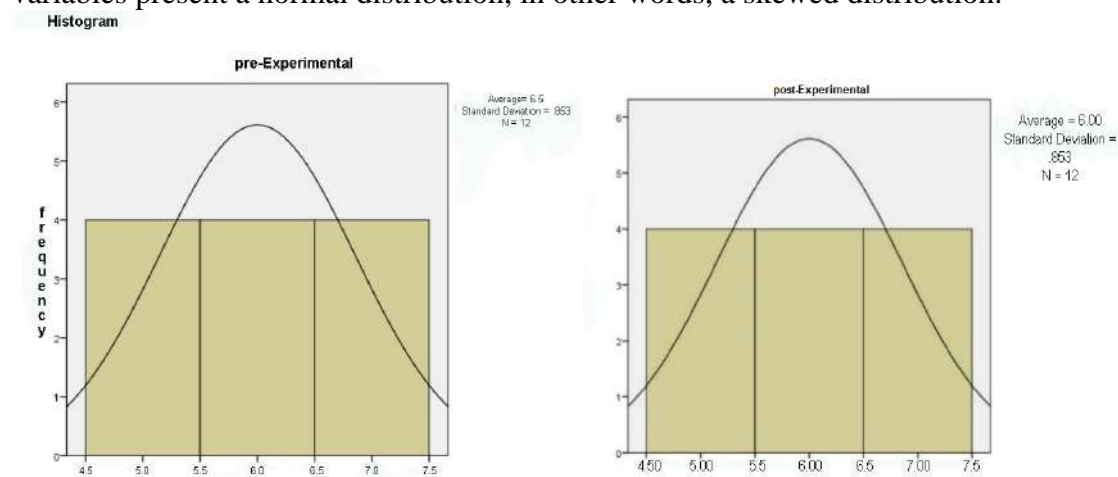


Figure 4. Pre-Experimental and Post-Experimental Histogram

Every time one of the previous test did not present a normal distribution, a non-parametric test was carried out for two independent samples called Mann-Whitney U test with a significance level that is 5%, in other words, <0.05 which allowed to contrast the data from the independent groups.

Pre-test and post-test control group comparative

In the third analysis, a comparative of the pre-test and post-test results for the control group is presented, with the aim of determining if the control group results improved in the post-test in a traditional class, since this will allow to establish comparatives with the experimental group.

The following table of descriptive statistics shows a comparative of the pre-test and post-test averages in the control group.

Table 4
Control group pre/post comparative

	preControl	postControl
N	6	6
Minimum	2.0	4.00
Maximum	4.0	6.00
Average	3.000	5.1667
Standard Deviation	.8944	.75277
Variance	.800	.567

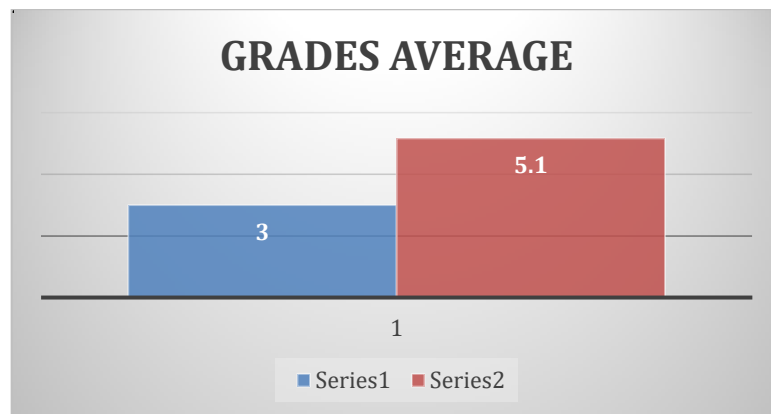


Figure 5. Pre-test and post-test control group comparative.

Figure 3 (PRE-POST/TEST) shows evidence that the standard deviation measures the data group variations with regard to the average. Basing on that, according to the previous table, it was found that the results of this analysis proved that the average score in the pre-test is 3+/- 0.89 and 5.1 +/- 0.75 in the post-test.

Having concluded that standard deviations of the samples are reasonably similar, it is not inappropriate to say that the population's standard deviations are equal.

Figure 5 (PRE-POST/TEST) shows the experimental group's grade average in the pre-test and post-test, which make it clear that post-test average grades improved if compared to the pre-test average grades.

To corroborate the previous statement, the following hypotheses are stated

Hypothesis definition:

Null hypothesis:

H0=The control group the scores average in the pre-test and post-test are not significantly equal

Alternative hypothesis:

H1=The control group the scores average in the pre-test and post-test are not significantly equal.

Normality Test:

H0=The “grade” variable has a normal distribution

H1=The “grade” variable does not have a normal distribution

The Kolmogorov or Shapiro-Wilk normality test indicate whether a null hypothesis must be rejected, for this case the normality with the Shapiro-Wilk test will be contrasted according to the sample, that is less than 50 data.

In accordance with what has been stated before, it can be observed that the experimental group with 6 as an approximate average improved the grades in the post-test, in comparison to the control group, that obtained a non-passing average grade of 5.1. Similarly, it was clear that in every test component (pre- and post-test concepts evaluation), the experimental group obtained better average figures, every time the score was higher than 2.8 in pre-test, such figure changed to 6 in the post-test, making it clear that there was a better understanding of the concepts regarding databases. Concerning the concepts’ use, the number varied from 3 in the pre-test to 5.1 in the post-test, with an average passing grade higher than 5.0. At this point, it was notorious that the technology tools via ICT (mobile app) developed with the implemented didactic strategy in the experimental group allowed eleventh grade students to learn some abilities.

