




Evaluation strategies of the student learning process during the new normality

Estrategias de evaluación del proceso de aprendizaje de estudiantes durante la nueva normalidad

Estratégias de avaliação do processo de aprendizagem do aluno durante a nova normalidade


Georgina García¹

Universidad Autónoma de Guerrero, Chilpancingo - Guerrero, México

 <https://orcid.org/0000-0002-3295-8024>
13759@uagro.mx

Kenny Acuña

Universidad Autónoma de Guerrero, Chilpancingo - Guerrero, México

 <https://orcid.org/0000-0002-3686-7138>
johnkenny291@yahoo.com.mx

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KEYWORDS

learning, virtual classes,
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ABSTRACT. The COVID-19 pandemic accelerated the realization of classes through virtual platforms and made the teacher evaluation, instead of positively reflecting the level of knowledge, evidenced a low performance of the students, in this case, of the Preparatory No. 7 of the Autonomous University of Guerrero, Mexico. To explain this problem, qualitative research was carried out with descriptive and interpretative scope. 50 students were interviewed, and a structured questionnaire with ten open-ended questions was developed. The main results indicated that students perceive that traditional assessment does not reflect their knowledge, but incipient learning, stress and anxiety, so they suggested modifying the assessment process.

PALABRAS CLAVE

aprendizaje, clases
virtuales, estrategias,
evaluación tradicional.

RESUMEN. La pandemia COVID-19 aceleró la realización de las clases por medio de plataformas virtuales e hizo que la evaluación docente, en lugar de que reflejara de manera positiva el nivel de conocimiento, evidenció un bajo rendimiento de los estudiantes, en este caso, de la Preparatoria N° 7 de la Universidad Autónoma de Guerrero, México. Para explicar esta problemática se llevó a cabo una investigación cualitativa con alcance descriptivo e interpretativo. Se entrevistó a 50 estudiantes, asimismo se elaboró un cuestionario estructurado con diez preguntas abiertas. Los principales resultados indicaron que los estudiantes perciben que la evaluación tradicional no refleja sus conocimientos, sino aprendizajes incipientes, estrés y ansiedad, por lo que sugirieron la modificación del proceso de evaluación.

¹Bachelor of Library Science at the National School of Library and Archive Science (ENBA). **Correspondence:** 13759@uagro.mx



PALAVRAS-CHAVE

aprendizagem, aulas virtuais, estratégias, avaliação tradicional.

RESUMO. A pandemia do COVID-19 acelerou a realização das aulas por meio de plataformas virtuais e fez com que a avaliação dos professores, ao invés de refletir positivamente o nível de conhecimento, mostrasse um baixo desempenho dos alunos, neste caso, do Ensino Médio nº 7 do Autônomo Universidade de Guerrero, México. Para explicar esse problema, foi realizada uma pesquisa qualitativa com escopo descritivo e interpretativo. Foram entrevistados 50 alunos e desenvolvido um questionário estruturado com dez questões abertas. Os principais resultados indicaram que os alunos percebem que a avaliação tradicional não reflete seu conhecimento, mas aprendizado incipiente, estresse e ansiedade, para o qual sugeriram a modificação do processo avaliativo.

1. INTRODUCTION

The Covid-19 pandemic caused by the SARS-COV-2 virus is being experienced worldwide. What has generated those activities carried out in daily life, such as attending face-to-face classes, have been modified in the new normality? Therefore, online or virtual classes have been chosen, which are taught through virtual platforms such as Meet and Zoom Google Classroom. In the case of High School No. 7 of the Autonomous University of Guerrero (UAGro), 2nd-grade students and group 305 received their classes through a virtual platform. However, low performance was perceived in this modality due to the inconveniences that appear in the forum. For example, echo, image freezing, and choppy audio. This causes the understanding of the classes to be developing. The evaluation used is the traditional one, which is extensive and imprecise, which leads to a developing review in the students.

This is supported by the following question: What strategies to implement to improve student assessment? It is worth mentioning that implementing systems that allow strengthening, evaluating, and monitoring student learning and thereby designing an efficient evaluation program will increase their academic performance. In this sense, Fernández and Vallejo (2014) state the following:

La educación en línea es considerada una modalidad de aprendizaje en la que se acoplan variables: de contenidos y actividades de aprendizaje; de interacción y comunicación entre los actores que participan en el proceso y la plataforma tecnológica que se emplea, esto se lleva a cabo a través de dispositivos tecnológicos conectados a internet (p. 31).

