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DEEP LEARNING FROM A PARTICIPATORY ASSESSMENT APPROACH BASED ON STUDENT EMPOWERMENT: A CASE STUDY IN HIGHER EDUCATION

APRENDIZAGEM PROFUNDA A PARTIR DE UMA ABORDAGEM PARTICIPATIVA DE AVALIAÇÃO BASEADA NO EMPODERAMENTO ESTUDANTIL: UM ESTUDO DE CASO NO ENSINO SUPERIOR

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Marisol del Carmen Alvarez Cisternas*
*Universidad de las Américas, Facultad de Educación, Dirección de Desarrollo Docente de la Vicerrectoría Académica, Santiago, Chile
Orcid: https://orcid.org/0000-0002-1418-9524
maalvarezc@udla.cl

Margarita del Rosario Yau Flores**
**Tecnológico de Monterrey, Escuela de Humanidades y Educación, Centro de Desarrollo Docente e Innovación Educativa, Vicerrectoría de Desarrollo de la Facultad, Monterrey, México
Orcid: https://orcid.org/0000-0003-1344-4703
margarita.yau@tec.mx

Myrna Lilian Alvarez Castillo**
**Tecnológico de Monterrey, Escuela de Humanidades y Educación, Centro de Desarrollo Docente e Innovación Educativa, Vicerrectoría de Desarrollo de la Facultad, Monterrey, México
Orcid: https://orcid.org/0009-0006-1601-8397
myrna_alvarez@tec.mx

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Abstract
This study examines the impact of assessment strategies that foster deep learning within a transformational model focused on student empowerment. Deep learning is understood as students' ability to build meaningful understanding, think critically, and transfer knowledge across contexts. Transformational assessment shifts attention from summative judgment to practices that promote continuous learning, reflection, and active participation. Student empowerment involves learners taking responsibility for selecting evidence, interpreting expectations, and using analytical rubrics to guide their performance. A qualitative–descriptive intrinsic case study was conducted with 20 university students participating in a learning experience based on transformational assessment. Data were collected from reflections, discussions, and analyses of assessment tasks using an inverse planning model and analytical rubrics, then coded thematically. Findings show that students strengthened critical and reflective skills by questioning and analyzing their own assessment

Resumo
Este estudo analisa o impacto de estratégias de avaliação que promovem a aprendizagem profunda dentro de um modelo transformacional centrado no empoderamento estudantil. A aprendizagem profunda envolve a construção de compreensão significativa, pensamento crítico e aplicação flexível do conhecimento em diferentes contextos. A avaliação transformacional desloca o foco da avaliação somativa para práticas que incentivam a aprendizagem contínua, a autorreflexão e a participação ativa. A pesquisa adotou uma abordagem qualitativa–descritiva, por meio de um estudo de caso intrínseco com 20 estudantes universitários envolvidos em uma experiência formativa baseada em avaliação transformacional. Os dados foram coletados a partir de reflexões, discussões e análises de tarefas avaliativas utilizando planejamento inverso e rubricas analíticas, sendo posteriormente codificados tematicamente. Os resultados mostram que os estudantes fortaleceram habilidades críticas e reflexivas ao analisar suas próprias tarefas e identificar

tasks. Through inverse planning, they identified relevant evidence and exercised autonomy in assembling it according to rubric criteria. These strategies allowed them to move beyond memorization toward deeper understanding, critical analysis, and problem solving. The study suggests that empowerment-oriented assessment promotes autonomy and higher-order thinking, supporting efforts to enhance teaching quality. It demonstrates that assessment can become a transformative learning experience, positioning students as active and reflective agents in their educational development.

Keywords: Students. Learning. Assessment. Participation. Collaboration. Empowerment. Critical Thinking. Analysis.

evidências necessárias por meio do planejamento inverso, exercendo autonomia na organização dessas evidências. As estratégias favoreceram a superação da memorização e a construção de compreensão profunda, análise crítica e resolução de problemas. O estudo indica que avaliações orientadas ao empoderamento promovem autonomia e pensamento de ordem superior, demonstrando que a avaliação pode tornar-se uma experiência transformadora que posiciona os estudantes como agentes ativos e reflexivos de sua aprendizagem.

