

Competencies and cooperative learning

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Abstract

Murillo, G. (2010) points out that within the many conceptions about competencies, the idea of competence equivalent to a complex performance process is added, in which particular characteristics of its dimensions are shown, it is valued in the evidences that are presented And articulate knowledge corresponding to the type and object it serves. The approach: What competences are developed through cooperative learning and directed didactics? The research is of a quantitative type, the approach of the problem, the general objective, the specific objectives, the research questions, the hypotheses began. A theoretical framework was constructed, resulting in 60 variables that were studied in three axes: of Learning are 20. Of Directed Didactics are 20. And in the Axis of Generic and Basic Competences were 20, which are measured with a Likert scale and 3 Age, sex and semester in progress. The Alpha of Crombach was .90. The population were 70 subjects surveyed applied to university students of the U.A.de C. The statistical processing that were performed were frequencies and percentage, factorial analysis, multiple regression, and all possible regressions. We conclude that competences are those that are shaped towards communication in a social context, competences such as dialogue, interpretation, languages, culture, use of technologies.

Learning, Didactics, Competences

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Introduction

The development of generic and basic competences, among others, has been an attentional focus in the last decades in different educational levels, at the present time it is tried to implement models of education in the superior level for the development of said competences. This research aims to answer the following question: The specific and generic skills have had a series of investigations that have been setting guidelines in different areas, according to Cáceres, T. (2012) conducted an investigation into the degrees of higher university education in Gran Canaria, Spain to know the teachers' assessment of generic competences, their effect on teaching. Through an online study of 366 teachers from the University of Las Palmas, from different areas of knowledge was obtained as a relevant result, that the high valuation of these skills are in the area of Health Sciences and Art / Humanities in front of the areas of Science and Engineering and Architecture, in which this assessment is not very positive.

Justification

The present research aims to answer to what competences are developed in the higher level students, considering that at present more emphasis is given to the implementation of innovative models that are relevant to train university students under this approach. The study of this topic explains a teaching model that favors the development of competences, specifically generic and basic. In such a way that it is suggested those relevant aspects that are important to attend in order to detonate these learnings. Furthermore, this research is important for those institutions interested in inserting efficient models for continuous improvement and educational innovation.

The findings of this research detonate basic aspects for a good coexistence and social responsibility as part of the formation of the new generation, which are part of our society. Therefore, governmental and non-governmental organizations will benefit from the results of the research, which will give suggested guidelines to mark a path towards socialization, plurality and the personal development of individuals.

Problem

What competences are developed through cooperative learning and directed teaching?

Hypotesis

1. In order to develop competences in the student, the directed didactics must be associated with the social reality.
2. Student learning is stimulated by teaching methods
3. Cooperative learning promotes generic competences

Objectives

General Objective

The present investigation has like general objective to know what competitions develop by means of the cooperative learning and a directed didactic.

Specific objectives

1. Know what are the most common basic skills developed by university students.
2. Describe the generic competences developed by university students.
3. Know how the cooperative learning process of the students is presented.

4. Identify which classroom projects benefit learning in the student group.

5. Detect teaching methods that stimulate learning.

6. Know how the directed didactics in the classroom is linked to the social reality

Theoretical framework

For Granados, P. (2003), learning also implies important factors that intervene to be propitiated. This procedure is necessarily based on the neurological system of the individual, whose attention, perception, mental processes, language, motivation, memory, emotions, feelings, creativity, etc. They depend on their capacity, their way of functioning and their good condition.

Involving the student in the learning processes for understanding and action, for Elliot (2005) represents yielding to the diversity of elaborations, rhythms, interests, developments and results that achieve individual and collective learning.

For his part, Moraes (cited by Ocampo, 2010) warns that teaching can not continue based on the organization from "a" classroom, with "a" teacher and for only "one" hour. Instead, learning environments and experiences of personal development and knowledge construction should be generated, which are flexible, that facilitate coexistence, attention, respect for differences, times and the needs of people.

Badilla, S. (2009) assures that from a constructivist perspective, the design of a project must have "a careful planning and the students will have a very active participation both in the planning of the project and in its development and evaluation" (pp. 6-7).

Quoting various authors, the author adds that the best educational projects have the following characteristics:

They are centered on the student and directed by the student.

They are clearly defined, with a beginning, a development and an end.

The content is meaningful for students and directly observable in their environment.

They deal with real-world problems.

They stimulate the development of first-hand research.

They are sensitive to the local culture and are culturally appropriate.

The specific objectives of the project are related to both the institutional mission as with the purposes of the curriculum.

They offer a tangible product that can be shared with the target audience.