Online classes can be delivered via desktop and mobile media such as laptops, smartphones, mobile tablets. Likewise, this modality has advantages in terms of time since it can be taught in real-time or through recorded classes and be supported by material from a repository or on the Internet. In this regard, Quesada (2006) mentions that online teaching occurs outside school spaces. On the contrary, it is taught through the internet, through discussion forums, chat, email, videoconference, audio, and video. In this context, Díaz (2013) mentions that the current generation of young people is familiar with the use of digital platforms. However, they require support to use these means and obtain the maximum benefit correctly. He also points out that there is a deficiency in the didactic approaches in virtual classrooms, which makes it necessary to develop educational proposals that constitute strategies for students to achieve good academic performance.

On the other hand, for Hodges et al. (2020), online learning is efficient if it is carried out with a detailed program outline and planning. Therefore, under a systematic model for its structure and development, they emphasize

that its design will determine the quality of teaching. At the same time, they identify nine dimensions that a program of this type must contain, which are: modality, rhythm, student-teacher ratio, pedagogy, the role of the online teacher, part of the online student, synchrony in online communication, the role of online assessments and source of feedback.

The factors that play an essential role are: teaching and learning by the teacher and the student, respectively (Rochina et al., 2020). It should be noted that distance education based on new learning techniques turns the teacher into a tutor and the student into a proactive researcher (Herrera et al., 2019). In the same way, Holguin and Rodríguez (2020) affirm that “la proactividad es una capacidad formativa del carácter, fortalecida como actitud mediante la autoevaluación, toma de decisiones y la formación del lenguaje proactivo para el alcance de metas de forma progresiva” (p. 4). However, student assessment must be done optimally for the teacher and student in online education. Assessment methods for assignments and tests are designed and executed efficiently and are necessary to know the student's performance. That said, Baelo and Mayo (2009) point out the following:

Los recientes requerimientos de la educación reposan en la mejora del proceso educativo en lo cual las Tecnologías de la Información y la Comunicación (TIC) contribuyen en la autonomía del alumnado, al facilitar el trabajo individual y en equipo, además de proporcionar la posibilidad de modificar y adaptar los métodos de evaluación y la interacción entre el profesorado y el alumnado (p.3).

The evaluation of the student in his learning process is essential to know the level of learning. In this way, it is possible to identify the topics that must be reinforced in class and see the efficiency of the educational program. According to Sánchez and Cisterna (2014) evaluation is necessary to improve teaching and learning since knowledge is accredited there, education is controlled, and the educational program's success is defined. On the other hand, Chaviano et al. (2016) point out that the concept of evaluation is a term that holds various meanings, such as qualification, measurement, comparison, control, analysis, assessment, appreciation, and judgment.

On the other hand, Quesada (2006) mentions that the four fundamental principles of learning evaluation are: a) reliability: for decision-making related to the learning achieved by students, it is essential to have security in the information destined for the educational program, since the tools used to reflect the student's level of achievement. b) Validity: what is intended must be measured. For this, the selected instrument must remember whether what is being asked is known. c) Objectivity: the rating obtained must be based on avoiding favoritism, prejudice, and corruption. d) Authenticity: the evaluation of learning must be genuine. This has as a condition authentic teaching, in which the main thing is the student's learning.

Chaviano et al. (2016) classify evaluation as a qualitative, alternative, and authentic. Qualitative evaluation is characterized by using a holistic trend, in which the student is judged from the evaluator's perception. It also includes quantitative actions, such as measuring and classifying, according to the student's attributes. In the alternative evaluation, evidence is made about how the student's process works with real problems; these tasks

are used as an instrument to know their learning. And in the authentic evaluation, the students expose their knowledge acquired through actions such as teamwork. In this type of evaluation, the student is conceived as a constant learner who manifests his progress over a long period.

Under this same tenor, Quesada (2006) maintains that the functions of learning evaluation are three: diagnostic, formative, and summary. The diagnosis serves to know the level of student learning. This is usually used at the beginning of the course. It also reflects their deficiencies intending to improve the educational program. In training, the student is supported in his learning process. In it, the flaws are pointed out. This function is essential for "online" distance learning. Without it, understanding would hardly be achieved. And finally, the summary function is carried out at the end of a course to assign a grade to the students concerning the learning completed. Likewise, Peralta and Díaz (2010) and Quesada (2006) point out various instruments for the evaluation of online distance learning, and these are the following:

