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# Perceptions of UNAB students regarding the change from face-to-face academy to ICT-assisted virtual work

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## Abstract

Quantitative study carried out between November 2020 and January 2021 with seven hundred twenty-two (722) undergraduate students from the Autonomous University of Bucaramanga, Colombia, with the purpose of recognizing their perceptions regarding the pedagogical experience that the change of the face-to-face academia has meant to virtual work assisted with ICT during the isolation caused by the COVID 19 pandemic. The researchers applied a survey-type survey to students of various semesters assigned to undergraduate academic programs belonging to the six faculties of the institution. Some of the most important conclusions are that students believe they learn better with lectures, workshops and case analyzes than with project work. Likewise, it was determined that future UNAB professionals expressed having problems maintaining attention during working hours; especially because they develop activities other than academic ones in class sessions.

## Resumen

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Estudio cuantitativo realizado entre noviembre de 2020 y enero de 2021 con setecientos veintidós (722) estudiantes de pregrado de la Universidad Autónoma de Bucaramanga, Colombia, con el propósito de reconocer sus percepciones frente a la experiencia pedagógica que ha significado el cambio de la academia presencial al trabajo virtual asistido con TIC durante el aislamiento ocasionado por la pandemia del COVID 19. Los investigadores aplicaron un sondeo tipo encuesta a estudiantes de diversos semestres adscritos a programas académicos de pregrado pertenecientes a las seis facultades de institución. Algunas de las conclusiones más importantes son que los estudiantes creen aprender mejor con clases magistrales, talleres y análisis de casos que con el trabajo por proyectos. Así mismo, se pudo determinar que los futuros profesionales UNAB expresaron tener problemas para mantener la atención durante las jornadas de trabajo; especialmente porque desarrollan actividades diferentes a las académicas en las sesiones de clase.

## Introduction

The pandemic produced by COVID-19 has not only brought hundreds of thousands of deaths around the world, millions of people without jobs and the worst economic projections since World War II, but has also forced attitudes and perceptions to change in order to to assimilate the new circumstances of life. This paralysis of daily activities has imposed challenges on human labor, without exception. In the educational field, for example, the Colombian government asked the institutions of the different levels to transfer their activities to the virtual methodology in order to continue the learning processes of the students; however, the measure uncovered a series of concerns of various kinds.

In technological infrastructure, the educational process has been interrupted by the absence of computers and internet service in students' homes. In addition to the lack of virtual learning environments, it is possible that not all institutions have educational platforms such as Moodle, Blackboard, Canvas, among others, or have the corporate versions of Google suite or Office 365.

On the other hand, the sudden transition between face-to-face and virtual reality generated by the health emergency did not provide much time for teachers and students to have training in the use of the digital tools used in this new stage, a scenario that is sometimes complicated because In some institutions, the technical support staff was overwhelmed by the number of people who needed questions to be answered or problems fixed when interacting online.

It was not the usual number of users requesting support, it was the entire educational community at the same time in the same situation. So the ability of teachers and students to adapt to changes was put to the test in every way. Teachers have had to rethink their teaching methods, while students have found it necessary to adjust their study strategies towards more autonomous learning. However, this situation has revealed a certain resistance on the part of educators and students to reconfigure their attitudes and daily practices in the classroom.

Taking this scenario into account, it can be affirmed that the Autonomous University of Bucaramanga reacted efficiently, quickly and accurately to mobilize its institutional processes to the virtual world, since it took advantage of its vast experience in said educational methodology to guarantee the development of classes in a synchronous manner. and asynchronous through the creation of a digital campus, the loan of computers and modems, and timely support in the use of

cybernetic resources. Likewise, it provided training to teachers and students in the use of the new learning environments and even created communication channels so that the educational community could have psychological support, if required.

All this effort merits that a process of investigation be carried out that allows knowing the perceptions and attitudes of the UNAB student in the face of the pedagogical experience that the change from face-to-face to virtual has meant, to document the successes and aspects to improve of this transition and thus proposing initiatives that result in better teaching and learning processes, both in person and online. Therefore, the objective of this study is to recognize the perceptions and attitudes of the UNAB undergraduate student towards the pedagogical experience that has meant the change from face-to-face academy to ICT-assisted virtual work.

## Methodology

The research was of a quantitative nature, while its purpose was to determine data that explain the object of study, which is why it is based on direct observation and verification through numerical, quantifiable and verifiable data. For the present case, a survey-type survey was applied to students from various semesters assigned to undergraduate academic programs belonging to the six faculties of the Autonomous University of Bucaramanga in the second semester of 2020. The methodological design and the application of instruments were carried out carried out in November 2020 and the analysis of results in January 2021.

With regard to the data collection instrument, a broad unstructured survey was designed that sought to recognize, through a survey-type questionnaire with Likert scales, the most relevant pedagogical and technological aspects regarding the situation of students in the context of educational institutions. Educational processes and their transformation during confinement. Thus, the form was created to collect information on two specific categories: a) insights on pedagogy in remote classes and b) strengths and weaknesses of students in the remote education experience.

The selection of the sample was carried out through convenience sampling (non-probabilistic) corresponding to students from all the faculties of the University, with the support of the Departments of Well-being and Sociohumanistic Studies and the mentor teachers of each academic program. The sample was accessed and applied through the internet. Here the link: https://forms.gle/xvqqDkfcvZojNDJ96

The distribution of participants by academic program is shown below:

| Programa académico | # estudiantes | Porcentaje |
|---|---|---|
| Administración de Empresas (Presencial) | 23 | 3,2% |
| Administración de Empresas DUAL | 8 | 1,1% |
| Administración Turística y Hotelera | 4 | 0,6% |
| Contaduría Pública | 10 | 1,4% |
| Economía | 4 | 0,6% |

| | | |
|---|---|---|
| Negocios Internacionales | 14 | 1,9% |
| Enfermería | 28 | 3,9% |
| Medicina | 173 | 24,0% |
| Psicología | 34 | 4,7% |
| Artes Audiovisuales | 21 | 2,9% |
| Comunicación Social | 10 | 1,4% |
| Gastronomía y Alta Cocina | 15 | 2,1% |
| Licenciatura en Educación Infantil | 30 | 4,2% |
| Música | 9 | 1,2% |
| Derecho | 188 | 26,0% |
| Ingeniería de Mercados | 10 | 1,4% |
| Ingeniería de Sistemas | 39 | 5,4% |
| Ingeniería en Energía | 9 | 1,2% |
| Ingeniería Financiera | 49 | 6,8% |
| Ingeniería Industrial | 24 | 3,3% |
| Ingeniería Mecatrónica | 20 | 2,8% |
| Total estudiantes | 722 | 100,0% |

Table 1. Distribution of participants by academic program



As can be seen, the survey was answered by seven hundred twenty-two (722) undergraduate students of the University. In this process, an effort was made to have representation of all the undergraduate programs without applying a stratified random sampling with all the statistical rigor, since it was a broad survey that aims to understand the current academic processes of the University and the different impacts that can have been generated in the students.