They show connections between academics, life and work skills.

They facilitate opportunities for feedback and evaluation by experts.

They facilitate opportunities for reflection and self-evaluation by the student.

They favor an authentic evaluation or evaluation (portfolios, diaries, etc.).

On the other hand Elliot, J. (2005) assures that the meaningful senses are thus based on the aspirations of the teachers to promote and protect the directed learning (independent reasoning) in the classes. They point out variables that can affect the ability of students to direct their own learning.

Therefore, the degree to which teachers claim preconceived cognitive results may influence the control they try to exercise on the students' thinking which, in turn, can influence the extent to which the learning situation provides a context that protect (informal) and promote self-direction.p.143.

Vázquez, V (2010) concludes that in the current knowledge society the teacher has to pay special attention to the second part of such social goal: the development or promotion of critical thinking of students, which has to do with the development of rationality and implies that students come to understand what makes reasoning good; to improve their abilities to observe and infer, generalize, express hypothesis, conceive alternatives, evaluate affirmations, detect problems and realize the appropriate action.

The student teacher binomial does not cease to be a central piece for the learning to take place, be it of basic knowledge, of some area of particular knowledge or transversal competences. Regarding the teacher's competences, the following is also considered.

According to the Interuniversity Electronic Journal of Teacher Training (2010), the requirements of the teacher can be identified in five areas: Knowing a structured set of knowledge about the natural and socio-cultural world. The disciplines of the curriculum. (Cognitive skills), make-sets of procedures and strategies. (Procedural Competencies), will-motivation, commitment, effort. (Effective Competencies), coexistence- Ability to work and relate with colleagues and students. (Communicative Competences), ser-Development of the teacher as a person. Ethical responsibility before students, families and society. (Personal competences).

However, the concern of many is to know the results to develop such a high catalog of characteristics by the teacher, so we have studied the most relevant model to measure the skills developed by university students, as the central axis and determinant.

On the other hand, the Innovation Educational Magazine (2012) comments on the need to evaluate with delimitation the generic competences developed in university students, which has begun to generate problems in the didactic models. However, the objective has been achieved under a different evaluation.

The most relevant evaluation model is that corresponding to collaboration with self, co and heteroevaluation, placing each student in a process of involvement and integral development of the skills to be explored.

Finally, the evaluation is an essential factor to determine the progress of the educational process, as well as the areas to be attended, which has not stopped occupying the researchers of education, international and world organizations.

An example of this is the World Declaration on Higher Education in the nineteenth century, where UNESCO (2012), where it is emphasized, that part of the innovative educational method is oriented to the training of students "who become well-informed citizens and deeply motivated, provided in a critical sense and able to analyze the problems of society, apply these and assume social responsibilities ".

Research Methodology

The research is of quantitative, descriptive and transversal type and was carried out in different stages. The instrument has three variables: Learning Axis, Directed Didactics Axis and the Generic and Basic Competency Axis.

In this instrument a decimal scale was used, with a total of 60 variables and 3 signalitic variables: as age, sex and semester in progress. The Crombach's Alpha was processed, resulting in all the variables with .90 reliability. The population corresponds to a total of 70 subjects surveyed from the different semesters, with a sample of 10 people who responded to the pilot test. The processes that were performed were Univariable analysis with frequencies and percentage, Integrational analysis: factorial, multiple regression, and all possible regressions. The criterion for the conservation of factors was considered the criterion or Kaiser's rule, indicating the selection of those factors whose eigenvalues are greater than unity.

At this level, Factor Analysis was used to observe underlying integrations. The Factor rotation method was used. A total of 9 significant factors are integrated that explain together the total 66.76% of the variation of the phenomenon. The different integrative procedures are shown, with normalized varimax factor rotation, error level .001 and confidence level of 99.9%. Subsequently, the significant variables were processed with Multiple Regression. This statistical analysis begins with the multiple selection of variables, considering as a dependent variable adaptability to the specialty that it studies, which in this case was chosen based on the factorial analysis with the intention of looking for possible proposals for the supporting proposal. Finally, the statistic of all Possible Regressions was processed, using as a variable selection the Root MSE statistic, obtaining a better model of variables.

Results

Below is the behavior of frequencies and percentages of the variables corresponding to sex and age.

In the gender variable, the participation of 57 women corresponding to 81.43% was observed, and 11 men representing 15.71% of the population. Therefore, the genre that had the greatest intervention in the research was the female gender.

Regarding the age variable, the surveyed population oscillates between 19 and 20 years of age, being the most frequent.

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The Centroid Method procedure was chosen because it has the highest level of explanation of the common variability and a considerable number of factors.

