Self-Assessment in higher education: students' perception on its usefulness in the learning process

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Abstract

Introduction: Learning assessment is a process where it is important to incorporate students through self-assessment, to involve them and make them responsible for their learning. **Objective:** To investigate the usefulness of self-assessment from the perspective of higher education students. **Method:** The methodology is mixed, with a qualitative analysis carried out in ATLAS.ti and a quantitative analysis developed in SPSS and Excel. **Results:** Self-assessment is not frequently used since only 23% of the participants have used it with a high frequency. **Conclusions:** a) An area of opportunity is for students to compare their learning with their peers', b) for effective self-assessment, students must strengthen their confidence in themselves, c) it is necessary for teachers to incorporate activities after self-assessment, d) the use of self-assessment is useful if its implementation has a goal and a structured process.
Keywords: learning assessment; self-assessment; higher education; metacognition; usefulness.

Autoevaluación en educación superior: percepción de los estudiantes sobre su utilidad en el proceso de aprendizaje

Resumen

Introducción: la evaluación del aprendizaje es un proceso donde es importante incorporar a los estudiantes a partir de la autoevaluación, para involucrarlos y hacerlos responsables de su aprendizaje. **Objetivo:** indagar sobre la utilidad de la autoevaluación desde la perspectiva de estudiantes de Educación Superior. **Método:** la metodología es mixta, con un análisis cualitativo realizado en ATLAS.ti y un análisis cuantitativo desarrollado en SPSS y Excel. **Resultados:** la autoevaluación no es usada asiduamente ya que solo el 23% de los participantes la han usado con una frecuencia alta. **Conclusiones:** a) un área de oportunidad es que los estudiantes comparen su aprendizaje con el de compañeros, b) para una autoevaluación eficaz los estudiantes deben fortalecer la confianza en sí mismos, c) es necesario que los docentes incorporen actividades posteriores a la autoevaluación, d) el uso de autoevaluaciones es útil si su implementación tiene un objetivo y cuenta con un proceso estructurado.
Palabras clave: evaluación del aprendizaje; autoevaluación; educación superior; utilidad.

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Introduction

Assessment in education has two purposes: a pedagogical or learning-related and accountability (which encompasses criteria for curriculum accreditation and quality certification) (Muskin, 2015). However, in the higher education field in Mexico, assessment as a process has lost its focus on the assessment of learning and now deals mainly on the accreditation of study programs which, although important, should be complementary and not exclusive to didactic purposes. This is observed in governmental and nongovernmental institutions in charge of higher-education assessment (García & Hervás, 2020).

Most of these institutions, such as the National Association of Universities and Institutions of Higher Education (ANUIES) and the National Council of Science and Technology (CONACyT), are in charge of quality accreditation without focusing specifically on the assessment of the learning of students graduating from the different institutions of higher education. In this sense, only the National Evaluation Center for Higher Education (CENEVAL) focuses on the assessment of learning and focuses only on the use of the exam as an evaluation instrument (García & Hervás, 2020).

In this sense, we must reevaluate the learning assessment as a complex process, in which each of its components is fundamental to make decisions in the educational context. Because of this, we must not lose sight of the importance of all the educational actors involved, such as students, teachers, administrators, among others. However, in the different educational levels it is constant that practices and instruments of hetero assessment are replicated period after period, which are mostly focused on the importance of the teachers' judgment and not on the students' learning achievement (Díaz Barriga, 2001; Copado, 2022).

This causes students to focus their efforts on meeting the expectations of others, excluding the value of self-assessment in the assessment of their own learning and the perception of responsibility for it is diminished (Taras, 2015; Panadero, Brown, & Strijbos, 2016). This is certainly not a generalizable fact, but it is a common occurrence and is evidenced by the scarce scientific production about self assessment of learning in Latin America, not only in higher education but at all educational levels.

In addition, it is observed that self-assessment has been relegated, due to the minimal attention paid to the design of public policies in Mexico on the subject. For example, in the General Education Law (2019), although there is a chapter on Higher Education, neither the topic of evaluation nor self-assessment is addressed. Also, in the General Law on Higher Education (2021), the subject of assessment is only focused on student accreditation and certification of study plans and programs.

With respect to the background information developed, it is important to pay attention to integrating evaluation as a key element in educational activities. It is also important to incorporate self-assessment instruments at different times during the school year to assess learning achievement, knowledge construction, and awareness of metacognitive elements that influence learning.