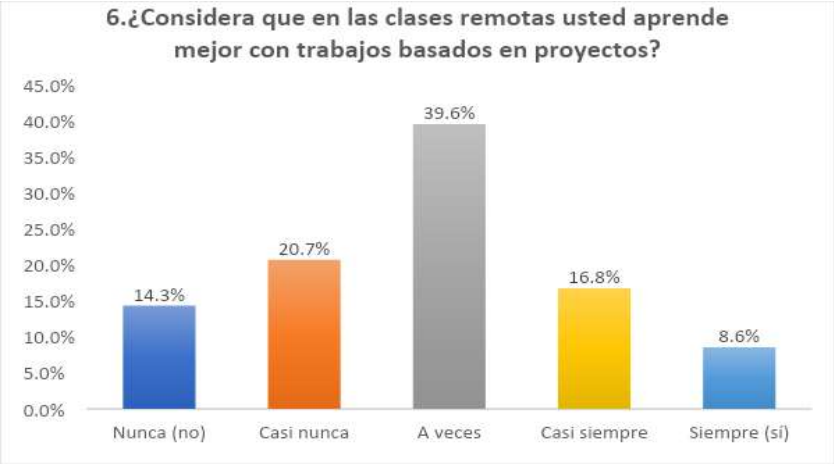
The age of the participants corresponds to what is expected of undergraduate students, since 84% of the respondents are between 15 and 21 years old, the average for daytime university students from any Higher Education Institution. Regarding the area of residence, 89% of them live in urban areas, not necessarily in Bucaramanga, where the university is located, but it does correspond to an urban youth population. In terms of gender, the survey was answered by 61.97% of women and 37.9% of men. Finally, the distribution of the participants by academic semester had the peculiarity of being concentrated in the first four semesters (75%), while the rest of the volunteers were in the fifth to tenth semester. With this, it is possible to evidence the natural tendency on the participation of students in the different events and activities of the institutions: the university students of the first semesters usually get involved in greater numbers than the apprentices who are close to graduating. Generally, it is because students in their last semesters are already beginning to have other concerns about their next professional life.

## Results and Discussion

### Appreciations on pedagogy in remote classes

In this section of the form, it was intended to know the appreciations of the students regarding pedagogical issues based on their experiences during remote classes. It is important to remember that pedagogy has its foundations in ancient Greece, when, after becoming aware of educational action, a data collection process takes place to organize, analyze and systematize them in order to reach conclusions that would give rise to to a series of normative principles on how to teach (Picardo et al, 2004). This situation shares the purpose of investigating how the pedagogical acts were developed at UNAB during the period of social isolation.

In the first instance, the participants were asked if they considered that they learned better through project-based work. According to García and other authors (2020), Project-Based Learning is a strategy in which a sequence of tasks is designed that students work on autonomously and cooperatively, to produce the final product that responds to an authentic learning need. In this sense, students build their knowledge with others, through specific actions in which they apply the knowledge and skills acquired to make said product.

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Graph 1. Perception results on the efficiency of project work in remote classes

As the graph shows, 39.6% of the students checked the “Sometimes” option, which suggests the variety of situations that the apprentices experienced, since it is probable that during the same semester they had experiences of project-based work that were successful and others were not. However, the trend shows a negative perception of students towards their learning mediated by PBL, since 35% of those surveyed indicated that they never or almost never learned better with this methodology; in contrast to 25.4% who perceived a beneficial effect of these pedagogical practices. Here it would be interesting to ask new topics in future works, such as: Why did students feel better learning or not? What do UNAB teachers and students understand by project-based work? And how is PBL carried out in classes?

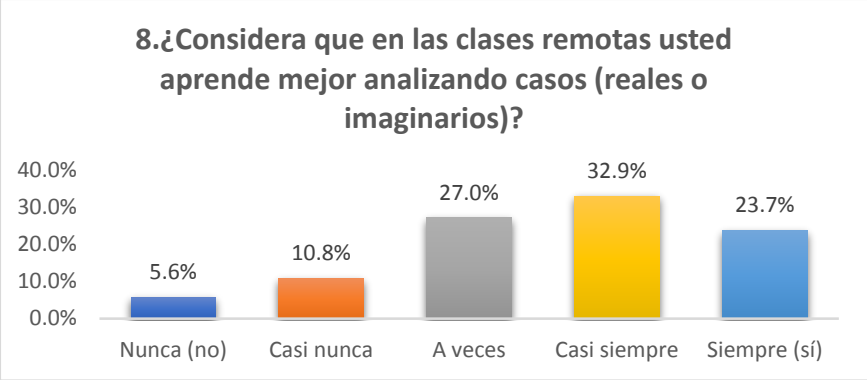
Another element related to pedagogy that was part of the research was the students' perception of their learning and its effectiveness through the use of workshops. Ezequiel Ander - Egg (1999) explains that the workshop, in pedagogical terms, refers to that space where something is made

and transformed through work. In other words, it is a "learning by doing" that, according to this Argentine author, has characteristics such as: its theoretical-practical nature and participatory methodology; the predominant role played by the formulation of questions for learning; the facility for interdisciplinary work with a systemic approach and the possibility of integrating teaching, research and practice. The response percentages are reported below:


Graph 2. Results perceptions about the efficiency of workshops in remote classes

It is likely that this combination of theory and practice makes students have a good assessment of the use of workshops to have better learning. In this case, 36.9% of the people consulted stated that they had almost always or always learned better when their teachers implemented workshops in their courses. Said result is even higher than the uncertain "Sometimes" that had 36.6% of the answers and that 26.5% composed of the options "Never" and "almost never". These figures are an interesting point of reflection on the degree of participation that students want to have in their learning, insofar as they seem to need the presence of the teacher during a good part of the process and less spaces of autonomy, such as, for example, those that are required for the proper development of project work.

