Learning Based on Competences and Communication, Tools for the Cognitive Development of University Students

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Abstract: Competency-based learning (ABC) in conjunction with communication, form a technique that helps the cognitive development of university students so that they are able to face the different present and future scenarios. The ABC entails putting into practice the competencies of the students through a problem, from which they must provide a solution using their knowledge, skills and abilities acquired during their school career, since when they graduate from the university they will have to put into practice everything they have learned, enter the world of work that demands people with initiative and skills to face the challenges that are found in the different spheres where professionals interact. The research is based on quantitative data applied to 93 students who study the Bachelor of Administration and Public Accountant. The text aims to demonstrate that ABC and communication directly impact the cognitive development of learners.

Key words: learning, competencies, communication, university education

1. Introduction

Talking about higher level education, but mainly about competency-based learning (CBL), communication and cognitive development, involves putting into play three fundamental factors that must be exploited within universities so that students have complete knowledge and integral that allows them to develop in the workplace.

Sometimes the formation strongly opts for the intellectual, full of important subjects and knowledge, and sometimes distant from the everyday reality of the world of work. Other times the training is limited to a transmission of specific knowledge, what we call tricks of the trade, valid for a small environment in space and short in time. That is why the approach of the EHEA (European Higher Education Area) insists that it is not about learning the little tricks of the profession, but about knowing, feeling and being a good professional (Martínez et al., 2012).

The word educate encompasses multiple meanings because it depends a lot on the person and vision that you have with respect to this item. For Mexico should be the main platform to teach and train professionals with the necessary knowledge and bases that allow interaction in various areas, and at the same time, have the necessary tools to solve the problems that present adequately, effectively and efficiently.

However, discourse the educational theme is to enter different perspectives and approaches, each president has proposed and enacted educational reforms with the aim of improving the situation of society, and currently the

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focus of current education are competencies and inclusion where teachers and students generate learning to learn, through collaborative work.

But education does not really meet its objective, the Center for Educational Studies (2013) says that education, far from promoting social mobility that guarantees the individual a result according to their abilities and efforts, is discriminating against the poor and favoring the rich. At the macro level, the education system is operating as a mechanism that helps maintain, reproduce over time and reinforce the enormous social inequalities, the stratification system and the class structure.

It is important that the functionality of the teaching-learning process is not compromised in educational institutions, regardless of whether it belongs to the public or private sector, the reality is that each student needs tools that help solve the concerns that afflict society. If the educational reform raises an education where priority is given to the development of skills, universities should be concerned with forming a comprehensive teaching staff, that is, teachers give classes according to their professional training, to update and seek that students develop their own cognitive process through CBL, communication, practical cases and other didactic questions, all according to reality so that once they graduate they can face the different scenarios that are outside the university.

2. University Education

It is said that education is the main ingredient for social cohesion and the consolidation of the values of society, making it the most powerful means to achieve individual and collective well-being. Despite this, the problems that have arisen as a result of assigning such an important role to education are as complex and diverse as the context of each country or region (Miklos, 2009).

Currently, many universities in all continents reestablish regulatory procedures in the academic debate, in order to increase efficiency and competence, appealing to the generation of an evaluative culture (Miranda, 2007). The university is the last step that the student must overcome, then it will face adverse issues, that is, enter the workplace where the problems are no longer practical cases, trials or projects, here you must put into practice what you learned to be able to solve issues that demand an immediate response, and making mistakes is allowed, but with consequences that can affect their performance at work.

Today, it is advocated by an education based on competences, that is, an education that transfers not only knowledge but also entrepreneurial skills and attitudes that allow newly graduates to successfully develop their professional careers. This professional efficiency is translated in terms of adequate work planning, capacity for innovation and adaptation to new tasks, reflective and critical thinking of situations, ease of relating, etc. (Sánchez, et al., 2011).