It also highlights the need to promote the pedagogical perspective of evaluation in order to go beyond institutional accountability and transparency. Therefore, it is in the interest of the present research to investigate the use of self assessment instruments and procedures, as well as their usefulness in estimating learning and making metacognitive elements conscious from the student's perspective. In this sense, it is significant to study this usefulness with reference to whether when the students self assess make decisions that positively influence their interests and identify the self assessment usefulness to contribute to their learning (Joint Committee on Standards for Educational Evaluation JCSEE, 2014).

Based on the above, it is necessary to develop a theoretical framework to understand the importance of assessment and the usefulness of self-assessment. In this sense, evaluation in education is understood as a systematic and fundamental process in the training of students, which demands the use of various instruments and the intervention of different actors that allow the collection and analysis of information

with which it is possible to assess and promote learning, as well as to make informed decisions and influence planning and didactics (Miller, Linn, & Gronlund, 2012; Gallardo, 2013; Sánchez, 2020).

With regard to the elements to be considered in order to carry out an adequate learning assessment, it is pertinent to analyze the intention in carrying out this process. The intention of the evaluation, as established by Paredes (2016), can be diagnostic, formative, or summative:

a. Evaluation with diagnostic intent: it is used to define the starting point of a learning process or to previously determine the level of knowledge, skills, and attitudes of the students. This type of assessment makes it possible to know the initial state of both the group and each individual student (Rosales, 2003; Frade Rubio, 2009; Gallardo, 2013; Sánchez, 2020).

b. Evaluation with formative intent: it is used for continuous and progressive monitoring. In order to carry out this evaluation, instruments must be planned to be applied throughout the learning process, and even after its completion. This allows teachers and students to appreciate progress, detect errors, and adapt teaching strategies (Martínez Rizo, 2009, 2013; Gallardo, 2013; Sánchez, 2020).

c. Evaluation with summative intent: it is used to estimate learning results at the end of a training process (Scriven, 1967). This type of assessment is done at the end of a program and is useful to identify how much the student achieved the learning objectives, assign grades, or provide accreditations and certifications (Sánchez, 2020).

In addition to considering the intention, the main actor who carries out the learning assessment must be considered. In hetero assessment, the judgment on the performance and learning achieved by students is issued by teachers and educators (Fernández & Vanga, 2015). In co assessment, the voice of peers is considered and this makes it possible to take into account the peer appreciation of each other's performance and learning (Topping, 1998; Torres & Torres, 2005; Jiménez, 2006; Fernández & Vanga, 2015). In self-

assessment, the student themself is the one who evaluates their own learning and performance, generating at the same time a support process for the development of metacognitive and self-regulation strategies (Boud & Falchikov, 1989; Boud, 1995; Kambourova, González Agudelo, & Grisales Franco, 2021).

In this sense, self-assessment of learning has three conditions for the process to be adequate and functional (Goodrich, 1996). These conditions are a) awareness of the value of self assessment since it allows for addressing the meaning of why and for what purpose to assess their learning, b) having access to the criteria on which the assessment is based so that students know the guidelines that guide the assessment, and c) the specificity of the task to be assessed so that students have clarity about the activity and the steps to be followed to perform the self assessment.

Regarding the types of self assessment that can be performed, there are different typologies based on different categorization criteria (Panadero et al., 2016). Table 1 lists five such typologies developed based on the research of various authors (Boud & Brew, 1995; Tan, 2001; Brown & Harris, 2013; Panadero & Tapia, 2013; Taras, 2015).

The term metacognition has been studied by several authors who have made revisions and proposals on what this concept, introduced in 1976 by Flavell, refers to. Therefore, for the purpose of this research, it is necessary to specify that metacognition is understood as a higher order cognitive process, which encompasses knowledge and regulation of cognition (Flavell, 1979; Brown, 1987; Kim et al., 2017; Valenzuela, 2019).

Likewise, a model is taken as a basis that encompasses what was established by Flavell (1979), Brown (1987), and Schraw & Dennison (1994), where the components of knowledge and regulation of cognition are specified. On the one hand, the knowledge of cognition is divided into three types: declarative, procedural, and conditional. On the other hand, cognition regulation is divided into three dimensions: planning, monitoring, and evaluation.