This hypothesis gains more strength when examining the results of the survey about the efficiency of learning when cases are analyzed in class. It should be remembered that case studies are reflective spaces where students build learning based on the analysis and discussion of real-life situations that have been documented in each field of knowledge. In general, this way of working seeks to give learners the opportunity to articulate the theoretical knowledge of a course with the practical application environments (Tecnológico de Monterrey, 2018). When reviewing the responses of the students, it is found that this was one of the topics in which they left their comfort zone housed in the option "Sometimes" (27%) to indicate that the use of cases "Almost always" and " Always" helps to have better learning (56.6%). This is seen in the following graph:



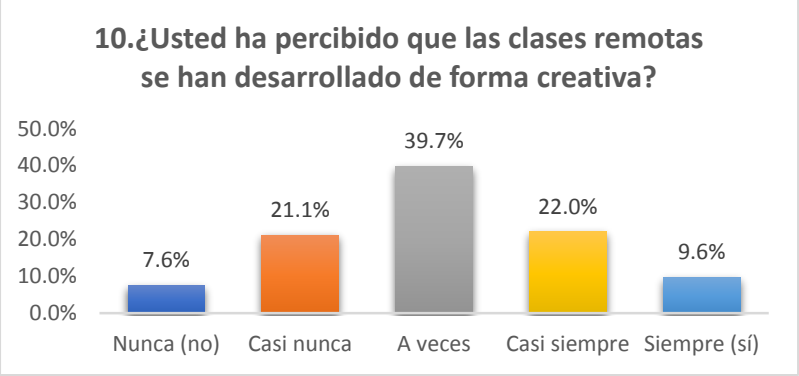

Graph 3. Perception results on the efficiency of case analysis in remote classes

Such a finding highlights the importance of practice, not only understood as the application of theory, but also as the analysis of the relevance of knowledge and understanding of everyday problems or questions that have not been able to be resolved from the study disciplines. Something equally valuable is the reflective component that the case studies demand, since it is from an explicit situation that the learners infer the concepts and procedures worked on in the classroom. This action establishes bridges between the class dynamics and the professional aspirations of the students, which seems to be significant for the university students. In addition, if the last three subcategories analyzed (effectiveness in learning through projects, workshops and cases) are considered, it is possible to conclude that students prefer to carry out short-term activities, such as workshops and cases, instead of participating in elaboration projects. of a product, where its commitment requires greater effort, dedication and development time. This may be because university students still have a strong influence of traditional teaching practices that have the teacher as the center of the process. An illustration of this is the results on the question "Do you consider that in remote classes you learn better when your teachers use oral presentations?". The following graph reports the findings in this regard:

Graph 4. Results perceptions about the efficiency of oral presentation of teachers in remote classes

Despite the fact that the most voted response was “Sometimes” (31.5%), 47.5% of the participants stated that they almost always or always learn better when teachers use oral presentations, also called “master classes”. . According to Elgueta and Palma (2014), this is "the lesson given by a teacher with an outstanding career, on a subject in which he is recognized as an expert (...) and is characterized by being essentially expository". As can be seen, almost half of the participants responded that they learn better when the teacher uses lectures; which indicates, not only that this form of teaching is still widely accepted among the student body, but that three imaginaries are reinforced: a) That in the remote methodology the teacher is the main person responsible for the learning processes; b) That short-term activities that do not require too much autonomy on the part of the students are prioritized; c) That they prefer tasks based on cases or examples that involve theory, practice and the relationship with the professional environment.

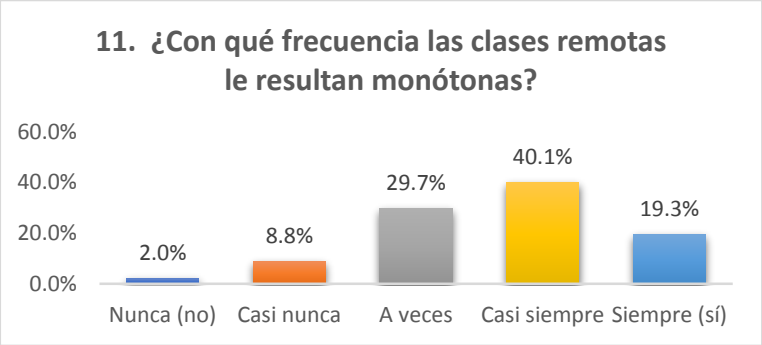
Now, it is time to report the information collected on some complementary aspects related to the good execution of learning: creativity, attention and participation. For Duarte (1998), Boden (1994) was correct when he pointed out that creativity requires the development of various daily psychological processes, such as: remembering, speaking, listening, understanding language, among others. In the same way, the exploration and evaluation of ideas is required to recognize the truly novel ones. That is why, increasingly, the promotion of creativity, understood as the capacity for innovation, becomes essential in higher education. In this sense, question number ten of the questionnaire aimed to identify whether remote classes favor their creativity.




Graph 5. Perception results on creativity in remote classes

In this regard, it is difficult to make a convincing judgment on the results, since 28.7% stated that they had never or almost never perceived that remote classes had been developed creatively; while 31.6% stated that the sessions almost always or always had this characteristic. Although, by a slight margin, the statistics seem to be in favor of a generalized positive perception, the 39.7% who selected the “Sometimes” option does not allow a precise conclusion to be drawn. In contrast to this, it is found that 58.4% of the people consulted expressed that they almost always

and always perceived that remote classes were monotonous. This is recorded in the following graph:




Graph 6. Perception results on monotony in remote classes

If the high percentage of the "Sometimes" option (29.7%) is also considered, it is possible to affirm that 89.1% of the participants have the perception that remote classes are monotonous, despite the fact that the UNAB has made enormous efforts to train its teachers in strategies and resources to streamline teaching processes and teachers have shown commitment and dedication to changes in educational processes. That is why it would be convenient to reflect on two specific questions in subsequent works. What does it mean for students that a class is creative or monotonous? And is the training that the university offers to teachers being effective to have better pedagogical and didactic activities in the current circumstances?