Palavras-chave: *Estudantes. Aprendizagem. Avaliação. Participação. Colaboração. Empoderamento. Pensamento Crítico. Análise.*

1 INTRODUCTION

In recent years, we have witnessed a significant shift in educational paradigms, leading to a reconfiguration of teaching and learning strategies across various academic levels. In the context of higher education, this phenomenon manifests through the emergence of multiple educational modalities—virtual, hybrid, and face-to-face—and underscores the urgent need to update pedagogical and evaluative practices within the classroom. The goal is to motivate students to take an active role in their educational process and, consequently, in the evaluative process, transforming the instructor into a guide or facilitator of student learning processes.

Assessment in higher education plays a fundamental role in validating student learning and progress. It not only measures the level of understanding of concepts but also serves as a driver for continuous improvement, both for students and instructors. In a learning environment that values innovation and critical thinking, assessment becomes an indispensable tool for identifying areas of improvement, adjusting pedagogical strategies, and ensuring that established educational objectives are being met. Furthermore, it fosters self-assessment and self-reflection, essential skills in the professional and personal development of students.

Thus, the need for a paradigm shift in educational assessment becomes evident, representing a significant turning point in how student learning is conceived and practiced

in higher education. Indeed, in some social constructivist educational models that promote active student participation, as is the case in the present study, such participation diminishes precisely at the moment of assessment, given that traditional, unilateral assessment procedures are implemented, where the instructor solely evaluates and makes decisions, minimizing the much-anticipated active participation of students.

Consequently, a significant issue arises from the dichotomy between what is declared and what is effectively done in the teaching-learning process, as assessing deep learning in higher education aims to prepare students not only to acquire knowledge but also to analyze, apply, compare, evaluate, make decisions, and create from it. Deep learning refers to an educational process in which students not only memorize information but also develop a meaningful understanding of concepts and skills. This type of learning allows for connecting new knowledge with prior experiences, fostering critical thinking and problem-solving abilities. Instead of a superficial approach, where the objective is merely to pass an exam, deep learning invites active and reflective participation, promoting more effective and lasting assimilation of content that endures over time.

Overall, this article aims to analyze the impact of implementing assessment strategies that promote deep learning in students through a transformational model grounded in active participation and student empowerment.

2 THEORETICAL RATIONALE

Educational assessment remains essential within the educational realm, especially in higher education. Although it represents a fundamental part of it, it often faces criticism for being unilateral and insufficiently aligned with expected outcomes; moreover, it does not always allow for active student participation. Despite being considered a key tool for facilitating learning for a long time, it continues to face challenges both in its design and implementation; this issue is notably common among university instructors, who often possess more disciplinary competencies than pedagogical ones.

In university education, educational assessment should not be limited to measuring data memorization but should become a tool that fosters analysis, synthesis, and evaluation, thereby promoting deep learning. According to Biggs and Tang (2011), tasks that require deep understanding and application of knowledge facilitate students in

developing critical and reflective skills essential to face real-world challenges. When assessments are designed to mobilize deep learning, requiring critical thinking in the process, students not only retain information but also learn to relate concepts and solve complex problems, enriching their learning process. An effective assessment must be aligned with the expected learning outcomes. When tasks, activities, and assessment criteria are coherently designed, students better understand what they need to achieve and how to assess themselves.

The need to transition to new assessment methodologies has a direct impact on educational quality. By focusing on formative assessment processes based on competencies and learning outcomes, deeper and more meaningful learning is promoted. Transitioning to assessment models focused on student empowerment not only accumulates knowledge but also develops critical skills and competencies essential in today's labor market. This comprehensive approach also allows for continuous feedback, which is fundamental for student growth and development. As a result, a culture of continuous, participatory, reflective, deep, and strategic learning is fostered, where assessment becomes a tool to improve teaching and learning, rather than being seen merely as a grading mechanism.

Consequently, many institutions have begun to make significant changes toward educational models that are exclusively student-centered (Al-Mwzaiji & Alzubi, 2022). Students now actively participate from the initial stages to the final evaluations throughout the entire formative process; this approach promotes transversal skills such as effective communication and collaborative work, as well as engagement with their own learning processes.