Faced with this situation, Muñoz et al. (2011) comment that the paradigm of the transmission of knowledge supposes that one learns in a linear way, and by means of repetition, which has no sustenance. It is known that learning is chaotic, complex, linked to emotions and consciousness. To solve problems, it is not enough to memorize information. The general idea that people learn in a linear way, and through repetition, has no support. These investigations support the need to organize different scenarios, novel experiences, so that students can apply what they learn — not in the form of definitions or paradigms — to use, in new scenarios, what they have learned.

Taking into account the previous premises, Gutiérrez (2014) affirms that currently inclusion is a term that is becoming important in the world, because thanks to the competency approach (educational reform proposed and promulgated by President Enrique Peña Nieto), educational institutions Higher education must seek the full

development of the students, that is, generate skills, skills and aptitudes according to the conflicts that are presented, and even more, that are as real as possible to what happens in the workplace.

2.1 What Problems does the Higher Education Environment Have?

It is well known that the educational institution has been one of the main pillars of classical modernity, because of its role in training the individual for economic production and also for the reproduction of the values and knowledge of society (Cubides & Valderrama, 1996).

Education is the guiding axis of the life of every professional, however, this factor has been modified at various times due to the different educational reforms proposed and promulgated by our presidents. Currently we are governed under the competency-based approach, where students are expected to develop the necessary skills, aptitudes and skills that allow them to resolve conflicts in various spheres where they interact.

Educational systems are affected by changes in the society in which they are immersed, and reciprocally. In recent decades, it is important to highlight how the convergence of variables of different nature — historical, philosophical, political and social — has brought new challenges for school systems, affecting their organization and functioning, especially in the mandatory stages (Dueñas, 2010).

It is important that the education system does not leave out inclusion, that is, the contribution of various teaching tools and scenarios that show a different perspective to what is lived within the university, as Bravo (2009) mentions that more and more are the voices that insist that the skills and abilities that society demands as most necessary are not adequately trained in the classrooms.

Taking into account the previous statement, we should ask ourselves if the education system is fulfilling the objective of developing competences in university students, because at the time they graduate, the scenarios and problems they experience are totally different from those shown in the classroom. We assume that the educational deficiencies of the students are simply questions where the intellect is put into practice, but the reality is different, where is the teaching to treat the client? How should the problems be solved?, In what way? Can you communicate opinions, questions or comments?

University education should emphasize the development of skills so that the student is able to resolve any conflict, but also needs to create a holistic communication where students and teachers express comments, information and others so that together they encourage the development of meaningful learning.

Therefore, the problem of research arises, what kind of skills should be taught in the university? How does communication influence the cognitive development of students?

It is important that higher education prepare professionals capable of facing multiple situations, but also can discern the collisions that arise in the workplace.

2.2 The Educational Reform in Mexico

In Mexico, according to the Ministry of Public Education (MPE), there are nearly 3,800 universities and thousands of different professional careers that can be studied. However, only 33 percent of young people of college age do so, and when they leave, only 50 percent think that going through college has improved their chances of employment. The failure does not end there; more than 40 percent of employers in Mexico believe that they do not find the talent needed in the graduates. As McKinsey would say: students blame businesses, companies, universities and universities for the previous two (Alvarado, 2017).

If we take into account that higher education is the last level that the student has to graduate to face the world of work, an analysis must be made in universities to know if they are effectively addressing issues according to

what companies need, and more still, if the graduate has the necessary tools to deal with the different scenarios that are present.

Not bad that education reform is changed with the arrival of new presidents of Mexico, but should pay more attention to the needs demanded by both society and the workplace, and beyond that, structures educative programs that confabulate in the formation of knowledge, skills and abilities that the student needs to face the different scenarios that are outside the school.

However, Roldán (2018) says that, four years after entering into force, the Education reform has not complimented with the promised precepts. The quality of education has not improved, as the evaluations show to the students; neither there is even a diagnosis of the infrastructure of the schools that serves to correct the needs and teachers have not been professionalized with new standards.