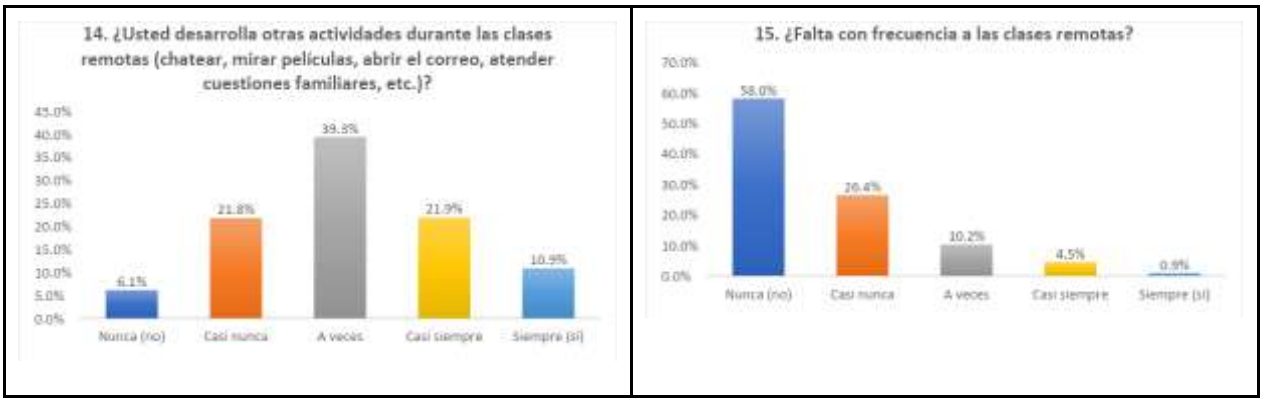
Other subcategories explored in the questionnaire were: attention and participation. The following charts show the compiled responses:


Graph 7. Results perceptions in attention and participation in remote classes

On the one hand, attention is defined by Gazzaniga, Ivry, and Mangun (2002) as the brain mechanism that allows processing relevant stimuli, thoughts, or actions and ignoring irrelevant or distracting ones in order to effectively perform more than one cognitive task in a consistent manner. simultaneous. On the other hand, Pineda and other authors (2017) suggest that the term Participation in class encompasses from verbal intervention to complement, question or respond to situations originating in class sessions, to the delivery that the apprentices make of the work assigned by the students. teachers. Thus, both attention and participation condition the way in which structured learning environments are configured.

In the survey it was possible to detect that 40.5% of students never or almost never manage to maintain attention during remote classes, not to mention that the "Sometimes" option was marked by 32.5% of those who took part. of the studio. Regarding participation in class, 30.6% answered that they always or almost always participate in the sessions. This indicates that the internet-mediated methodology has a low rate of interaction. These data help shape two of the difficulties of remote teaching: the effort that learners must make to keep their attention in spaces full of stimuli and the lack of willingness to participate that is evident in the results of the previous graph. The latter materializes in virtual sessions full of profile photos where learners rarely turn on the camera or use the microphone to express their contributions, according to the increasingly common comments by teachers. Undoubtedly, this point points to new research horizons, since it would be useful to have explanations that help understand why learners are reluctant to interact spontaneously in synchronous classes mediated by virtual platforms.

Other factors associated with the attention and participation of the apprentices were the development of activities other than those of the class during the synchronous meetings and the frequency of absences from the sessions. Here are the results:




Graph 8. Perception results on the development of extracurricular activities and absences in remote classes

The answers to question fourteen reinforce the hypothesis raised above, since a slight tendency is perceived that indicates that 32.8% of the students almost always or always carry out different

activities during the session (chat, watch movies, attend to family matters, etc.). etc.), despite the fact that 27.9% affirm that they focus solely on the development of classes. This is not counting the 39.3% who answered “Sometimes”. This distribution in the statistics leads to the conclusion that, given the variety of responses, it could be said that most students have carried out complementary tasks in parallel with an online class on at least one occasion.

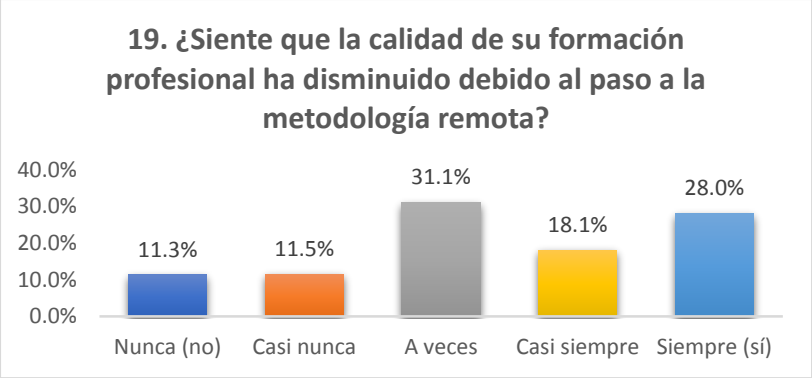
The opposite occurs with the report of question fifteen, where 84.4% of the participants stated that they never or almost never missed classes through remote systems (Teams, Meets, Zoom, etc.). Here an obstacle and a virtue of remote sessions could be highlighted, on the one hand, students have various distractions at home that affect their attention span; On the other hand, the ease of entering the virtual classrooms from home, without the need to travel to the university, allowed for a low rate of permanent absenteeism in the group of students who took the survey (5.9%).

The third section of the questionnaire explored the students' preferences regarding the work methodology for the next semesters: remote, hybrid or face-to-face. The following table contains the results in this regard:


Graph 9. Perception results on preferences for face-to-face, remote or hybrid classes

According to these results, half of the students (50.4%) stated that they would not like to have classes in remote methodology after the pandemic. This data is consistent with 50.2% of the participants who expressed their desire to return to face-to-face attendance once possible. However, the experience of remote teaching is on the way to transform the perceptions of learners, due to the possibility of having structured learning environments that combine the advantages of face-to-face interaction and the technological tools of the synchronous and asynchronous spaces that it offers. the virtuality. This can be seen in question seventeen "Would you like a combination of remote classes with face-to-face classes to continue?", noting that the option "Almost always" had the highest percentage of acceptance (16.4%).

Finally, this section investigates the students' perception of whether the quality of vocational training has decreased due to the switch to remote methodology. These are the findings:




Graph 10. Perception results on the decrease in quality in professional training

The information provided by the survey on this topic requires special attention, given that 46.1% of the students responded that they always or almost always felt that the move to the remote methodology had brought about a decrease in the quality of their professional training; in contrast to 22, 8% of those who responded that they never or almost never perceived this situation. In addition, it is worth reviewing that the highest percentage of responses (31.1%) was in the "Sometimes" option, which makes it possible to conclude that almost a third of the students consulted felt that remote education did not meet their expectations. training expectations on at least one occasion. Without a doubt, it would be interesting to carry out studies that shed light on what causes these perceptions and how to deal with them.