This increased involvement requires clarity regarding the purpose behind each assessment, as well as consistency with what has been previously taught (Ibarra-Saiz et al., 2020). This aspect positively influences not only the development of critical skills but also fosters active reflections from students, while driving instructors toward better training in evaluative pedagogical methodologies.

Thus, we conceptualize assessment, moving away from its traditional image solely linked to academic closure, to truly become a useful tool aimed at identifying errors or achievements accumulated throughout the entire formative journey—fulfilling clearly pedagogical functions where we emphasize effective continuous evaluations (Ibarra-Saiz

& Rodríguez-Gómez, 2019)—allowing for constant adjustments in response to specific needs observed in situ through continuous feedback, directed both toward instructors but primarily focusing on the students themselves, who will assume leading roles, gradually advancing toward responsible self-management (Förster, 2017; Al-Mwzaiji & Alzubi, 2022).

Therefore, these transformations require reconsidering traditional approaches solely associated with knowledge acquisition, prioritizing the development of complex capabilities adaptable to variable contexts, whether professionally or in other areas (Tai et al., 2017), favoring the resolution of present everyday problems (Asencio & Ibarra, 2020).

From this renewed perspective on assessment, the strengthening of metacognition, self-assessment, and peer assessment among students is also expected, which is relevant in contemporary dynamics, fostering personal autonomy and progressively evaluating performances, supported by criteria applicable to the diversity of educational scenarios and contexts; constituting the central core of the transformation democratically promoted, integrating an enriching experience, making intelligent decisions that would contribute to the collective solidarity construction, generating respectful and negotiative dialogue, guiding us toward a substantial common goal, socially committed and opening a necessary space of trust for the exchange of ideas without fear of judgment (Castro & Moraga, 2020).

Evidently, adopting inclusive and neurodiverse formats will allow for better cognitively grounded collective connections; enhancing critical awareness, with situated learning, since the current context demands different demands, giving profound meaning to new ways of learning and jointly evaluating (Morales et al., 2021).

Furthermore, the assessment of deep learning in higher education is an essential component that not only measures knowledge but also promotes the integral development of students, preparing them to face the challenges of the labor market and contribute significantly to society. As we advance in analyzing assessment methodologies and tools, it is crucial to keep in mind the importance of this student-centered approach and their learning.

The challenge of moving toward renewed assessment approaches for student learning requires the implementation of various methodologies that adapt to the specific

needs of students and the pedagogical objectives of institutions. In this way, formative assessment, which focuses on the learning process rather than the final outcome, provides continuous feedback to students, helping them identify their strengths and areas for improvement. This methodology allows instructors to adjust their teaching strategies and offer additional support when necessary.

Among the techniques used in formative assessment are diagnostic tests, class discussions, and group activities, which foster collaborative and active learning. Alongside this, summative assessment, conducted at the end of an instructional period, aims to measure the level of learning achieved by students. This methodology is crucial to determine if the learning objectives established at the beginning of the course have been met. Final exams, projects, and presentations are common examples of summative assessment. Although its focus is more outcome-centered, it is important for instructors to use the data obtained to reflect on the effectiveness of their teaching methods and the adequacy of the curriculum.

Similarly, competency-based or learning outcomes assessment, ideally in real and authentic contexts, is based on students' ability to apply knowledge and skills in real situations. This methodology seeks to value not only what students know but also how they use that knowledge in practical and authentic contexts. It involves identifying specific learning outcomes, which are measured through tasks and projects that simulate real-world scenarios. This methodology is especially relevant in higher education, where graduates are expected to face complex challenges in their future professions.

Furthermore, incorporating authentic and contextualized tasks is key to connecting learning with reality. Herrington et al. (2014) argue that solving real problems, interdisciplinary projects, and simulations motivate students to apply their knowledge in relevant contexts, promoting meaningful and lasting learning. These activities allow students to experience situations similar to those they will face in their professional lives, developing critical thinking, collaboration, and creativity skills. Additionally, by working in authentic contexts, students perceive greater relevance in their learning, which increases their engagement and intrinsic motivation. The integration of these tasks also favors knowledge transfer, an essential aspect for learning to be truly deep and useful in daily and professional life.