The factor 1. Learning for the development of skills, contributes 19.83% of the common variability and integrates the variables progression, practice, reflection, relationship, solutions, interaction, among others.

This factor allows observing multiple relationships that contribute to the student's trajectory at the higher level, in which cooperative learning is presented as a process that is given with practicality through the development of classroom activities related to the subject of the subject, which are directed for specific purposes and the proper use of teaching aids. In such a way that the university students are stimulated by the teacher, to develop generic and basic competences as a more analytical mind before the decision making and the participation of artistic activities that extend their criteria, to infer mental conclusions and to become more determining individuals in terms of personal achievements.

In factor 2 regarding the development in the environment, it explains 8.34% of the common variability, which is integrated by important variables such as openness, proactive, environmental responsibility, dynamics, art, commitment, among others.

This factor makes it possible to emphasize that students who show acceptable positions before opinions different from their own, also respond in their environment by reflecting on environmental problems, contributing responsibly to its conservation. In addition, they operate with respect for the fulfillment of human rights and civic acts that allow them to participate harmoniously in their environment.

It is distinguished that those university students who are dynamically stimulated by teachers to integrate group work, show greater openness to cultural participation, developing basic skills such as mastering a second language, which allows them to develop with greater willingness to cultural and social pluralism.

In the following applied knowledge factor, explains 4.57% of the common variability and integrates practical variables, advice and interpretation.

It is identified that the classroom projects that benefit cooperative learning are those where the student applies his knowledge, with a connotation towards practicality. It also shows a link with the recommendations given by the teacher through specialized academic attention, reflecting their learning to interpret oral discourses of which is facilitated to draw mental conclusions.

It stands out in factor 4. The variable Linked contents, explains a 4.22% of the common variability and integrates the knowledge variable. It is notable that students identify the relationship between the knowledge acquired with different subjects, therefore, the intellectual capacity of identifying the logical coherence that integrates the curriculum is shown.

The variables art, materials and classes stand out in factor 5. The factor explains 4.40% of the common variability. The potential of the allusive competition to art is observed, for which the student is sensitized and values art as an expression of the beauty and expression of ideas, sensations and emotions. The list of variables shows that students who participate in practices related to art, require that the knowledge taught by the teacher, either through materials that facilitate their learning and that the classes are presented in an orderly manner and showing some attraction, which stimulates His learning.

The factor 6 of basic competence explains 3.70% of the common variability, highlighting the variable habit of reading. The development of reading habits is encouraged at the higher level, a level where students are expected to acquire universal knowledge, since this habit is considered to provide understanding, reflection and analysis.

The factor 7 refers to the domain of a second language, explains a 3.33% of the common variability and integrates the foreign language variables and solutions.

The factor emphasizes the importance of mental operations through connections, helping the student to communicate collaboratively, his opinion for the solution of academic problems. This basic communication allows you to express, understand messages and interpret situations in your environment.

The factor 8. Information process, provides 3.42% of the common variability and integrates variables analysis, understanding and memorization. An important process is observed at the moment when the student receives information. The competence to think critically and reflexively is a skill that is favored in higher level studies, shows the importance of the learning process of students as recipients of information, a process that enhances the understanding, retention and estimation of implicit aspects, for the decision making. The last factor is the health care variable with significant importance, with a common variability of 2.06%, in which physical care is distinguished as a lifestyle choice and practice in university students, as they develop a personal responsibility, assessing behaviors and habits that help their care and physical development.

Relational analysis: multiple regression analysis

This statistical analysis begins with the multiple selection of variables, considering as a dependent variable adaptability to the specialty that it studies, which in this case was chosen based on the factorial analysis with the intention of looking for possible proposals for the supporting proposal.

Based on a factorial analysis, the dependent variable analysis was studied with the multiple regression processing, from which the independent variables reflection and advice resulted.

So it is inferred that, for students to elaborate mental considerations before making decisions, they need to receive personalized attention by a tutor whose recommendations take on importance at the moment in which the student concentrates his thoughts on a specific topic.

From the proactive dependent variable, the independent variables were critical, systematization and knowledge. It is inferred according to the analysis, that the university students to be propositive reflecting on giving solutions to environmental problems, require that the knowledge shown in the different subjects be structured and progressive in order to achieve the elaboration of judgments, favoring a series of proactive ideas. When ordered knowledge is acquired, the student can think clearly different alternatives to solve problems.

Through the processing of the dependent variable equality with multiple regression, the independent variables reflection, ties, knowledge and information stood out. From the above it is inferred that in order to ensure that university students practice acts of impartiality or justice in their social environment, they require clear and precise information through technological techniques that raise awareness of topics of interest.