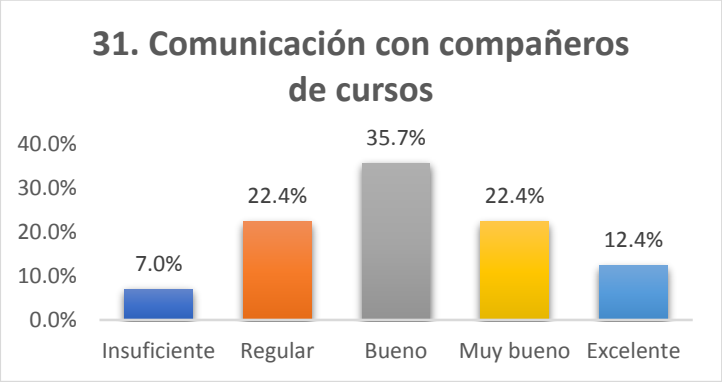


**Strengths and weaknesses of UNAB undergraduate students in the remote education experience**

One of the most common terms today is resilience, understood as the ability to proactively adapt to unexpected or adverse situations that affect the normal development of life. But you don't always have the tools, the personal disposition, or the environment to be resilient; Next to the strengths that this implies, the weaknesses and circumstances that lead to complicated recovery processes are inevitable. In this part of the study, it seeks to identify those situations in which students have found strengths or faced weaknesses in their learning from the particular contexts in which each one develops their academic processes.

Graph 11. Results perceptions about communication with teachers in remote classes

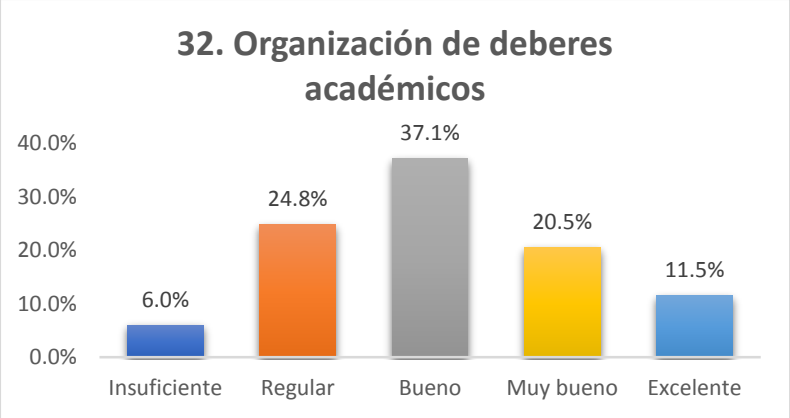
According to the previous statistical results, in a significant percentage (66.4), the students were not very satisfied with the communication with their teachers in times of isolation. This may be due to the disruptive change caused by the pandemic, which generated another form of communication through virtual means, different from the one used until a year ago. This can cause variations in their ability to communicate in teachers and students. This generates different difficulties that can be a weakness in the development of the teaching-learning process.




Graph 12. Perception results on communication with classmates in remote classes

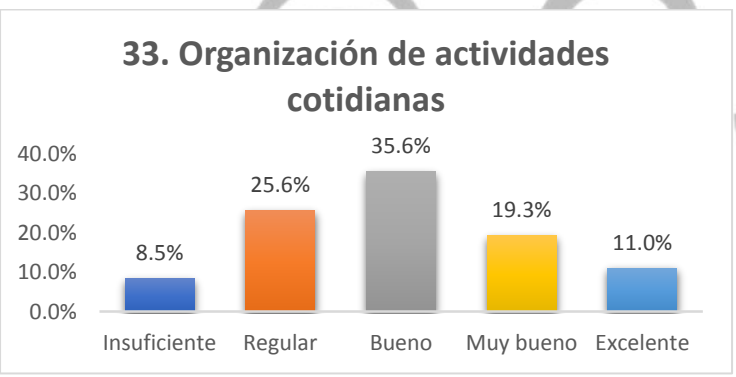
Unlike the answers to the previous question, relationships between peers and the social and emotional supports that this implies were not largely affected (70.5%). This could have been due to the fact that young people are used to maintaining different types of relationships through virtual communication channels, such as social networks. In any case, the university must work so that communication between members of the academic community reaches high levels of assertiveness.

However, one of the positive aspects that has caused this situation has been the reinforcement of learning for individual autonomy. As seen in the following graph, most students better organized their time and their academic obligations during isolation. This is an aspect that could be deepened in another study regarding the autonomy, self-management and personal responsibility expected of a university student.




Graph 13. Results perceptions about the organization of academic homework in remote classes

However, an organization of academic duties during isolation does not necessarily mean that university students would have been more efficient in planning their daily activities, as can be seen in the following graph:

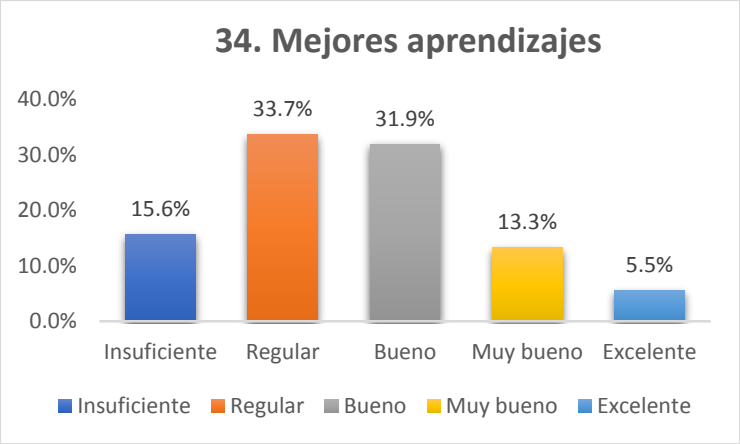



Graph 14. Results perceptions about the organization of daily activities in remote classes

The transition from face-to-face work to remote work caused noticeable changes in daily activities. As can be seen, more than 30% have seen their daily activities noticeably affected and another 35%, although they say they are good, have nevertheless had some level of change that has forced them to transform their routines and has possibly caused some discrepancy in their activities.