The issue of education will always be controversial because each person has a different position and ideology regarding this item, you really need to think about what the country's needs are, which is intended to be fostered in schools, that is, what knowledge, skills and abilities Demand the labor world. We must avoid forming obedient people and better focus on people who think, analyze and resolve conflicts that arise in their immediate context.

3. Competency Based Learning (CBL)

Alberici and Serreri (2005) say that the debate on the concept of competence, in the field of education and training (or rather from the pedagogical point of view), is to learn to think, to learn not only a specific job but to work, to learn to live, to be, in the sense of confluence between knowledge, behaviors, skills, between knowing and doing, which is carried out in the lives of individuals, in the sense of knowing how to act in the different contexts of Reflective and meaningful way.

Competencies should be considered as part of the cognitive-behavioral adaptive capacity that is inherent to human beings, which are deployed to respond to the specific needs that people face in concrete sociohistorical and cultural contexts (Frade, 2009).

The adoption of the model by competences in higher education means, for the teacher, to move the focus from teaching to learning. Learning understood as a process that allows capturing, codifying, relating and storing new information with that already integrated into long-term memory (Martínez et al., 2012).

Education needs to elucidate all the demands that are manifested in the university, theory is not the same as practice, and within the professional field there are several issues that, sometimes, are not reviewed during the school trajectory of university students, that's why, it is important to generate a learning based on the competences of the learners, through various problems, case studies, projects and other teaching tools so that they think, analyze and understand what they are witnessing, so that they can provide an effective solution to the dilemma shown

One strategy to generate CBL is the implementation of Project Based Learning (PBL), Maldonado (2008) explains that PBL involves forming teams made up of people with different profiles, disciplinary areas, professions, languages and cultures that work together to make projects with the purpose of solving real problems.

4. Communication as a Tool in the University

When talking about communication, we think about the interaction that is generated with two or more people, but using this term in the educational field is very similar, the only difference is that it is used to exchange

information or clarify doubts in order to generate knowledge.

The District Network of Internal Communication (2007) says that communication is a necessary tool to enable the development of democracy and citizenship, but beyond that, it also serves for the creation and development of cognition in university students. It's them, who, at the time of graduation, must resolve the conflicts that arise in their work environment.

Following this guiding axis, Corrales et al. (2017) manifest a communicative variant, that is, they consider that assertive communication has to do with the ability to express oneself verbally and preverbally in an appropriate way to culture and situations.

Thus, educational processes will have to be understood as the spaces in which, both students and teachers, but mainly those, participate in a process of construction of meanings, which is achieved in a more optimal way when there is a possibility that the student can interact and participate actively in that process (Banderas, 2014).

The new challenges of education place greater emphasis on communication; only in this way can we clarify all those uncertainties that could arise in any scenario where human beings interact, because through comments and interaction, information and knowledge can be generated.

4.1 Communication Skills that Promote Effective Education

Tejera et al. (2012) say that the concrete historical condition in which the contemporary world lives marked by complex processes of changes, transformations or social readjustments, especially in the economic and political, demand reforms in educational policies and readjustments of important social values in the that these policies are sustained.

Education must be the fundamental pillar in every educational institution, but, above all, it must offer a teaching that is consistent with the needs of society and the world of work. Given this, Batista and Romero (2007) say that communication processes in the university area contribute in a complementary and dynamic way to structure the organization and respond to stimuli that arise from inside or outside, depending on compliance with their social mission

Communication skills can be defined around the influence exerted on the receiver and consequently the change that occurs in their environment. These skills are represented by the capabilities to perform certain tasks consistent communication to influence people so, because communication is a circle where the subject influences other individuals and others in it. Therefore, it is necessary to master them to face the various changes that occur in the environment of the human being and even more so for the leaders, who confront and influence in multiple ways the personnel, clients, suppliers of the organization among others (Batista & Romero, 2007).