Consequently, many institutions have begun to make significant changes toward student-centered educational models (Al-Mwzaiji & Alzubi, 2022). Students now actively participate from early stages to final assessments throughout the entire learning process; this approach promotes transversal skills such as effective communication, collaborative work, and engagement with their own learning processes.

This increased involvement requires clarity regarding the purpose behind each assessment, as well as consistency with what has been previously taught (Ibarra-Saiz et al., 2020). This aspect positively influences not only the development of critical skills but also fosters active reflection among students, while encouraging educators toward better training in didactic assessment methodologies.

Thus, we conceptualize assessment, leaving behind its traditional image solely linked to academic closure, to become a truly useful tool aimed at identifying errors or achievements accumulated throughout the entire learning journey—fulfilling clearly pedagogical functions where we emphasize effective continuous evaluations (Ibarra-Saiz & Rodríguez-Gómez, 2019)—allowing constant adjustments in response to specific needs observed in situ through continuous feedback, directed both toward teachers but primarily focusing on the students themselves, who will assume leading roles, gradually advancing toward responsible self-management (Förster, 2017; Al-Mwzaiji & Alzubi, 2022).

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From this innovative perspective of assessment, it is also expected to strengthen metacognition, self-assessment, and peer-assessment among students, which is relevant in contemporary dynamics, fostering personal autonomy and progressively evaluating performance, supported by criteria applicable to the diversity of educational scenarios and contexts; constituting the central core of the transformation democratically promoted, integrating an enriching experience, making intelligent decisions that would contribute to the collective construction of solidarity, generating respectful and negotiable dialogue, guiding us toward a substantial common goal, socially committed and opening a

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Evidently, adopting inclusive and neurodiverse formats will allow for better cognitive connections based on collective foundations; enhancing critical awareness, with situated learning, since the current context demands different requirements, giving profound meaning to new ways of learning and jointly assessing (Morales et al., 2021).

Furthermore, the assessment of deep learning in higher education is an essential component that not only measures knowledge but also promotes the integral development of students, preparing them to face the challenges of the labor world and contribute significantly to society. As we advance in analyzing assessment methodologies and tools, it is crucial to keep in mind the importance of this student-centered approach and their learning.

The challenge of advancing toward renewed student learning assessment approaches requires the implementation of various methodologies that adapt to the specific needs of students and the pedagogical objectives of institutions. In this way, formative assessment, which focuses on the learning process rather than the final result, provides continuous feedback to students, helping them identify their strengths and areas for improvement. This methodology allows educators to adjust their teaching strategies and offer additional support when necessary.

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In conclusion, the use of formative assessments and constructive feedback is fundamental to enhance meaningful learning. Black and Wiliam (2018) argue that continuous assessment allows students to identify their strengths and areas for improvement in real time, fostering self-regulation and motivating them to deepen their understanding. Timely and specific feedback helps students adjust their study strategies and consolidate knowledge, creating a constant improvement cycle that favors deep learning.

Feedback should not be limited to pointing out errors but should offer clear guidance for improvement, motivating students to reflect on their own cognitive and emotional processes. This approach fosters a growth mindset, where mistakes are seen as learning opportunities, not as definitive failures. Therefore, formative assessment becomes a dynamic process that accompanies and enriches learning, rather than just a moment of final grading.

Encouraging self-assessment and peer assessment is another powerful strategy to deepen the learning process. Andrade and Cizek (2010) highlight that these practices develop metacognitive skills such as self-reflection, self-awareness, and responsibility for one's own learning process. Self-assessment allows students to identify their own goals, recognize their progress, and detect areas for improvement, promoting an active and

conscious attitude. Peer assessment, on the other hand, fosters collaboration, respect for others' opinions, and the ability to offer and receive constructive criticism. These practices contribute to creating a learning culture where students become active agents of their education, rather than passive recipients of information. Additionally, they strengthen social and ethical skills, which are fundamental in any profession.

The use of clear rubrics and evaluation criteria oriented toward understanding is essential to ensure transparency and fairness in the assessment process. Andrade and Du (2007) note that when students are aware of the evaluation criteria in advance, they better understand what is expected of them and how they can achieve a deep level of understanding. This not only increases their motivation but also provides them with concrete guidance to direct their efforts and improve their performance.