With respect to the types of cognition knowledge, declarative knowledge comprises the understanding that each student has about their

abilities and performance as a learner; procedural knowledge includes understanding strategies and procedures for problem-solving and learning; and conditional knowledge involves the degree of mastery of when, how, and why to use each strategy and/or procedure (Brown, 1987; Schraw & Dennison, 1994).

In relation to the dimensions of the regulation of cognition, planning is carried out prior to the execution of the task where the time to be invested, strategies, and goals are established; monitoring is carried out during the elaboration of the task to supervise the progress and learning in terms of the established goals; and evaluation is carried out after the task to assess the strategies implemented and the degree of achievement of the established goals (Brown, 1987).

Method

Design

This research was conducted based on the mixed method, defined by Plano-Clark & Ivankova (2016) as an intentional integration of quantitative and qualitative approaches, the purpose of which is to address the research problem in an ideal way. However, the use of the mixed method should not be misunderstood as the sum of both quantitative and qualitative perspectives. This method is approached as an alloy, developed based on a strategy that contributes to the development of the research (Ramírez-Montoya & Lugo-Ocando, 2020).

This methodological approach was chosen because the application of the mixed method in educational research offers the possibility of

Table 1
Types of Self-Assessment

Author(s)		Categorization
Boud and Brew (1995)	1.	Technical interest
	2.	Communicative interest
	3.	Emancipatory interest
Tan (2001)	1.	Self-awareness
	2.	Self-appraisal
	3.	Self-determined assessment
	4.	Self-assessment practices
	5.	Self-assessment of tasks
	6.	Self-grading or self-examination
Brown and Harris (2013)	1.	Self-grading
	2.	Self-assessment of performance
	3.	Assessment based on criteria and rubrics
Panadero and Tapia (2013)	1.	Self-grading
	2.	Assessment rubric
	3.	Self-assessment scripts
Taras (2014)	1.	Self-grading
	2.	Robust standard
	3.	Apprenticeship contract
	4.	Standard self-assessment
	5.	Self-assessment model with integrated feedback between peers and the teacher

Note: The name used in the typologies of Tan (2001) and Brown and Harris (2013) are translations made by the author, so they could be found in other writings under different names.

understanding and approaching the complexity and changing nature of educational phenomena in a holistic and adjusted way. This is due to the diversity of designs, instruments, and strategies of analysis that can be used. Therefore, although there are still challenges to overcome, it is important to approach educational innovation and learning assessment issues from a mixed approach in order to obtain greater depth and breadth in the studies conducted (Ramírez Montoya & Lugo-Ocando, 2020).

Participants

The study was carried out in three universities in central Mexico, two of them publicly funded and one privately funded. A total of 61 students participated, 50 from public schools and 11 from private schools. The distribution of students by career is 26 from the undergraduate program in Pedagogy, 10 from the Social Work program, and 25 from the Biotechnology Engineering program. Likewise, from each program, there were participants from the subjects of Biochemistry, Management Skills, Project Management, Professional Identity and Linkage, Curriculum Design and Evaluation, Didactics, Pedagogical Research, and Specialization Practice. The participants were selected by census, from of which 50 were women and 11 were men, ranging in age from 20 to 29 years old.

Instruments

In order to carry out this study, three questionnaires were applied, which underwent a content validity process based on expert judgment. Each questionnaire has the following structure:

a. First questionnaire: the first section contains items from previous self assessment experiences, the second section makes a projection on whether they consider that they will achieve the learning objectives of that subject, the third section delves into the self-assessment of metacognitive and affective processes during their learning in previous subjects, and, finally, the fourth section asks in an open-ended manner about the usefulness of this questionnaire as a means of self assessment.

b. Second questionnaire: the first section assesses whether they consider that they are achieving the learning objectives of the subject, the second section delves into the self assessment of metacognitive and affective processes developed in the subject, and, finally, the third section asks in an open-ended manner about the usefulness of this questionnaire as a means of self-assessment.

c. Third questionnaire: the first section assesses whether they consider that they achieved the learning objectives of the subject, the second section delves into the self-assessment of metacognitive and affective processes experienced throughout the course, and, finally, the third section asks through items about their perception of the usefulness of self-assessment and openly about the usefulness of this specific questionnaire as a means of self-assessment.