Bearing in mind that the communicative process is fundamental for the development of the human being, it is necessary that at all times an effective communication be encouraged, that is, opinions, knowledge, skills and other actions are exchanged that confabulate in the formation of learning, skills and skills that help to face the different present and future scenarios.

4.2 Cognitive Development, Ability for University Students

Cognitive development is understood as the set of transformations that take place in the characteristics and capacities of thought in the course of life, especially during the period of development, and by which the knowledge and skills to perceive, think, understand and manage increase in reality (Linares, 2009).

In this sense, Zapata (2009) says that cognitive fluency increases complexity because it increases the information we can process, it allows us to make more relationships between the stimuli and events that we

perceive and live, and it facilitates the imagination, the free association of the remembered elements, free expression, the inflow of relationships, and the perception of different options.

Knowledge, therefore, is similar to a puzzle but without limits, and with its pieces with versatile borders. Without limits in the sense that it is like an arrow always in tension, which does not reach the goal, but constantly the objective, when it is close, it moves away and the arrow must still follow in progress (Sanmartín, 2013).

Discussing the cognitive development leads to analyze different perspectives, each teacher has different teaching methods and techniques, but the objective is to get the learners to transform their knowledge, that is, learn to learn, stimulate creativity and foster skills, aptitudes, attitudes and skills that help to solve present and future conflicts.

5. Method

This research used a quantitative approach using the survey technique and aimed to measure the impact generated by competency-based learning (CBL) and communication in higher education in the municipality of Amealco to ensure that the students have a favorable cognitive development. The data was applied and collected in April 2017. The population to which the research instrument was applied was in a Higher Education Institution, located in the municipality of Amealco de Bonfil in the state of Querétaro with an enrollment of 93 university students studying the careers of Public Accountant and Bachelor of Administration. In this regard, 31% of the students are men and 69% are women, both of different ages because all the semesters of the educational institution were selected. In the following table the situation of the students of Higher Level is detailed.

Table 1   Student Population of Higher Education

Semester	Bachelor of Administration	Certified Public Accountant
Second	11	9
Quarter	13	14
Sixth	12	17
Eighth	9	8
TOTAL	45	48

Source: Self made.

6. Results

The results obtained from the non-participant observation, the survey and the content analysis that the research instrument showed to know the impact of Competency Based Learning (CBL) and communication in higher level education for the cognitive development of the students.

In relation to Figure 1, the selected sample expresses that the Competency Based Learning (CBL) within the educational field is good, according to 40%, 36% say it is regular and 24% mention that it is bad to promote the CBL inside the classroom. It is essential that the CBL is gradually increasing within the universities, because through it, students can learn from what they know how to do, and thus get more confidence to deal with present and future problems.
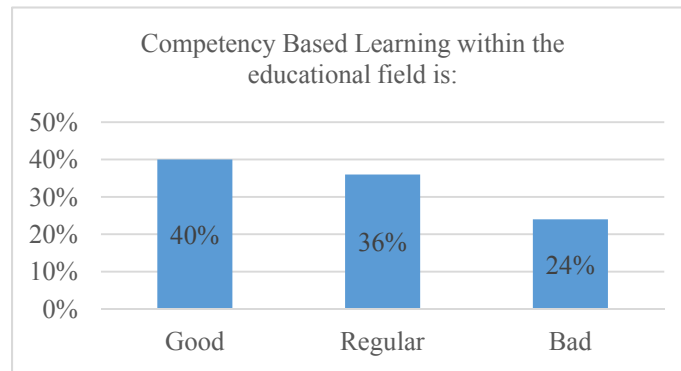
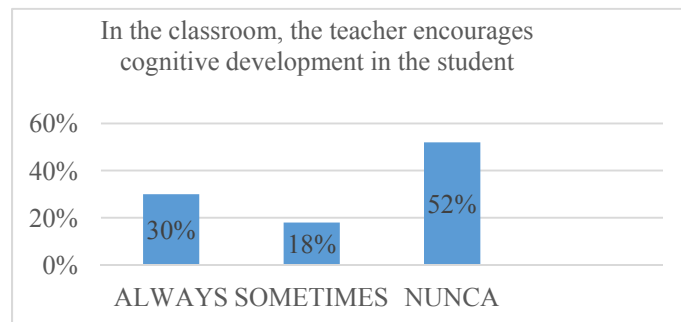**Figure 1   Competency-based Learning within Education**