The rubric acts as a map that guides the learning process, allowing students to self-assess and adjust their strategies based on established standards. Furthermore, teachers can use these tools to provide specific feedback focused on key aspects of knowledge and skills, thus promoting a more just, reflective, and formative assessment process.

Using clear and detailed rubrics allows students to understand expectations and assess their own progress (Pool Cibrián & Martínez Guerrero, 2013). Self-assessment, guided by these criteria, strengthens personal responsibility and the perception of control over one's own learning.

Peer assessment allows for reflection and strategy adjustment, promoting self-awareness and motivation (Groeneveld et al., 2020). Additionally, the use of oral feedback alongside the rubric has been shown to improve performance and reduce grade disputes (Barney et al., 2023).

Thus, the objectives of assessing deep learning in higher education are multiple and encompass everything from measuring acquired knowledge to promoting essential skills for students' future professions. Among the most relevant objectives are validating meaningful learning, ensuring that students can understand and apply what they have learned effectively; fostering academic self-confidence and self-efficacy, helping students recognize their achievements and mistakes, as well as strengthening intrinsic motivation; developing critical and reflective skills by encouraging students to question, analyze, and reflect on their learning; promoting valuable information about the teaching delivered to students, considering their strategies and impact. Therefore, promoting

participatory assessment processes directly contributes to consolidating deep learning in students.

In conclusion, ensuring that students, through implemented assessment strategies, achieve academic self-confidence and self-efficacy as a result of deep learning involves creating conditions for them to consciously perform effectively in specific academic tasks (Bandura, 1997), demonstrating strong positive correlations with academic performance, reduced anxiety, greater persistence, and better learning strategies (Greene et al., 2014; Honicke & Broadbent, 2016).

Conceptually, participatory assessment is defined as a process in which students actively participate in evaluating their own learning and that of their peers. Unlike traditional assessments, which are often one-directional and teacher-centered, participatory assessment promotes open dialogue in the classroom, where students can express their opinions, reflect on their own performance and that of their peers, and contribute to the construction of evaluation criteria. This approach not only enriches the educational process but also allows students to develop critical skills such as self-assessment and peer evaluation.

In this way, participatory assessment presents itself as a valuable methodology to foster both self-confidence and self-efficacy in students. By involving students in their own assessment process, they are given an active role in their learning, allowing them to reflect on their strengths and areas for improvement. This involvement not only contributes to deeper learning but also strengthens their self-esteem and sense of competence. Promoting metacognition through assessment using strategies such as guided questions ("What do I already know? How did I solve it before?"), concept maps, semantic networks, thinking aloud, or lists for regulating thinking improves planning, monitoring, and reviewing learning (Carr, 2002; Wenden, 1991; King, 1991).

Recent studies show that using language models (LLMs) to guide post-class reflection increases student self-confidence and improves performance in subsequent exams, that is, guided and mediated reflection (Kumar et al., 2024). Asking questions like: "What did I learn? What challenges did I face? How can I improve?" turns assessment into a metacognitive and motivating experience. If we add to all of the above the use of technologies, it is possible to access computerized adaptive assessment, which adjusts items according to individual performance, offering timely and individualized

feedback, favoring learning regulation and preventing premature blockages (Carless et al., 2023), all of which is more in line with traditional procedures, which of course is not exempt from promoting active student participation in their assessment processes.

Therefore, participatory assessment has consolidated itself as an innovative approach in the educational field, especially in higher education, where the goal is not only to measure learning but also to involve students in the assessment process. This method allows students to take an active role in their own education, fostering a sense of belonging and responsibility toward their learning.

Implementing participatory assessments in the classroom has multiple benefits. First, it fosters students' self-confidence, as it allows them to recognize their own abilities and achievements through reflection on their performance. By actively participating in assessment, students feel more empowered and confident, which can translate into higher academic performance.

Additionally, this type of assessment promotes self-efficacy, as students can tangibly see the impact of their efforts and strategies on their learning. The ability to set realistic and achievable goals, while assessing their progress, reinforces their belief in their own abilities.

Another key benefit is the improvement in communication and teamwork. Participatory assessment not only involves students in evaluating their own learning but also allows them to collaborate with their peers, strengthening interpersonal relationships and creating a more cohesive and supportive learning environment.