Procedure

The application of the instruments was carried out with the prior consent of the students and assuring the confidentiality of their data. The application was done in the following three moments: (a) the first moment was during the first weeks of each course where their background was deepened by reflecting on their metacognitive processes, previous self assessment experiences, and their perception before the first instrument, (b) the second moment was developed approximately in the middle of each course where they were asked to self-assess their learning, metacognitive processes, and their perception of the second instrument, and c) the third moment took place in the last weeks of the course where each student self-assed their metacognitive and learning processes, commented on their perception of the usefulness of this third instrument and in general the usefulness of self-assessment.

Data Analysis

In this sense, the data analysis was carried out in a differentiated manner. On the one hand, the quantitative analysis was carried out with the support of SPSS software to present the

frequency distribution and correlation of the non-parametric data responses, which were used in this way since the data do not have a normal distribution given that the participants were obtained by the census. On the other hand, the qualitative analysis of the discourse was carried out with ATLAS.ti software to identify with codes expected elements based on the literature and to recognize unexpected aspects that speak about the usefulness perceived by the students of performing self-assessments during their learning process.

Results

Firstly, the results of the quantitative analysis are presented, where it is important to highlight that the 61 participants of the population answered the first questionnaire, where a diagnosis of previous experience with self assessment was established. Based on these responses, Table 2 shows that self-assessment is not a form of evaluation that is used assiduously, since only 23% have used self assessment at a high frequency. Table 3 also shows that the most frequent form of self assessment is to self assess performance, indicating strengths and weaknesses with the support of a rubric.

Regarding the definition of self assessment, the most frequent option observed in Table 4, with 67.2%, is "reflecting on what I have achieved and what I still need to achieve to reach the learning objectives." Also, regarding the participants' experience with self-assessment, Table 5 shows that it is not frequently used to evaluate a student's learning in comparison with another classmate. Likewise, Table 6 shows that the least frequent moment in which self-assessments are carried out is at the beginning as a diagnostic assessment, and the most frequent is at the end of the course, so it can be inferred that it has been used more as a summative assessment.

Table 2
Frequency with which Students Have Performed Self-Assessments

	Frequency	Percentage
High	14	23.0
Regular	33	54.1
Low	10	16.4
Very low	4	6.6
Total	61	100.0

Table 3
Forms of Self-Assessment that Students Have Carried Out

	Frequency	Percentage
Self-rate myself numerically, placing a grade based on what I think I learned in the course	26 de 61 people	42.6
Self-assess my performance, indicating strengths and weaknesses with the support of a rubric	52 de 61 people	85.2
Narrating my learning experience from my perspective (no preset criteria)	14 de 61 people	22.9

Table 4
Best Definition of Self-Assessment

	Frequency	Percentage
Give me a rating for my learning or performance	8	13.1
Narrate briefly what I have learned and what I have yet to learn in a course or module	12	19.7
Reflect on what I have achieved and what I still need to achieve to reach the learning objectives	41	67.2
Assess my learning or performance in comparison to my peers or classmates	0	0
Total	61	100.0

Table 5
Experience in How Self-Assessments Have Been Considered

	Frequency	Percentage
They have been part of the qualifications obtained in courses.	21	34.4
They have been part of the feedback process given to me by my professors.	22	36.1
They have been reflections that have helped me to understand myself more as a learner.	16	26.2
They have been reflections that havwe helped me to compare myself with other peers or colleagues.	2	3.3
Total	61	100.0

Table 6
Time Point at Which the Self-Assessment is Carried Out

	Frequency	Percentage
At the beginning of a subject or course	11	18.0
During a subject or course learning process	20	32.8
At the end of a subject or course	30	49.2
Total	61	100.0

On the other hand, when the participants were asked about their expectations of self-assessment, Table 7 indicates that they prefer the teacher to comment on their mistakes and successes. Regarding the usefulness attributed to self assessment, based on the results of Table 8, it can be inferred that the participants would find it useful to reflect on how they learn in terms of strategies and methods; this response represents the most frequent with 52.5%. Likewise, Table 9 shows that the emotions most present during

the self-assessment were enthusiasm and confidence with 44.3%, as well as surprise and uncertainty with 39.3%.

Regarding the participants' perception of comfort during the self-assessment process, Table 10 shows that they prefer that the criteria established for assessment arise from a co construction between the student and the teacher.

Also, in Table 11, 49.2% of students report that they do not obtain any comments after learning the result of the self-assessment. Furthermore,

regarding the alternative usefulness that the self assessment provided to the student, Table 12 shows that 42.6% consider it more important to improve the instructional design, in terms of the types of activities and evaluations of the course.