- a) Rubric: they are known as checklists or performance with the elements to be evaluated. This type of instrument offers a record of student performance.
- b) Portfolio: it is a resource that shows the evolutionary nature of the development of the learning process, provides the opportunity to reflect on the student's growth and provides evidence of the knowledge, skills, and dispositions of the person who elaborates it and reflects what you want to learn and what you learned.
- c) Conceptual maps: they are a resource to evaluate the analysis of documents by representing them in an organized and schematic way.
- d) Debates and asynchronous discussion forums: It is defined as an asynchronous communication space organized in dialog boxes, which has the advantage of promoting a greater degree of reflection by having more time to manage one's ideas and reflect on others.
- e) Synchronous media: Chat and videoconferencing are communication platforms in which students and teachers discuss different topics in real-time through text, audio, and video.
- f) Project development: it is a structured and organized exercise to solve a problem. It is carried out progressively and over long periods.
- g) Virtual laboratories: virtual spaces where multiple simulations are carried out, such as manipulated practices and guided tours. Its objective is to promote creativity in students by developing processes of exploration, measurement, and analysis of phenomena, which allows the development of complex skills.

Based on this, it is essential to mention that the purpose of this work was to analyze the perception of the efficiency of traditional evaluation in the students of High School No. 7 of the UAGro and identify adequate

strategies to apply them in the work modality. Online. This will allow us to know the effects of the new normality and improve the scheme of the activity of teachers to achieve an excellent academic performance.

2. METHOD

This research exposes the case study of the group "305" of the high school No. 7 of the UAGro. The study presents a qualitative approach with a descriptive scope (Hernández et al., 2014). A non-probabilistic sampling was used for convenience. The criteria for selecting the sample were interested in participating and ease of access. This allowed interviewing 50 students.

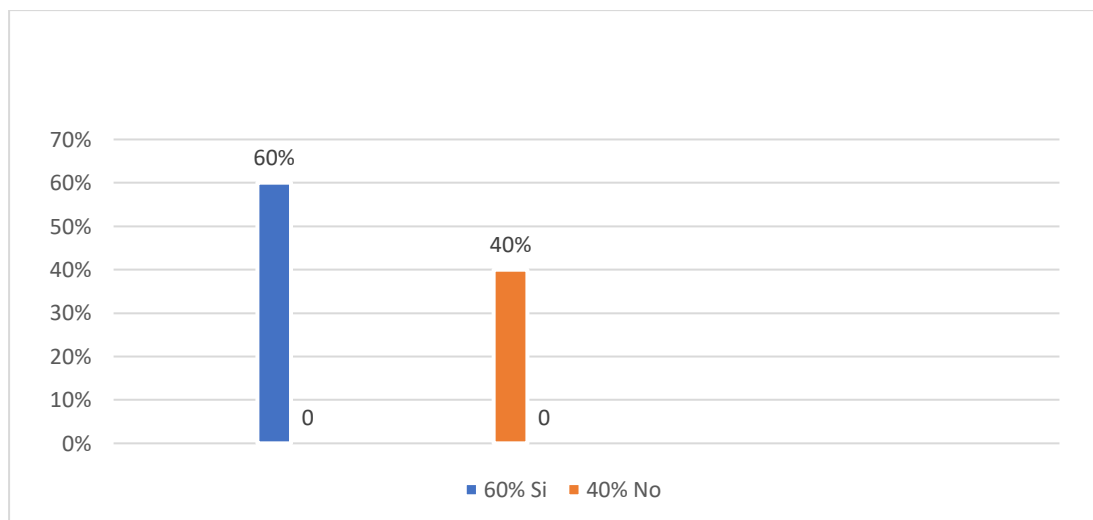
For this, an instrument was developed, which consisted of a structured questionnaire with ten open questions, which was validated by experts, a pedagogue, and an educational psychologist. Subsequently, the questionnaire was uploaded to the google forms platform, it was communicated to the students, and finally, the results were graphed and analyzed. Likewise, a documentary review was carried out based on primary sources to determine the strategies to implement in a distance education program.

3. RESULTS AND DISCUSSION

In the online class system, computer equipment and internet service are necessary. However, these requirements have affected the population in general. In this regard, Inga and Aguirre (2021) point out that the Covid-19 pandemic highlighted socioeconomic vulnerability by increasing the dropout rate of students with fewer resources. At the beginning of the new normality, multiple students expressed difficulty connecting to classes, the main reason being the computer equipment and internet service.