There are various practices that can be implemented in the classroom to carry out effective participatory assessment. One of them is the creation of co-designed rubrics, where students participate in developing the evaluation criteria. This not only ensures that the criteria are relevant and understandable to them but also helps them have a better understanding of what is expected in their performance.

Another practice is conducting self-assessments and peer assessments. Students can reflect on their own work and provide constructive feedback to their peers, promoting collaborative learning. For instance, in a group project, each member can evaluate both their own contribution and that of their peers, facilitating the identification of strengths and areas for improvement.

Promoting deep learning in higher education requires designing participatory assessments that go beyond rote memorization, integrating strategies that foster critical thinking, self-regulation, self-confidence, self-efficacy, and the contextualized application of knowledge, aiming to make learning meaningful and truly significant. This approach aims to develop students capable of facing the challenges of the 21st century with analytical, reflective, and creative skills, among others.

Authentic tasks involve applying knowledge in real contexts or simulations close to professional practice: projects, case studies, simulations. This approach promotes deep understanding, intrinsic motivation, and self-confidence through real success in relevant tasks (Brown, 2015; Karim et al., 2018). At the university level, it is recommended to include public presentations, mock conferences, or projects involving really problem-solving (Clerici et al., 2024).

The aim of this research is to describe the impact of implementing assessment strategies that promote deep learning from a transformational assessment model based on student empowerment.

3 RESEARCH METHOD

The research was conducted through an intrinsic case study, following the approach outlined by Sandín (2003). Its objective is to describe the effect of implementing assessment strategies aimed at deep learning, using a transformational assessment model grounded in student empowerment. This was done through inquiry and analysis from the perspective of students enrolled in the Diploma in Educational Assessment, who took the course on authentic assessment and effective feedback during the second semester of 2024.

A purposive sample of 20 students who actively participated in the course was selected. All were professionals from various disciplinary fields and academic modalities; additionally, they received scholarships to attend the diploma program while teaching during that academic period. Data collection took place in November 2024 at the end of the course. First, the ALE–Q Questionnaire – Learning Assessment Climate and Empowerment in Higher Education developed by Ibarra-Saiz and Rodríguez-Gómez (2019) – EVALfor Research Group (SEJ509) – Evaluation & Assessment in Training

Contexts was administered. This questionnaire specifically considers seven evaluative dimensions, from which four were selected with their corresponding indicators linked to deep learning: D2 Self-regulation; D3 Participation; D5 Empowerment; D6 Strategic Learning; and D7 Transfer of Learning. The items are structured on a five-point Likert scale:

1: Strongly disagree

2: Disagree

3: Agree

4: Strongly agree

0: Not applicable

Additionally, qualitative information was collected through three guiding questions directed to the students using the Google Forms digital platform. After providing informed consent, students voluntarily shared their opinions and could respond as many times as they wished. They were informed that their contributions were related to the continuous improvement of the course and would not affect their academic performance. The interviews were transcribed verbatim, and the analysis was conducted inductively using the constant comparative method proposed by Glaser and Strauss (1967).

At the end of the course, students were asked to respond to the following questions:

What can you say about the assessment procedures worked on in groups during the course?

What impact did they have on you?

How did you experience this process?

For the analysis, descriptive and thematic coding methods were applied using Atlas.ti version 25 software. The thematic analysis methodology allowed the identification of analytical trends in the data through coding, which helped reveal emerging themes facilitating the understanding of the technical implementation of the support initiative.

4 RESEARCH FINDINGS, ANALYSIS, AND DISCUSSION

Based on the quantitative analysis of student responses, Table 1 illustrates the average ratings across various evaluative dimensions. The lowest-rated areas pertain to: Reviewing and evaluating peers' assignments and practical activities (2.8); opportunities to comment on the post-assessment process and consider student suggestions (2.7); considering errors made by students to implement improvements (2.6); correcting personal and peer assignments following evaluative criteria and guidelines (3.0). Conversely, the highest-rated indicators are: Contributions of evaluative tasks to reflection, self-analysis, and critical learning awareness (3.7); access to evaluative tasks promoting decision-making and problem-solving (3.6); opportunities for team collaboration and peer interaction (3.6); enhancement of problem-solving skills and self-confidence through assessment (3.5); strengthening critical skills and access to instructions, procedures, and evaluation guidelines (3.5).