On the other hand, Table 13 shows that the most significant help provided by self assessment is the reformulation and improvement of their learning processes and clarifying what and how they should continue working in order to learn better. In this sense, Table 14 shows that 63.9% of the students prefer that the results obtained from these self-assessments coincide with what they think of themselves, regardless of what others think.

Table 7
Expectations about Self-Assessment

	Frequency	Percentage
Have the teacher read it and discuss it with me to identify my mistakes/what I can improve/identify for myself my strengths and areas of opportunity	29	47.5
Identify for myself my strengths and areas of opportunity	26	42.6
Reflect to better understand how I learn	5	8.2
Receive a grade that will help me get a better grade point average	1	1.6
Total	61	100.0

Table 8
Usefulness of Self-Assessment

	Frequency	Percentage
If it would allow you to realize the contents you have retained	15	24.6
If it would allow you to realize the skills that you have developed	14	23.0
If it would allow you to reflect on how you learn in terms of strategies and methods	32	52.5
If it would allow you to compare yourself with your peers in the same group or class	0	0
Total	61	100.0

Table 9
Emotions during Self-Assessment

	Frequency	Percentage
Enthusiasm, confidence	27	44.2
Insecurity, anger	7	11.5
Indifference, disinterest	3	4.9
Surprise, uncertainty	24	39.3
Total	61	100.0

Table 10
Comfort with Self-Assessment

	Frequency	Percentage
Proposing myself the criteria for the self-assessment process	12	19.7
Criteria to be proposed by the course instructor or the institution	5	8.2
That the criteria are a co-construction between the teacher and me	38	62.3
That the criteria come from a certifying entity in the field	6	9.8
Total	61	100.0

Table 11
Teacher's Request after Self-Assessment

	Frequency	Percentage
Work on more exercises/review readings to reinforce my areas of opportunity	21	34.4
Pay more attention in class/participate more	10	16.4
I have not received specific instructions after analyzing my self-assessments	30	49.2
Total	61	100.0

Table 12
Alternative Usefulness of Self-Assessment

	Frequency	Percentage
Improving the curriculum (class topics)	6	9.8
Improving the teacher's didactics (the way they teach)	16	26.2
Improving instructional design (types of activities and course evaluation)	26	42.6
Redefining learning objectives	13	21.3
Total	61	100.0

Table 13
Help Provided by the Self-Assessment

	Frequency	Percentage
Reaffirming the learning goals you have	12	19.7
Reformulating and improving learning processes	22	36.1
Clarifying what and how you need to continue working to learn better	21	34.4
Clarifying the mechanisms for better learning	6	9.8
Total	61	100.0

Table 14
Results that the Self-Assessment Should Match

	Frequency	Percentage
The grade my professor gave me	20	32.8
What my peers think of my performance	2	3.3
What I think of myself, regardless of what other people think of me	39	63.9
Total	61	100.0

Based on the above data, three significant correlations between variables have been identified:

a. The first correlation is represented in Table 15, which shows that reflecting on what has been achieved and what needs to be achieved to reach the learning objectives significantly influences the occurrence of emotions such as enthusiasm, confidence, surprise, and uncertainty.

b. The second correlation is observed in Table 16, which tells us that, if the results of the self-assessment agree with what the participants think of themselves, regardless of what others think, it significantly influences the occurrence of emotions such as enthusiasm, confidence, surprise, and uncertainty.

c. The third correlation is shown in Table 17, which shows that the absence of specific requests after the self-assessment significantly influences the participants proactively to reformulate and improve their learning processes and clarify what and how they should continue working to learn better.

On the other hand, in the third questionnaire, where responses were obtained from only 25 people out of the initial 61, we inquired about the usefulness of self-assessment. In this sense, from the data obtained, Table 18 shows that most participants consider more useful to carry out a self-assessment approximately halfway through the course. Likewise, Table 19 shows a high perception of the usefulness of self-assessment for establishing, monitoring, and evaluating learning objectives. It is also perceived as useful for assessing their abilities as learners, identifying which strategies to use to promote their learning, as well as recognizing when and why these strategies should be used. Similarly, participants consider it useful for assessing their

motivation and monitoring their emotions with respect to the subject.