Figure 2   Cognitive Development of Students

Based on Figure 2, 52% of the surveyed population suggests that the teacher does not help to promote cognitive development in higher education, 18% say that only sometimes, and 30% of respondents think that it is always seeks cognitive development in university apprentices. These percentages mark a red focus because it is perceived that more than 50% of students argue that teachers have not made any effort to promote cognitive development in each student.
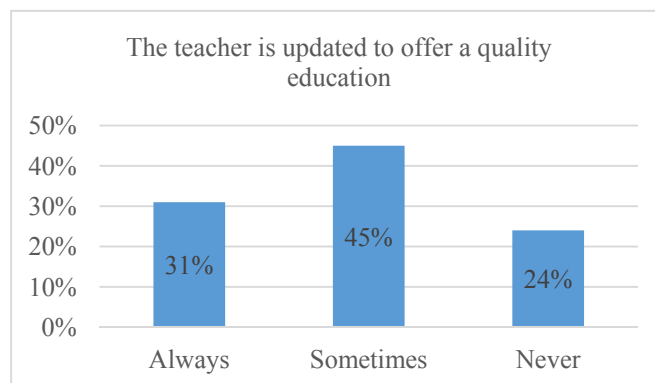
Figure 3   Teacher Update

Figure 3 discusses whether teachers are updated to offer a quality education that enhances cognitive development in college students, with 31% saying that teachers always worry about updating to offer a broad educational background, 45% say that only sometimes are they updated and only 24% said that the professors have never worried about updating themselves to provide a better education, they arrive at the classroom and

transmit only information. It is necessary to motivate and invite the professors to be updated according to their profession and can improve their teaching-learning techniques.
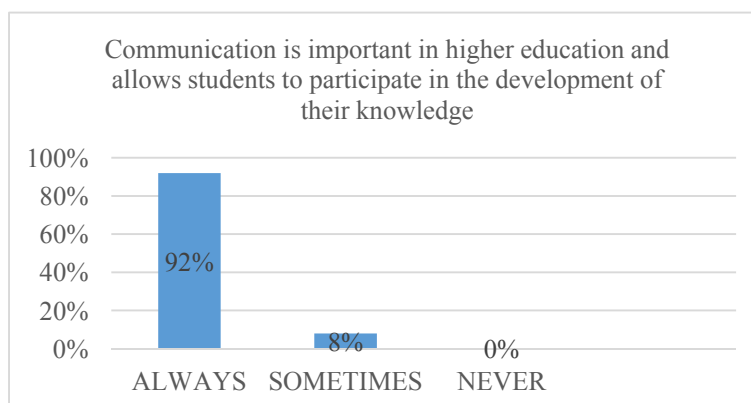

Figure 4   Communication in Higher Education

Figure 4 shows that respondents identify communication as a relevant factor, and a result of 92% was obtained, recording that communication is always important as a means to innovate in higher education and get students to participate in the development of your knowledge. While 8% of the participants decided that only sometimes communication is substantial to innovate and achieve the participation of the student.

7. Discussion

Encouraging the CBL and communication in the university is to offer educational alternatives, today, it is necessary that students have a broad background, that they have different tools that allow interaction in different scenarios, and that, in addition, they provide effective solutions for each situation. We know that education is and always will be the fundamental basis of the human being, however, it is necessary for universities to have professionals who are updated, trained and willing to teach others.