Figure 1

Computer equipment and internet service



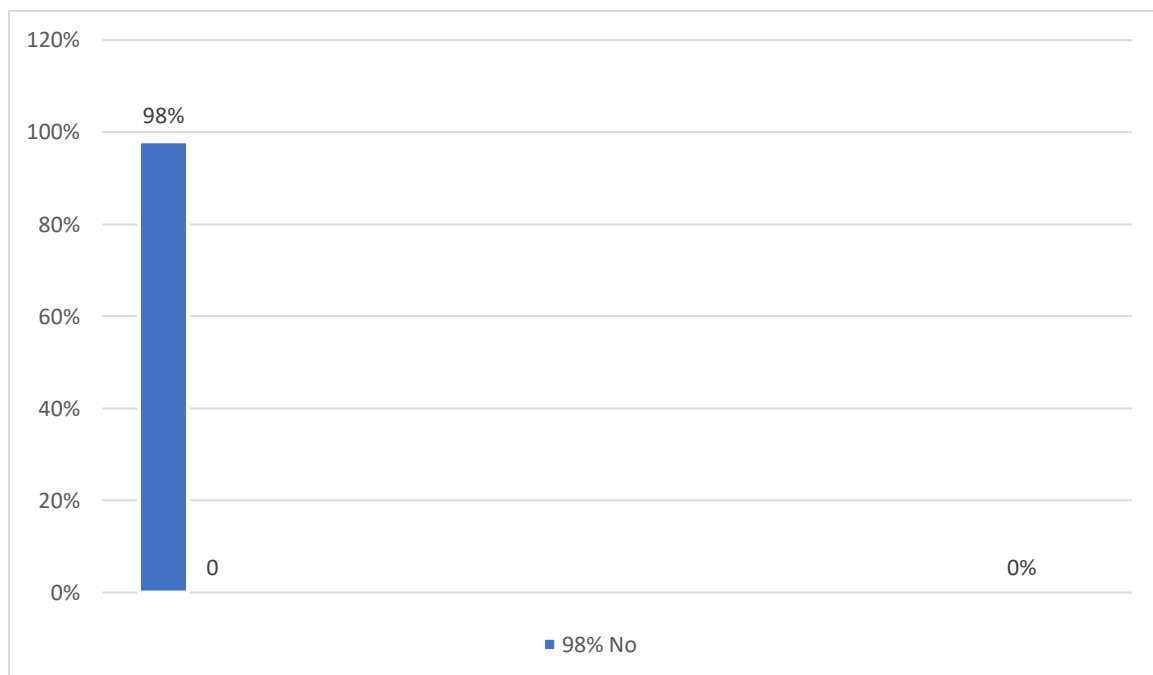
Note: Prepared with data from group "305" of high school No. 7 of the UAGro.

It can be seen in Figure 1 that only 60% of the students have computer equipment and internet service, which reflects that 40% do not have these instruments. This presents a problem for the online system, as student performance may be affected. However, a study must be carried out on students' performance without computer equipment and internet service and in this way determine if it is an essential requirement.

According to Quezada et al. (2020) there are various benefits during teamwork, such as increased individual responsibility, increased personal confidence, improved decision-making, increased creativity, innovation, and increased emotional support in the team structure. In this sense, teamwork must be strengthened in online classes to guarantee the permanence of these benefits. But unfortunately, students perceive that this capacity has been weakened in the online modality.