Secondly, the results of the qualitative analysis are presented, where, based on coding expected and unexpected categories, an analysis of the discourse is carried out. On the one hand, the unexpected categories were the identification of motivation and its importance, assessment of the importance of the contents, identification of the importance of emotions, knowledge about elements of self-assessment, assessment of the importance of the contents, identification of the importance of emotions, knowledge about the elements of self-assessment, evaluation of theimportance of self-assessment, and the identification and solution of errors. On the other hand, the expected categories based on the literature on metacognition ([Brown, 1987](#)) were identifying skills as a learner, recognition of learning strategies, identification of elements for problem-solving, establishment and monitoring of goals and objectives, and monitoring of learning.

Table 15

Association Between the Definition of Self-Assessment and the Emotions that Occur During Self-Assessment

	Value	Significance
Pearson Chi-Square	14.384a	0.026
Phi	0.486	0.026
Cramer's V	0.343	0.026

Table 16

Association Between the Emotions Presented During Self-Assessment and Results Obtained

	Value	Significance
Pearson Chi-Square	8.550a	0.073
Phi	0.374	0.073
Cramer's V	0.265	0.073

Table 17

Association Between the Help Provided by the Self-Assessment and What Teachers Request after Carrying Out These Processes

	Value	Significance
Pearson Chi-Square	13.813a	0.032
Phi	0.476	0.032
Cramer's V	0.336	0.032

Table 18

Time Point in the Course When Participants Consider that Self-Assessment Is Most Useful for Their Learning

	Frequency
In the first weeks of the course	6 de 25 people
Approximately halfway through the course	16 de 25 people
At the end of the course	10 de 25 people

Table 19

Usefulness of Self-Assessment as Perceived by the Participants

Self-Assessment Statements in Terms of Their Usefulness	Yes	No
Self-assessment during their course is useful for setting learning objectives.	25	0
The self-assessment carried out during their course is useful to choose which strategies they should implement to promote their learning.	25	0
Self-assessment during their course is useful to know when to implement certain strategies to promote their learning.	25	0
Self-assessment during their course is useful for reflecting on and assessing their skills as a learner.	24	1
Self-assessment during their course is useful for monitoring and evaluating the achievement of learning objectives.	24	1
Self-assessment during their course is useful for assessing their motivation.	24	1
The self-assessment carried out during their course is useful to know the reason why they had to implement certain strategies to promote their learning.	23	2
The self-assessment performed during their course is useful to monitor your emotions regarding the subject matter.	22	3

The expected categories that were identified most frequently were a) monitoring learning, b) identifying skills as a learner, and c) establishing and monitoring goals and objectives. As for the non-expected categories most frequently found were a) identification of motivation and its importance, b) valuation of the importance of content, and c) identification of the importance of emotions.

Regarding the monitoring of learning, it was identified that students were able to follow up on the learning they were obtaining by giving feedback to themselves or just reflecting on their performance. An example of this are comments such as: "I learned that I must keep a balance and have constant feedback to monitor my progress as a student" and "It is important to compare our degree of satisfaction between before and after carrying out a project because that way we can identify areas of opportunity and where to reinforce that knowledge."

It was also shown that, based on the self assessments, students identify and evaluate both the skills they possess and those that they need to develop or that they do not have as learners.

Figure 1
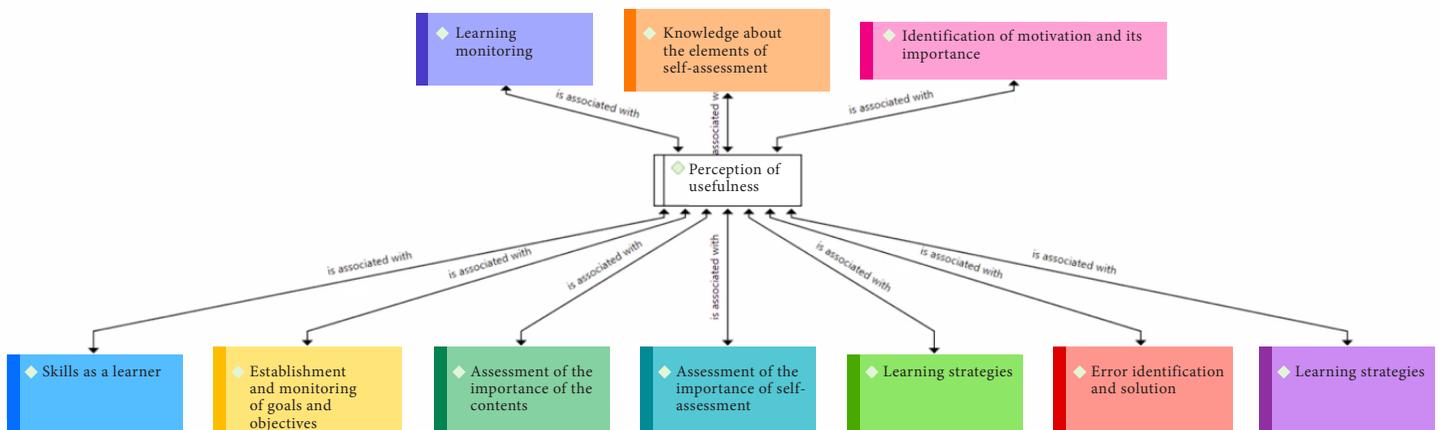
Categories Found in the Discourse Analysis