Based on a factorial analysis, the dependent variable dialogue was studied with multiple regression processing, from which the objective independent variables and advisory results were obtained. It follows that, for students to respond to conflicts peacefully, using dialogue as a mechanism, teachers are required to show direction and the purposes of their approaches when exposing problems and that the pedagogical intervention of the teacher is more personalized and directed.

From the dependent variable respect, the variables knowledge and reflection resulted.

Due to the above, it is worth noting that for students to act in defense of human rights, the teacher is required to teach the knowledge of their subject, through reflective techniques that raise awareness among students about their participation and social responsibility.

Dynamics: Teaching given by the teacher in an active way.

Cognitive Bridges: Mental processing in which relationships are made with the information received.

Mathematical Competences:
Understanding and use of statistical procedures.

From the dependent variable, mathematical competences, independent variables such as cognitive and dynamic bridges resulted.

Reference is made to the didactic methodology of the teacher, if the knowledge is shown favoring the active participation of the group of students by means of related information or with the use of techniques that promote a learning by association, the students will be able to develop the mathematical competence, particularly the statistical language.

According to the multiple regression procedure, the dependent variable was the independent variables, capacity, advice and solutions.

It is inferred that, for the student to have greater agility to create mental conclusions, he needs a facilitator who, in a specialized manner, accompanies him in his professional learning and is motivated to collaborate as a team studying alternatives to problematic solutions and achieve the development of qualities or aptitudes. intellectuals for better academic performance.

From the dependent variable art, the dynamic independent variable was found. It is inferred that the students require that the directed teaching of the teacher be transmitted in an active and not passive way, which will encourage students to participate in cultural and universal art fields.

When processing multiple regression, the independent variable information resulted from the dependent variable civics. From which it is inferred, that the messages or informative data directed towards university student, are presented systematically, so that an awareness is obtained, with respect to the viability rules. The aforementioned will determine the degree of knowledge and appreciation of the rules of social coexistence and their responsible participation as citizens.

Of the dependent variable use of technology, the evaluation variable was found. It is concluded that as the teacher measures the academic performance of students through various instruments, it contributes to the student to increase the use of new resources, procedures and techniques to process, store and transmit information.

According to multiple regression processing, the open dependent variable yielded independent variables such as critical, objective and integration. Which indicates that to increase the openness of the students before diverse opinions, it is necessary that the pedagogical intervention has a determined purpose, stimulates a critical mind and also motivates for the group cooperation.

From the dependent variable foreign language, the independent practical variable was found, so the importance of applying knowledge to achieve mastery of a second language is deduced.

Such consideration shows the most appropriate strategy for teachers, particularly of languages, to use teaching methods that encourage the constant practice of students for learning a second language.

Relational analysis: all possible regressions

In this statistical processing, the best regression model that gives the best explanation to the sustainable approach was obtained.

The variables that make up the regression model, that is, the best specified.

The best model for students to be more analytical, is integrated by independent variables progress, practice, reflection, training, information, criticism, planning, methods, content and support.

It is inferred that the pedagogical intervention must show the information provided as a practical and reflective process, which forms the student in a critical manner. This intervention must be conducted in a planned manner, using appropriate methods that show the contents in a theoretical and practical way, giving greater emphasis to the teacher's support. A teaching model that encompasses the aforementioned characteristics encourages students to develop an analytical and proactive mind.

Conclusions

Education in a changing society, have caused educational institutions to rethink and diversify educational processes.

Therefore, the present research when considering as a general objective, to know what competences are developed through cooperative learning and a directed didactics, it is concluded that the basic competences that students develop, are those that are outlined towards communication in a context social, skills such as dialogue, interpretation, languages, culture, the use of technologies, as well as those cognitive skills such as analysis, reflection.

The cooperative learning process of the students requires a flexible pedagogical intervention adapted to the social context of the students and the transfer of knowledge through practice. This process in conditions of autonomy, openness and analysis. Those classroom projects that benefit group learning are those that integrate dialogue, equality, respect, social openness, the elaboration of arguments and ideas, but above all with a practical sense.

It is concluded that teaching methods that stimulate learning are those in which the teacher intervenes as an advisor and support, using the autonomy of the student as a platform for expression of analysis. It is a model in which the student is observed inserted in a society to give answers by means of assertive solutions to the problems of their environment. Which means the preparation of globalized students, with social openness and interaction with other cultures. Therefore, the didactic directed by the teacher demands a social connection, where the training of the teachers is crucial for the scholastic accompaniment of the students. The teacher is also shaping the acquisition of new skills that encourage more pluralism in the educational field.

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