Figure 2

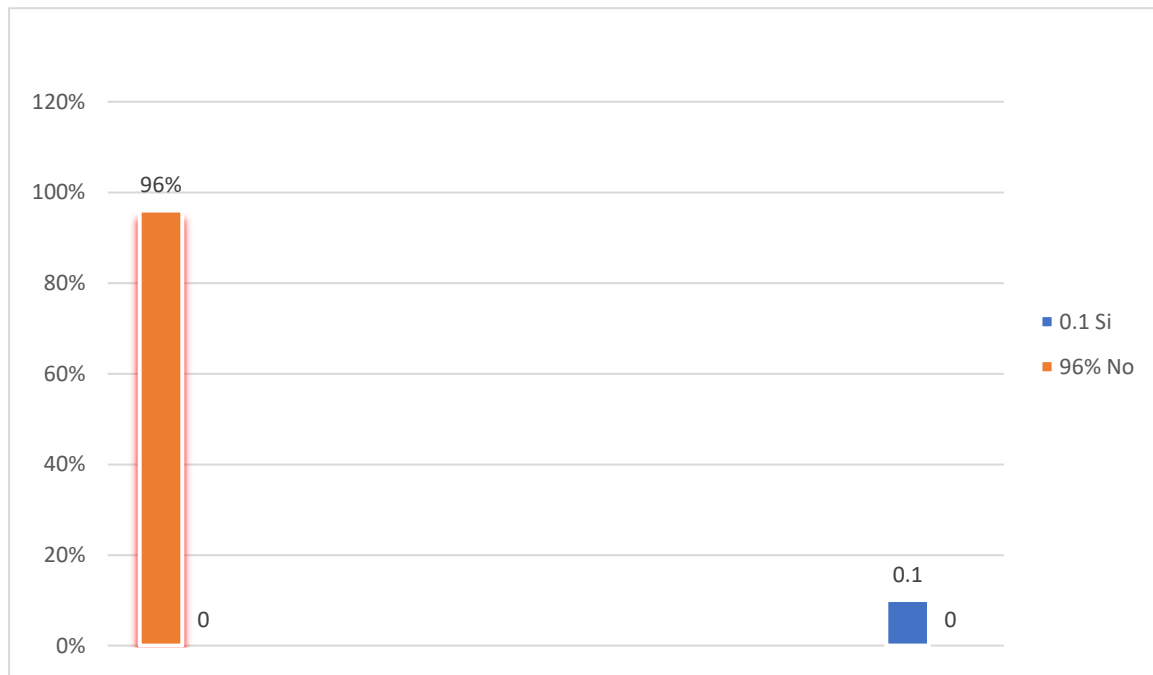
Teamwork



Note: Prepared with data from group "305" of high school No. 7 of the UAGro.

Figure 2 shows that 98% of the students consider that the teamwork in the online system is not similar to what they practiced in the traditional method. This is attributed to the fact that they cannot express themselves and unfold genuinely through internet platforms.

According to Galván and Cervantes (2017) participation is defined as the power that individuals have to get involved honestly and genuinely in situations of interest. In this sense, student participation is key to a complete understanding of the class. However, participation is not feasible for all students in the online mode.

Figure 3**Balanced participation online**

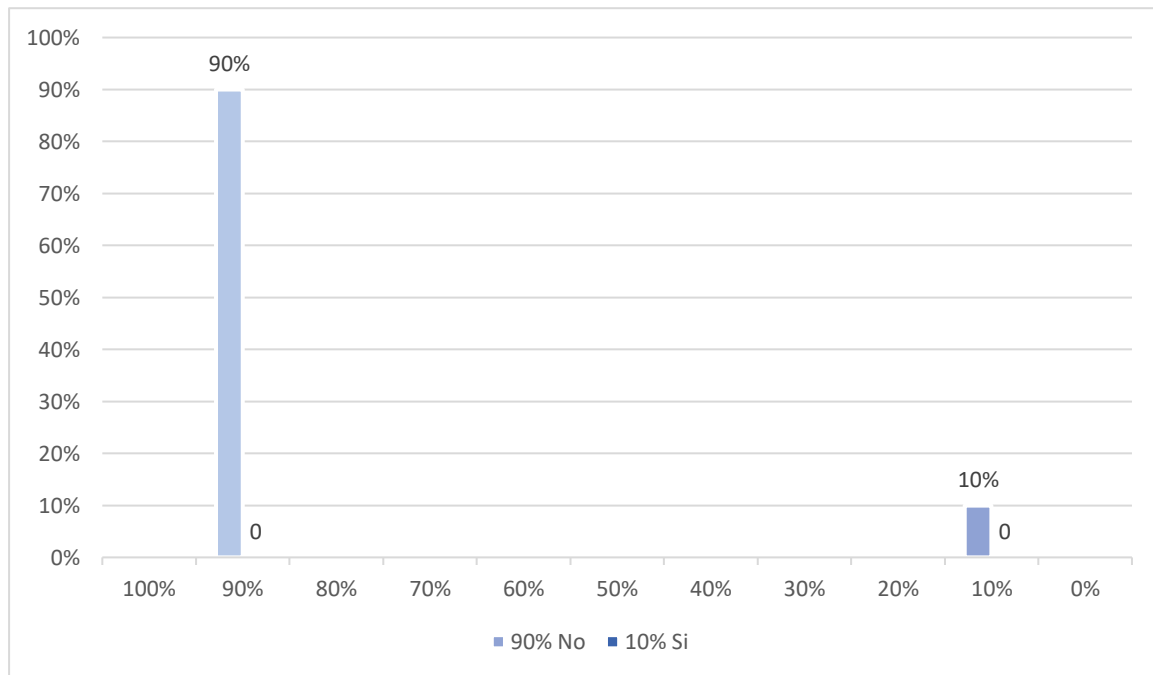
Note: Prepared with data from group "305" of high school No. 7 of the UAGro.

Figure 3 shows that 96% consider that participation is not balanced, this is attributed to the fact that it is a group of 50 students, which makes it difficult for all students to express their doubts in a short period, as well as it also influences the teacher cannot closely visualize the body expressions of the students and emphasize the topic with those who require it. The above highlights the importance of proper design for an online course.