Figure 2
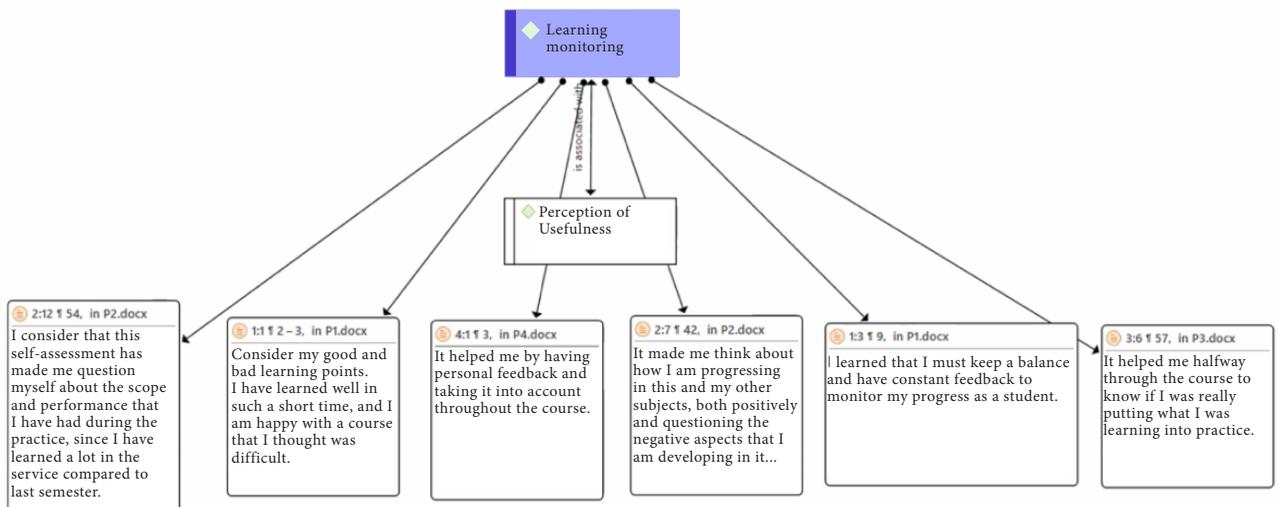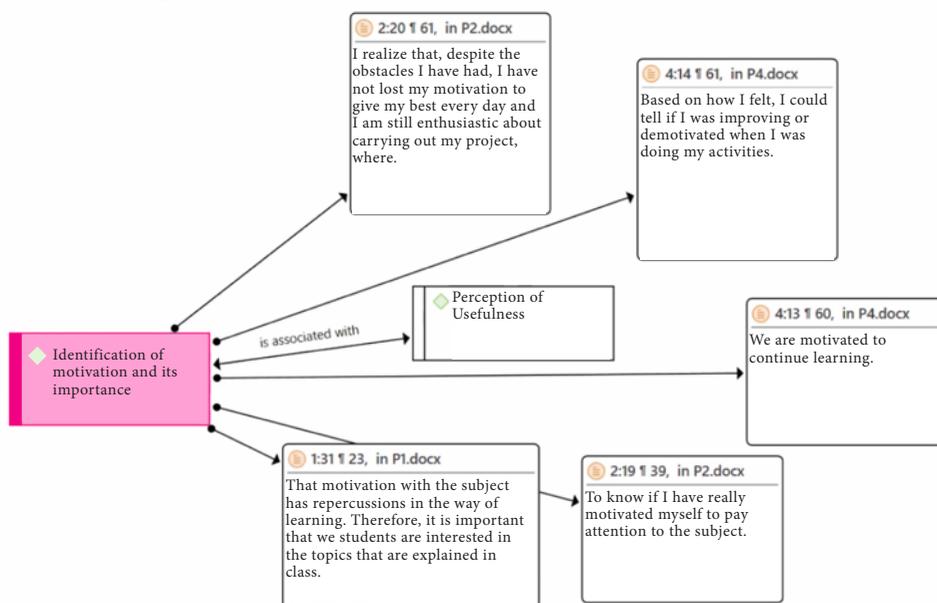
Sample Answers on Learner Monitoring