During the investigation, it was determined that communication, one of the competences that should be developed at all educational levels is important for students, since 92% of the sample selected said that this tool manages to develop students' knowledge because it allows to clarify doubts and exchange information, then turn it into learning.

However, 52% of college respondents said Ron that teachers discourages cognitiv development or situation that detracts the student learning, as the quickening skills, Manriquez (2012) ensures that the student happens to have a active participation in the construction of their own learning, with which the teacher becomes the great facilitator who puts resources in the hands of students: information, methods, tools, creates environments and accompanies them, providing assistance throughout the process, thus increasing their motivation, commitment and pleasure to learn and understand the usefulness of learning.

Can be considered as a factor in school recoil little updating teacher because the teacher always does the same and is not concerned about meeting the needs demanded by the labor market. Sometimes, teachers only focus on imparting information, but they do not make sure that their pupils are decoding the data they receive, or they do not give current examples and referring to their context. It is necessary that the professors update and know the necessities which develop outside the classroom, motivate students to continue learning and become

active agents, so they generate their own learning, and especially see that the CBL's is used in different scenarios helping them to effectively address any situation.

Considering the stated arguments, it is inferred that the CBL, communication and cognitive development are an essential tool for university students, and for that reason, it is important that educators use diverse teaching tools, scenarios, problems and all issues that propitiate in the student the need to think, analyze and visualize the problems clearly so that they can provide efficient and effective solutions. Courses, workshops, dynamics and other activities aimed at teachers must be fostered and encouraged so that they can improve their teaching-learning strategies and achieve that their students acquire the necessary knowledge to face present and future problems.

8. Conclusions

Education will suffer changes constantly because each president proposes an Educational Reform that he considers necessary and timely for the situation that the country shows, however, one should think about what Mexico needs and not try to impose educational models from other places, as what works there, may not be effective here. It is enough to want to solve the educational decline that is had with copies of educations of world powers, it is necessary to carry out a study that shows the needs, weaknesses and deficiencies, so that later, options are proposed that really help the country.

Today, the current education in which we live requires each of us skills, skills, knowledge and certain types of attitudes and skills that allow us to compete in the best of cases. The competency approach establishes that students build their knowledge and, even more importantly, the purpose is for each individual to be able to count on their own elements, to learn on their own and to solve problems that arise throughout their life.

The emergence of education by competencies is a model that is formalized and gradually begins to appear in most educational institutions, giving favorable results in each of their students because it allows them to be responsible for their learning, becoming a practice generalized that becomes more important in each educational level.

The CBL and communication are visualized as basic tools that allow the student to achieve school success, since they are an integral activity to guide and support learners during their training process, attending them from the self-knowledge of their problems and the attention of needs not only academic, but social, emotional and economic because they all directly or indirectly influence the construction of learning. In addition, advising is a permanent task intrinsically linked to the reason to be of the teacher, which empowers him to provide a full education to students.

Cognitive development, competency-based (CBL) learning and communication are factors that directly or indirectly affect the human being, and speaking of higher education, these elements interrelate to generate ideas, concepts, skills and abilities, allowing a dive in different scenarios, both present and future. The university investigates the initiative of taking advice as a source of help where the learner can express their concerns and the teacher supports them so that together they manage learning according to the union demand. Do not forget that the fundamental objective of higher education is to prepare professionals with a cultural and intellectual background that helps interact, address and respond to the concerns that emanate from the world of work.

Based on the graphs and their interpretation, it is concluded that education must be attended to constantly, not only every six years when a new president comes in and proposes reforms that appear to be the solution to the

backward movement that exists. It is essential to take into account the inquery. These are the ways in which the country manifests itself in order to propose actions that are really beneficial for the higher educational level, since this is the last step that the student has before leaving to work. You need to have the necessary tools to be competent and competitive with other graduates who aspire to a position in an organization; the disturbing or to some extent necessary, is to train thinking professionals, with initiative and able to act in difficult situations to solve them, and not to seek that the university students are obedient and without aspirations.

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