According to Luna et al. (2018) there are various methods of instructional design, eight characteristics that contribute to the quality of teaching are recognized. The first method relates to the fair use of the content, ensuring that content is available to all students. The second method refers to the flexible use of the content to present it in various formats compatible with the technological availability of students. The third method corresponds to the course interface's intuitive and straightforward design. The fourth method attributes perceivable information in various formats. The fifth method conforms to error tolerance with the aim that the student has the opportunity to correct her errors. In the sixth method falls the low physical and technical effort to test the usability and efficiency of the design. The seventh method is related to a community of learning and support to promote communication between students, teachers, and support services. And finally, the eighth method includes an instructional climate conducive to learning as the instructor maintains personal contact and provides feedback to all students.

Figure 4

Didactic sequence

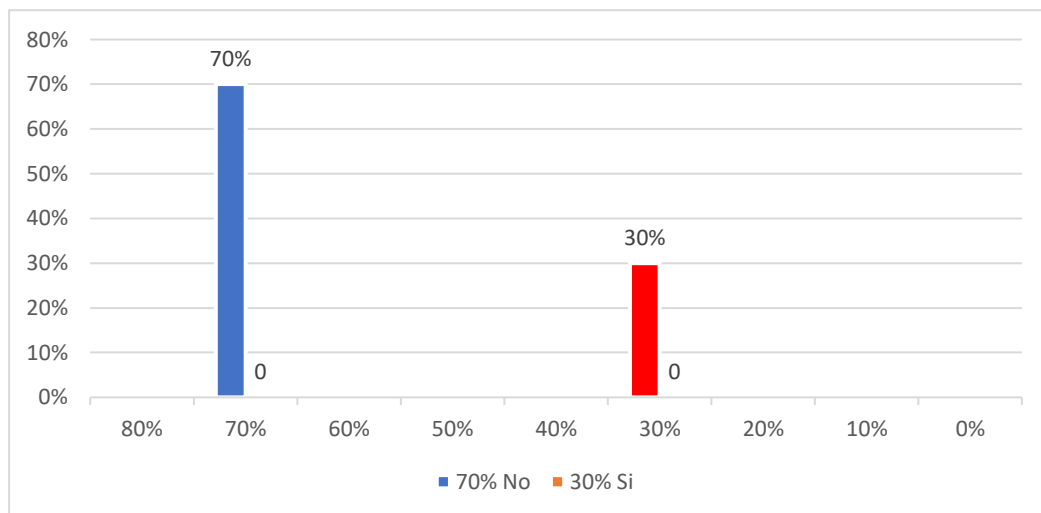


Note: Prepared with data from group "305" of high school No. 7 of the UAGro.

As shown in Figure 4, 90% consider that the material provided in the online classes does not resolve their doubts. This is attributed to the fact that the design of the didactic sequence was considered for face-to-face courses, so a plan must be carried out. Appropriate for online classes.

It is essential to know the level of knowledge achieved in the various courses that a student acquires. In this regard, Sánchez and Cisterna (2014) point out that evaluation is necessary to identify the points that must be strengthened in the didactic sequence. Likewise, it can be helpful to know the student's level of understanding because, during the evaluation process, knowledge is accredited, learning is controlled, and the success of the educational program is defined.

Figure 5

Traditional evaluation process

Note: Prepared with data from group "305" of high school No. 7 of the UAGro.

As shown in Figure 5, 70% of the students consider that the traditional evaluation process does not reflect their knowledge. This can be attributed to the fact that the academic requirement in a face-to-face system is not appropriate for an online system. Because in this system factors such as social interaction change, which is related to teamwork, body expression, the ease of participating in class. As well as that, the number of students per group is high, and even empathy about the internet connection and computer equipment, which has also been a critical factor in academic performance because it is the primary tool for the remote system. However, it may also be due to adapting this new compulsory modality in a face-to-face approach. However, a study should be carried out to clarify students' perceptions about the certainty of the knowledge obtained.

During the evaluation process, it is essential that the work requested to evaluate the course is comprehensive and sufficient to issue a grade and meet various requirements. In this regard, Quesada (2006) mentions four fundamental principles in evaluating learning: reliability, validity, objectivity, and authenticity. In this context, in the item about the number of papers students deliver per semester, 100% mentioned that they provide more than five final papers concerning the final evaluation. Usually, in the traditional system, at least one final project was delivered and at most two; however, in the remote system, this figure has been exceeded, which is a factor that influences the quality of the final works because these works involve time and effort to deliver a job with the requested requirements. However, as the number of absolute papers increases, at the same time, stress and anxiety increase to finish them promptly.