Figure 3

Sample Answers on Identifying Motivation and Its Importance

An example of this are comments such as "I need to be more creative when studying so that it is easier" and "I think it is important to do a self-assessment at the beginning so that students know their aptitudes and skills in general."

Likewise, it was found that the self-assessment was useful to make the students remember, value, or rethink the goals and objectives they had determined they wanted to achieve in the course. The above is demonstrated by the following comments: "I really have to establish my goals, set them and not let the negative factors external to the subject completely affect my performance and emotional stability" and "Yes, the most important is that despite the various situations that arise I must keep in mind the objectives set in order to achieve them."

As for emotions and motivation, both turned out to be significant elements that were questioned and analyzed based on the self assessment. This is shown in comments such as "I thought it was very good that we also focused on the emotional aspect since many times this area is the one that helps us or slows us down when we make a progress" and "that the motivation with the subject has repercussions in the way we learn, that is why it is important that we, the students, have interest in the topics that are explained in class."

In addition, from the self-assessments the students recognized the importance of the contents they were learning now as important aspects that would impact their academic and working life in the future. It is important to emphasize that the importance of the contents was not only found in one but in the three programs of the study. An example of how they identify this importance is with comments such as "this subject is valuable both for my work development and for what I want to do in my life" and "that the subject is important to be able to perform as well as possible in my work."

Discussion

Based on the results obtained from the research, the main conclusions are as follows:

- An area of opportunity to be explored in self assessment is for students to compare their degree of learning and achievement of objectives with that of their peers, since beyond competing, some could be tutors for others.
- In order to carry out a more effective self assessment, students must strengthen their self-confidence, since one of the highest expectations found when carrying out a self assessment process is that the teacher comments together with them on the mistakes and successes they had to confirm with a third party that they have really learned.
- It is necessary that teachers who integrate self assessment into their processes also incorporate activities or actions after self assessment, since without this plan, self assessment is reduced to being a mean of identifying what one perceives have learned, but without tools to achieve or complement those objectives or learning that were left pending.
- In general, self-assessment is useful for: a) setting, monitoring, and evaluating learning objectives, b) assessing skills as learners, c) choosing and knowing when and why to implement learning strategies, d) assessing motivation and monitoring emotions, e) assessing the importance of the contents for professional and working life, and f) identifying mistakes that have been made and their possible solutions. Also, the most useful self-assessment is approximately halfway through the course or at the end.
- To avoid erroneous expectations about self assessment, it is necessary to clarify from the beginning of the course what is the objective, intention, and instruments to be used.

Likewise, in order to enhance the usefulness that students perceive of self assessment and increase the use of this form of assessment in higher education, the following interventions are proposed; a) to plan, design, and develop activities that raise students' awareness of the importance of self-assessment, b) to identify the number and sequence of self-assessment instruments to be implemented, c) to incorporate elements on metacognition in each self assessment instrument, d) to inform teachers, directors, and administrators of the usefulness of carrying out self assessment processes for the entire school community, and e) to inform teachers, directors, and administrators of the usefulness of carrying out self assessment processes for the entire school community, and f) to inform teachers, directors, and administrators of the usefulness of carrying out self assessment processes for the entire school community, and e) to carry out self assessment protocols based on professional association groups.

In short, self assessment has been gaining ground in recent years, and one factor that influenced it was the pandemic, since it was a global event that transformed the educational context, making it necessary for institutions to rethink the evaluation mechanisms that have been used for years. It is also possible that, like the authors, other teachers have reflected on the abundant time load involved in traditional assessment and its real significance for students.

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