As stated by the results obtained with the use of tools, the forms handed in to the eleventh grade students from Gimnasio Campestre San Rafael, it is concluded that:

Smartphones are the most popular devices among eleventh grade students from Gimnasio Campestre San Rafael, in comparison to phablets or tablets; the research study proves that it is key to prioritize the use of mobile devices as a tool for supporting the teaching-learning process, since this is a device the students uses during the major part of the day.

In this educational process, a mobile app is used, one that supports and promotes learning at any place and moment, in other words, ubiquitous learning via ubiquitous technology.

Besides that, the development of mobile apps for educational purposes are resources to support the students’ learning, it is clear that it provides mobile educational technological solutions with the characteristic that the content (additional readings in pdf and doc formats, (documents developed in Word), video tutorials relates to the topic, links to trustworthy web pages searched by the teacher), can be accessible from any place and at any time.

As well, the use of instruments proved that the most widely used operating system is Android, considering that is an operating system that was thought to be used in cellphones, which provides all the interfaces needed to develop apps that access to the smartphone’ functions (such as GPS, webcam, keyboard, sensors, calls, agenda, among others) in a very simple way in a very well-known programming language as Java is; it is also a flexible operating system, friendly, that allows to install and manage the mobile app provided by the teacher, so the student can enjoy the app at any moment and with no restrictions.

Eleventh grade students from Gimnasio Campestre San Rafael use and connect their cellphones to the Internet using a data plan paid by the parents, by themselves or they rather connect to the school’s WIFI, which is freely accessible.

The most widely used apps are: social media (Facebook, twitter, waze, WhatsApp, Instagram, YouTube, Snapchat, Musically, Spotify, among others), same as

screens to change the smartphone's look, downloaded music and other apps of personal interest: Memrise, Duolingo, Learn English, Sounds: Pronunciation, whose objective is to learn or improve the current English level, taking into account that Gimnasio Campestre San Rafael offer bilingual education. In addition to that, students rely on some background on previous apps installation.

All of this aims at the desire to support the teaching-learning process and the technology and IT classes of Gimnasio Campestre San Rafael with the databases topics with the MySQL Workbench tool.

Discussion and conclusions

Thanks to the mobile app, students can experiment the knowledge from a non-traditional perspective using it, it is clear that as time goes by they are willing to understand and deep in the knowledge with new information resources via the mobile app. Additionally, the difficulties to the study and recommendations will be presented so that posterior related works can bring increasingly integral answers.

This study's is included in the Design and development of digital educational resources line of research, which focuses on the design and development of educational resources to take advantage of them in digital scenarios.

Particularly, a mobile app was designed, developed, implemented and evaluated with a clear focus on education and it was done with a theoretical and technological support for the academic performance's improvement of students.

This research study's goal is to motivate teachers and researchers to put into practice and implement mobile apps whose purpose is to strengthen students' learning.

One of this study's goals was for the students to improve their academic performance and to do so via the mobile app, the teacher's support, and the support among peers, for such factors allow to build knowledge.

Aretio (2017) establishes that "The illusion of being able to be permanently connected, no matter time or space, is no longer an entelechy. Communication with everyone and permanently, as well as the incomprehensible information world that is kept on the Internet", hence, it is confirmed that mobile learning is a possibility for the student to have access to supporting elements that ease the training via an app that is installed in the smartphone. Consequently, this states that the didactic strategy allowed the student to better understand and use the concepts, making the student responsible for the learning process and broadening the student's vision on these kind of instruments to learn about databases.

In the research study, it mainly stands out the student's role in the app's development and use, there was a positive commitment, responsibility, interest and support to continue with the learning process, as well as there was a greater collaboration and distribution of information and knowledge with the individual learning, moreover, the teacher enhanced collaboration, creativity, criticism and self-criticism and reading.

Concerning the mobile learning model, it can be said that the evaluation results were satisfactory, it was possible to make students get involved in a learning model that was unknown until that moment for them, as well, the use of the mobile app beyond its

traditional use was achieved; furthermore, students took charge of the mobile learning model.

Concerning didactics and pedagogy, an integral training was achieved for all students, since they learned the theoretical and practical knowledge, values such as responsibility and respect stand out, the use of ICT tools was boosted and hence, their work was eased, and so it was their results, Aguila (2017) says that m-learning is a learning modality or learning environment that happens via devices that allow people or content to move.

The difficulties faced initially were making that all students paid attention while reading the pdf files, nevertheless, they watched the videos and URL with specific information on the subject, however, students claimed the need to have more feedback at class when they did not understand something related to the use while working.

Some of the recommendations identified for future projects is to develop the app for other operating systems such as iOS, because it is statistically speaking the second most used operating system after Android. The other recommendation is to develop and implement the mobile learning app to diverse educational experiences to expand the learning area, in other words, to use it in other subjects or areas of knowledge and to validate its results, in this way, teachers that develop and implement it can share the educational experiences and allow the exchange of knowledge.

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