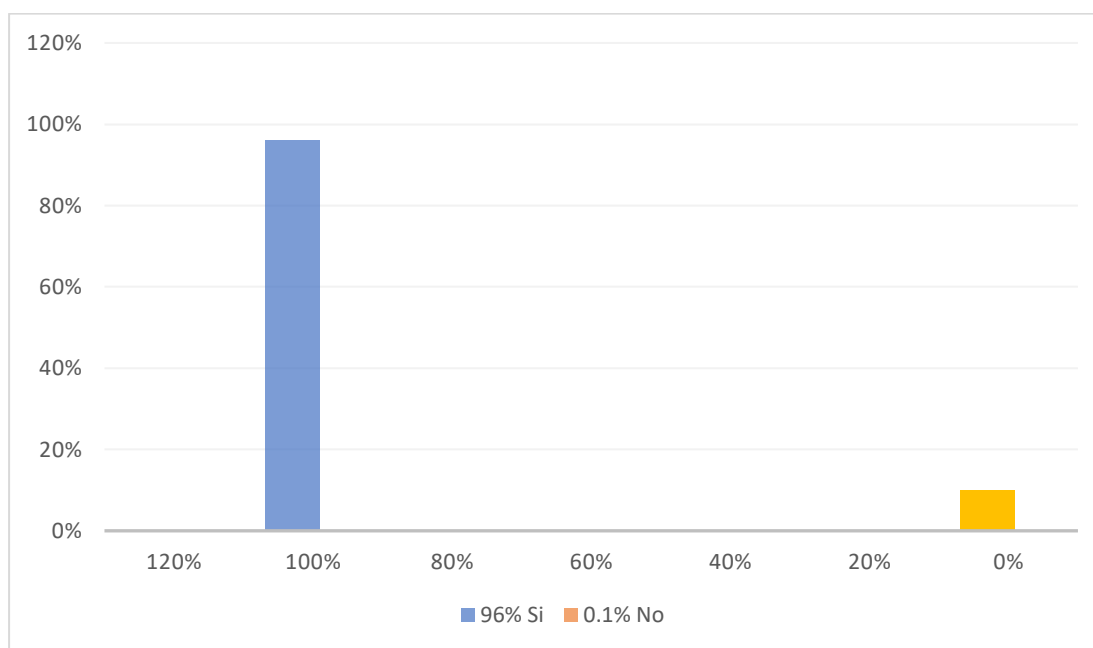
In the same way, the students were asked what subjects presented the most excellent workload? In this regard, 100% of the students stated that mathematics, physics, and philosophy are the subjects that receive the most work requests for the final evaluation. This can be attributed to the fact that the first two subjects require the execution of practical exercises, and the last one boasts a deconstruction of paradigms. The preceding refers to more effective mental training. However, this cannot be covered in its entirety on a virtual platform, and the

stipulated time that marks the didactic sequence cannot be exceeded; therefore, teachers choose to hide it in the final works. However, a study must be carried out in which the foundation of the teachers about the number of final papers is known.

In multiple courses, the practice of exercises is critical so that the subject is understood in a high percentage, for which socio-training must be used. In this regard, Tobón et al. (2015) point out that it consists of forming knowledge for society through the solution of problems through the use of information and communication technologies (ICT). For example, to solve mathematics, physics, microbiology, laboratory, Internet platforms can be used that are consistent with the subject. In this way, the student can understand it better.