Regarding the quality of learning, half of those surveyed find that their learning deteriorated during confinement. Another 30% rate it as Good; while high levels of learning give very low percentages, less than 20%. This response implies the way in which both teaching and learning

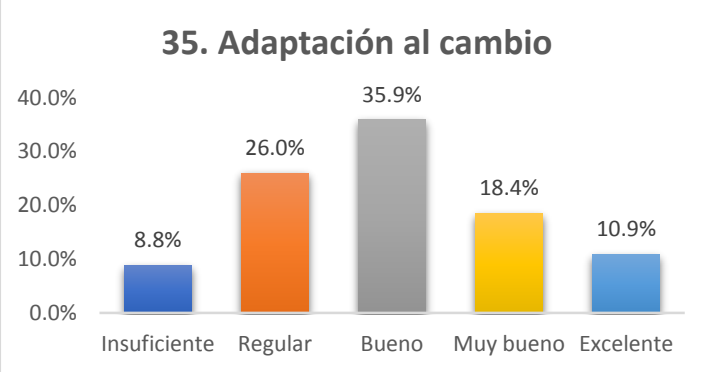
can be affected in the face of disruptive situations that leave very few alternatives to the usual face-to-face processes. In any case, even if the teaching effort has been the same or higher, with greater creativity and with the same sources of knowledge, and the university has responded quickly and efficiently to the new needs of the academic community, according to these results, the learning was affected in 49.3% of those surveyed by changes in the students' routines or in their personal circumstances. This can be seen in the following graph:




Graph 15. Perception results on remote classes as promoters of better learning



Along the same lines, the research team considered it convenient to explore the perceptions of students about their ability to adapt to changes. The results are shown below:



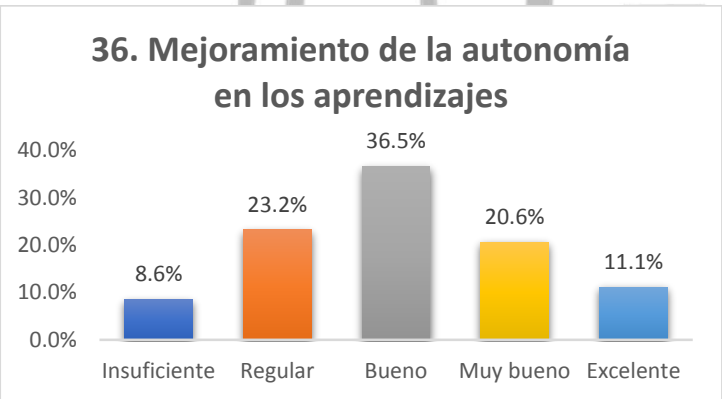

Graph 16. Perception results on the ability of students to adapt to change

Here it should be noted that this instrument was applied in the last weeks of the second school semester of 2020, which implies that there was already a process of adaptation and accommodation to the changes produced by the new educational processes, both in teachers and in students. Despite the above, about 35% of the students had not yet adjusted to the new academic processes, which implies that there were still adverse personal, family or environmental

situations that made it difficult to adapt to change. Which, in turn, explains all the more why a good part of the students want to return to face-to-face learning as soon as possible, as their natural and appropriate learning space.

These indicators show that the transition to hybrid or virtual education requires a process of psychological, emotional and habit adaptation, which goes beyond simply technological or educational changes, which would require a deeper and more careful study of the possible effects of these transformations. in educational methods; that is, a projection of future scenarios, to avoid the pure trial-error game that, in educational terms, is very delicate, since the consequences cannot be corrected in the subject who has suffered them.

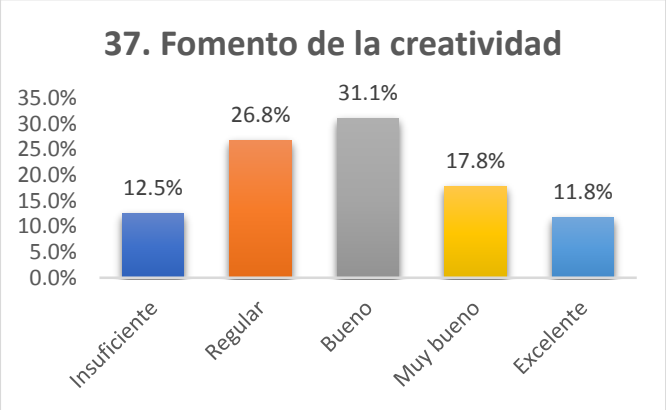
This research also sought to know the perceptions about the improvement of autonomy in learning. In this regard, they found an improvement in their ability to act autonomously in the face of their academic responsibilities (68.2%). This autonomy can be interpreted as a capacity or as a right. In the first meaning, it refers to the ability of each person to choose, make decisions and assume the consequences that derive from it. This form of autonomy is learned, it is part of the formative process that occurs to a person in their life, it is developed and strengthened through learning that comes from oneself, from the family, from school and from social interaction. (Papacchini, 2019). For the present case, the students perceive that they have had an improvement in their ability to be autonomous, which coincides with the improvement processes that they have shown in the previous questions.




Graph 17. Perception results on the improvement of the autonomy of students in remote classes

Regarding creativity, this supposes the ability to produce new ideas, new associations between already known ideas, generate new possibilities, applications, transfers, assimilations or adaptations. Creativity is learned, developed or fostered depending on the training contexts of each person (Alonso, 2000). It is one of the capacities that is expected to be developed in all its dimensions with educational dynamics. For this study, the trend of the results (60.7%) shows that there was encouragement of creativity in the students; very possibly as a result of the needs

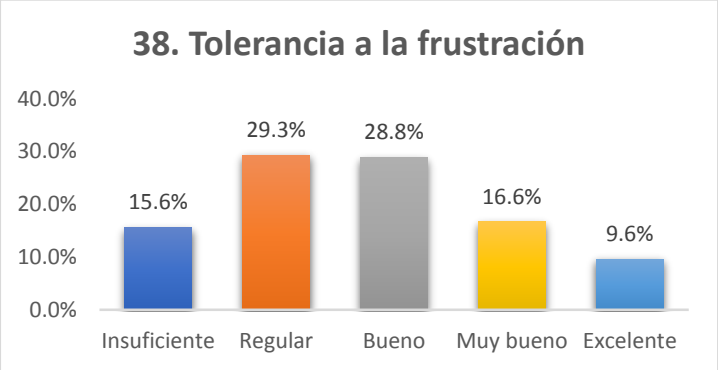
generated by changes in personal habits and adaptation to new learning and study processes, either as a process, as a product or as a combination of factors (Chacón, 2005). This generates a potential that can be exploited to stimulate new ways of approaching knowledge and assimilating it in the face of a break with traditional customs in the limited environment of a classroom.