Figure 6

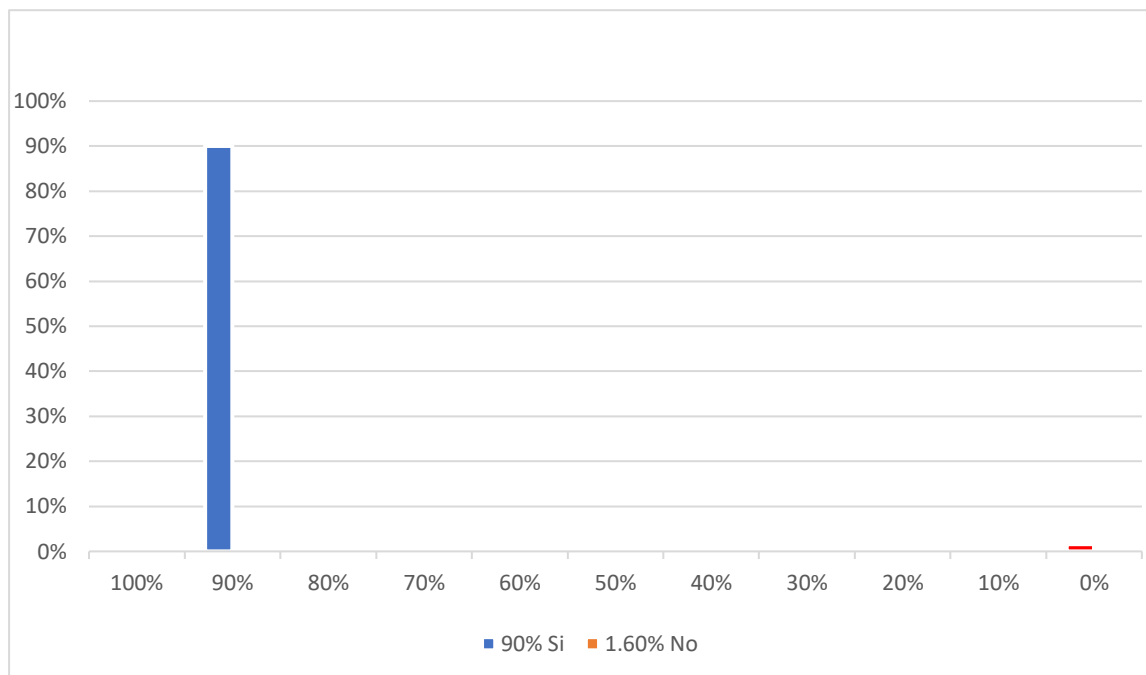
Teaching materials



Note: Prepared with data from group "305" of high school No. 7 of the UAGro.

As shown in Figure 6, 96% of the students consider that mathematics, physics, and philosophy should use other types of teaching material to understand the subject better in a short period and with material that is easy to assimilate. First, however, a study must be conducted in which the didactic material used in these subjects of upper secondary education is evaluated, thereby establishing a well-founded criticism.

Figure 7

Evaluation process

Note: Prepared with data from group "305" of high school No. 7 of the UAGro.

As shown in Figure 7, 90% of the students argue that the evaluation process should be modified, reflecting their disagreement with the traditional evaluation system. This is attributed to the lack of an appropriate evaluation process for the remote system to evaluate the student's current conditions. However, a study must be carried out in which the teacher's perception is evaluated about the traditional evaluation system used, thereby supporting the evaluation process's modification. According to Silva et al. (2020) academic stress is a state that occurs when the student negatively perceives the events in her environment, for which she reflects as various distressing situations that she faces during the educational process. This causes the student to lose control of problems to meet them and sometimes manifest physical symptoms such as anxiety, fatigue, and insomnia. As well as poor school performance, loss of interest, absenteeism, and even dropouts, here lies the importance of designing an appropriate course for students.

In this sense, the students were asked what were the reasons why they considered that the evaluation process should be modified? In this regard, 100% of the students argued that the main reasons are excessive documentary work and little learning generated in addition to the stress and anxiety generated by the delivery of multiple assignments on the required dates, which causes them to submit incomplete projects, which may affect their academic performance. However, stress cannot be attributed in its entirety to school requirements, for which a study should be carried out in which the stressors of high school students were evaluated.

4. CONCLUSIONS

In this work, we sought to know the perception of students in relation to the online evaluation process. In this sense, according to the results obtained, it is concluded that the perception of the students is homologous with respect to the need to modify the form of evaluation by the teachers. As well as modify the activities that take place in class such as participation, teamwork, the integration of interaction with other internet platforms with the aim of optimizing the practical exercises of subjects that require it. And in this way improve the academic performance of students, adding that if they do not do so, the consequences are incipient learning, poor academic performance, increased stress and anxiety.

Therefore, it is necessary to implement integration activities in the students and achieve an interaction between student-student, student-teacher, and balanced participation. As well as the use of attractive material for students, stimulate feedback constantly, in such a way that the teacher appears as a facilitator and stimulator of knowledge to provide confidence to the student in the distance system. In the same way, use an appropriate study program for this system and allow the student to acquire new knowledge in a harmonious environment that will enable them to continue advancing in their academic life.

Likewise, different theories related to teaching and learning were analyzed, which served to identify strategies for evaluating the understanding of an online system. In this sense, it is suggested in subsequent research studies to evaluate the knowledge obtained from high school students in the new normality and evaluate the stressors of these students. These investigations will solve the questions that have arisen in this investigation. Likewise, they will contribute to the bibliographic heritage to improve learning

Conflicto de intereses / Competing interests:

Los autores declaran que no incurren en conflictos de intereses.

Rol de los autores / Authors Roles:

Georgina García: conceptualización, curación de datos, análisis formal, adquisición de fondos, investigación, metodología, administración del proyecto, recursos, software, supervisión, validación, visualización, escritura - preparación del borrador original, escritura - revisar & edición.

Kenny Acuña: conceptualización, análisis formal, investigación, metodología, administración del proyecto, recursos, software, supervisión, validación, visualización, escritura - preparación del borrador original, escritura - revisar & edición.

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