Graph 18. Perception results on fostering student creativity in remote classes



It was also considered convenient to investigate the capacity of tolerance to the frustration to which the students were exposed. The following graph illustrates the responses obtained:

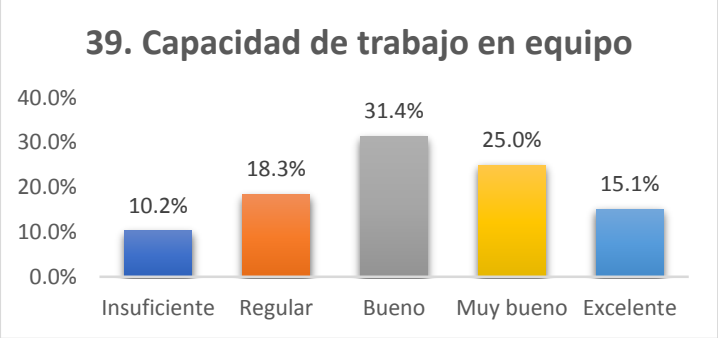



Graph 19. Perception results on students' frustration tolerance in remote classes

It is worth mentioning that frustration occurs when an attempt to assimilate, accommodate or create something fails in the course of a given process or situation, also when a desire or hope is not achieved, it is a negative feeling in the face of unsatisfied expectations, low levels capacity to

accept defeat or error or a combination of both. The results show an acceptable level of tolerance to frustration (55%) on the part of the students, which indicates that, although there are conflicting situations or unachieved achievements, the management of emotions helps to understand the context and to assume determinations of proactive way.

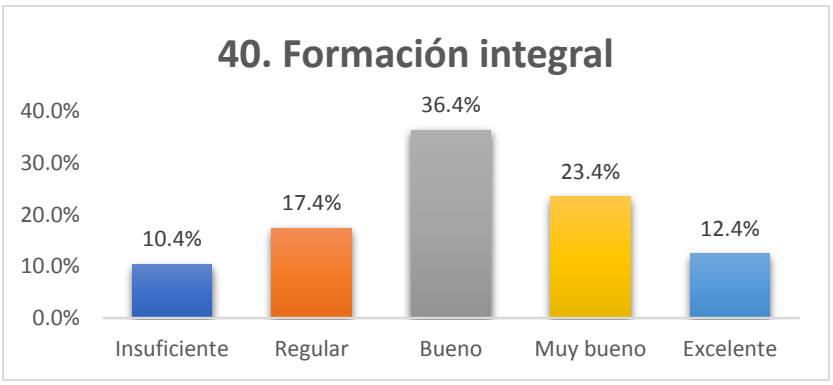
To face this, one of the alternatives is to work as a team in order to face the challenges that university life poses to future professionals. Regarding this topic, the following results were obtained:




Graph 20. Perception results on the teamwork capacity of students in remote classes

As can be seen in the graph, this is one of the outstanding strengths of the students. In 71.5%, teamwork was strengthened thanks to virtuality. As seen in the answers to questions 25, 26 and 27, social support networks were fundamental and were reinforced in these circumstances of isolation and remote education, since, according to the results of the previous graph, there was a high percentage of support in work teams, which is essential in strengthening other skills, such as motivation, assertive communication, efficiency in learning results, the sense of belonging to their program or to the university, the same than commitment to study.

With all of the above in mind, the research team wanted to know the perceptions of the student body regarding the comprehensive training that they are forging in their educational processes during isolation. These were the percentages of responses:



Graph 21. Results perceptions about comprehensive training in students in remote classes

According to the PEI of the UNAB (2012), comprehensive training is "oriented towards the achievement of social, disciplinary and professional skills, framed in the principles of harmony, autonomy and knowledge, from which balance, sensitivity, integrity, tolerance, social responsibility, interdependence, uncertainty, reasonableness and creativity. For this, it favors the development of the following dimensions in the student: Affective, so that he acquires awareness and appreciation of himself and others, accepts differences and recognizes the importance of interdependence in the construction of projects. Cognitive, so that it broadens the horizon of sensitivities, thoughts, concepts, theories and methods; exercise critical reflection, analysis and synthesis to build your own representation of reality. Physical-sensitive, so that he responsibly assumes his corporeity and expresses himself creatively through multiple languages" (p. 23). If one takes into account that a little more than 70% of those surveyed found that comprehensive training was strengthened, it means that the University has been successful in this process, which has been disruptive and has required all the capacity, imagination and creativity of each server of the Institution (teachers or administrative) so that the emotional, cognitive and sensitive physical training processes of the students were not affected.

In short, the key word in these results and, in general, in this part, is resilience. Initially understanding that it is not a kind of antidote against suffering or an acquired and immutable state, but a path that must be traveled in the midst of disruptions, failures and enormous efforts to overcome unexpected or traumatic situations. While it is true that these circumstances of 2020 have left a painful and traumatic inventory, it has also been a time for challenges, empathy and resilience to take personal, institutional, family and social history into our hands and move forward. among all.

## Conclusions

In general, this study concludes that, regarding the Appreciations on pedagogy in remote classes, it is possible to affirm that students believe they learn better with lectures, workshops and case studies than with project work. Likewise, it was possible to determine that future UNAB professionals consider remote classes to be monotonous and expressed having problems maintaining attention during working hours; especially because they develop activities other than academic ones in the sessions. On the other hand, it is worth noting that, although one advantage of the Teams meetings was the low rate of class absences, the learners prefer face-to-face sessions, they moderately agree with a mixture of face-to-face and ICT-mediated sessions and rejected the possibility of continuing with a 100% remote model. However, the most worrying finding in this section was that the participants indicated that they feel that the move to the remote methodology has diminished the quality of their professional training, an aspect that, in

the opinion of the researchers, merits more in-depth studies that allow knowing what cause that perception.

When talking about the Strengths and weaknesses of UNAB undergraduate students in the remote education experience, the respondents expressed having problems in communication with professors and classmates; in addition to problems organizing time for their academic duties and daily activities. They also stated that they did not feel that remote education allowed them to learn better, allowed them to be more creative or autonomous; Nor did it make it easier for them to adapt to change or tolerate frustration. However, the results showed that the trainees perceived improvements in their ability to work as a team and their comprehensive training.

These conclusions allow us to reflect that the situation of confinement and its social, economic and affective repercussions can generate affectations at a mental and emotional level in people, especially in young people, who, according to the results of this research project, have experienced at least in some difficulty in this regard. Taking into account the aforementioned, it is important to implement adequate coping strategies and protective factors that allow mitigating these effects. The latter are: a) the support network that students have, given that being able to relate to their relatives and feel their support is essential in the field of mental health; and b) access to technological devices that have allowed interaction through virtuality, through video calls, social networks, online games, among other scenarios that overcome physical barriers and help students not feel isolation with greater impact. .

Cornok (2020) suggests that, in a first approach to the role of ICT during this situation, it is necessary to remember previous experiences in which attendance at face-to-face classes was altered. He refers to what happened during H1N1 in 2009, and finds that back then there was a very different use of distance education forms in higher education. He concludes that today it has been much more efficient, since before virtual education was encouraged as a channel to transmit knowledge and offer documentary repositories that were consulted by apprentices.

Currently, in theory, there is a more student-centered didactic development, since they find educational resources with well-explained content, pedagogical dynamics that favor their participation in their own learning, and teachers who seek to be more creative and resilient. For this reason, the isolation generated by government measures in the face of the pandemic is an opportunity to reconsider the entire educational apparatus in order to train more autonomous students, encourage more recursive and updated teachers in technology, propose pedagogies with a high degree of participation of the apprentices and strengthen the human capital and technological infrastructure of universities. The question is: how to achieve it?

A first step should involve students in the planning of educational strategies that are carried out in institutions. Usually, universities create actions from a small group of administrators that are then shared with teachers so that they can be taken to students. The formation of teams made up of administrators, teachers, students, and even graduates, would allow not only to have a more complete vision of the educational needs that the world demands in a pandemic - and post-pandemic -; but also the contribution of diverse voices to respond to these challenges.

On the other hand, the results of this study reveal some particularities that must be taken into account to understand the impact of remote education on the perceptions of UNAB students. Although the institution carried out different actions to meet the needs of the apprentices for an efficient transition between face-to-face and ICT-mediated methodologies (teacher training, implementation of a virtual campus, loans of technological equipment, among others), the Respondent responses showed that teacher-centered teaching practices are still widely accepted in the student community, to the point of placing responsibility for learning on what teachers say and do in class. So, it is necessary to continue in search of pedagogical processes aimed at making future professionals aware of the need to appropriate their role as protagonists of their training.

In other matters, Cotino-Hueso (2020) uses the case of Spain, where closures due to circumstances such as snowfalls or floods have negative effects both emotionally and pedagogically, to illustrate that emotional damage can be mitigated if there is a coordinated response of society and a proactive attitude of educational institutions and their teachers in the face of the immediate needs that arise in students. Thanks to this type of joint mobilization, it is possible to turn the solutions to the problems derived from isolation into opportunities to create more significant and better equipped learning environments in all senses. Thus, for example, the dynamics of remote classes and teleclasses came to be incorporated into pedagogical practices from now on.

These new hybrid forms of education (face-to-face, remote, with teleclasses or virtual, as proposed by the UNAB) must respond to a permanent process of technological adaptation, both of support teams and of different digital tools, platforms, software, etc. that are meaningful for students, friendly for teachers and flexible in their updating; that is, that they give pedagogical and psychological meaning to the construction of knowledge and not only as simple mediators of information that end up not satisfying the needs and expectations of teachers and students.

Some of the ideas presented up to this point echo documents that for several years have shed light on the future of education. In 2014, the Organization of American States (OAS) raised the need to keep in mind the processes related to content management in terms of quality in the design of materials; as well as pertinent and didactic coherence in relation to the balance in resources, study aids, compilation of didactic activities, consistent academic resources, self-assessment and evaluation systems and adequate use of synchronous and asynchronous communication tools; to which, for the training to be comprehensive, psychological and emotional aspects must be added so that the current resilience processes are not limited to the results given by the statistics of admission, permanence or results in qualifications, but that it is truly a comprehensive resilience, with a human face.

Finally, it should be noted that more in-depth and rigorous research should be carried out on the different ways in which the changes caused by the pandemic affect the mental health and study practices of the apprentices, in order to define specific strategies that mitigate the emotional indicators highlighted in the present study and that allows young people to respond effectively to the demands of their role as university students.

**Bibliographic references**

Ander-Egg, E. (1999). The workshop: an alternative for pedagogical renewal. Magisterium of the Río de la Plata.

Alonso Monreal, C. (2000). What is creativity. Madrid: New Library.

Cotino-Bone, L. (2020). Serious digital teaching and education in times of coronavirus. Journal of Education and Law, (21), 21-29. Retrieved from https://revistes.ub.edu/index.php/RED/article/view/31213/31283

Cornock, M. (2020). .caling up online learning during the coronavirus. (Covid-19) pandemic Blog Online CPD & Technology-Enhanced Learning. Retrieved from https://mattcornock.co.uk/technology-enhanced-learning/scaling-up-online-learning-during-the-coronavirus-covid-19-pandemic/

Chacon Araya, Y (2005). A critical review of the concept of creativity. Electronic Journal "Research News in Education", 5 (1), San José de Costa Rica, University of Costa Rica. Retrieved from https://www.redalyc.org/pdf/447/44750106.pdf

Duarte Briceno, Efrain. (1998). Creativity as a value within the educational process. School and Educational Psychology, 2(1), 43-51. https://doi.org/10.1590/S1413-85571998000100005

Elgueta Rosas, Maria Francisca, & Palma Gonzalez, Eric Eduardo. (2014). A PROPOSAL FOR THE CLASSIFICATION OF THE MASTER CLASS TEACHED AT THE FACULTY OF LAW. Chilean Law Review, 41(3), 907-924. https://dx.doi.org/10.4067/S0718-34372014000300006

Garcia, V., Villaverde, V. Benito, V. D., & Camp; Munoz, R.C. (2020). Project-based learning and formative assessment strategies: Perception of university students. Ibero-American Journal of Educational Evaluation, 13(1), 93-110. Available at: https://dialnet.unirioja.es/servlet/articulo?codigo=7408493

Picardo, O. Escobar, Pacheco, R. (2004). Encyclopedic Dictionary of Sciences of the. 1st. Ed. – San Salvador, El Salvador, C.A.: Educational Research Center, García Flamenco School. 2005. 400p. 22X15cm.

Pineda, E. R., Cárdenas, G. M., González-Beltrán, L. F., García, O. R., & Leyva, H. R. (2017). Class participation in university students: dispositional and situational factors. Rev. Iberoam. Educ, 74, 149-162.

Rogero-Garcia, J. (2020). The fiction of distance education. Journal of Sociology of Education-RASE, 13(2-Special), 174-182. http://dx.doi.org/10.7203/RASE.13.2.17126

Tecnologico de Monterrey (2018). Case method. Teaching techniques. Teaching Skills Development Program. Directorate of educational research and innovation. Available at: http://www.itesca.edu.mx/documentos/desarrollo_academico/Metodo_de_Casos.pdf