Table 1

Average Responses by Analyzed Dimensions – ALE–Q Questionnaire

Dimension	Indicator	Average Response
D2	Evaluative tasks required decision-making, finding solutions, and identifying perspectives	3.4
D2	Evaluative tasks helped reflect strengths, weaknesses, opportunities, and threats in learning	3.7
D2	Evaluative tasks required decision-making, finding solutions, and identifying perspectives	3.6
D3	Able to self-assess own work, activities, and practices	3.3
D3	Able to review and evaluate peers' work, activities, and practices	2.8
D3	Able to comment on the evaluation process and consider suggestions	2.7
D5	Enhanced problem-solving skills	3.5
D5	Increased self-confidence	3.5
D6	Peer review of work helped improve learning	3.0
D6	Access to evaluation instruments before assessments was valuable	3.5
D6	Errors made helped improve work and learning	2.6
D6	Corrected own and peers' work using evaluation criteria and guidelines	3.0
D7	Strengthened critical skills	3.5
D7	Worked and contributed in teams to produce joint results	3.6

Source: Author's own elaboration (2025)

From the individual interviews conducted with voluntarily participating students, four major descriptive categories emerged, encompassing 39 meaningful units. These categories are:

Table 2

Descriptive Analytical Categories

Descriptive Categories	**Description**	**Number of Meaning Units**	**"Perception of participants"**
Category 1: Skill Development.	Offering evaluative activities and tasks that help students acquire specific skills, thereby increasing their competence and self-confidence.	10	"…I have learned evaluation techniques and instruments that I did not know before, so I have acquired new information…" "…clear and useful information to understand evaluative processes and develop instruments…" "…reflection, data analysis, reformulation, and innovation…"
Category 2: Promotion of Self- and Peer-Assessment.	Encouraging students to reflect on their own and their peers' learning and performance, aiding in identifying strengths and areas for improvement	9	"…we have not participated much in evaluative processes, since we did not improve criteria or evaluation guidelines. Nevertheless, learning through the evaluation itself has allowed me to critically analyze my teaching practice…" "…in the analysis and reception of comments, continuous learning…"
Category 3: Constructive Feedback.	Providing feedback that not only points out areas for improvement but also recognizes and validates students' successes and efforts.	12	"…guiding myself by the rubric has allowed me to frame my answers and redefine learning… It helps better understand the concepts of work and education for all those prepared to acquire and learn more, as in my case as a nurse…" "…there was always access to feedback prior to

			submitting an assignment, which led to good results in subsequent submissions; having more than one opportunity to make changes helps…"
Category 4: Establishment of Realistic Goals.	Assisting students in setting clear and achievable goals that allow them to measure progress and celebrate achievements.	8	"…challenging myself to adopt innovative strategies that facilitate learning processes…" "…yes, it has allowed me to become familiar with a quite comprehensive evaluation scheme applicable to our activities with students…"

Source: Author's own elaboration (2025)

Based on the analysis of the average responses in the student participation dimension of the ALE-Q Questionnaire and the descriptive categories generated alongside the participants' perceptions, the findings reinforce those of Al-Mwzaiji and Alzubi (2022), emphasizing the need to promote deep learning in students through their involvement in evaluation processes.

This involvement fosters a set of transversal skills such as effective communication, collaborative work, and commitment to their own learning processes. These aspects align with a category that emerged from the analysis: the development of complex skills in students, critical skills, and encouragement of active reflection by students, in accordance with Ibarra-Saiz et al. (2020). This approach promotes students taking leading roles, gradually advancing toward responsible self-management (Förster, 2017; Al-Mwzaiji & Alzubi, 2022).

Consequently, the results of promoting self-regulation, participation, empowerment, strategic learning, and transfer of learning confirm the findings of Tai et al. (2017) and Asencio and Ibarra (2020), which prioritize deep learning assessment procedures that develop in students' complex capabilities adaptable to variable contexts, whether professionally or in other areas, favoring the resolution of present daily problems.

Additionally, based on student perceptions, categories such as the promotion of self-assessment and peer assessment, constructive feedback, and the establishment of realistic goals emerge. These align with the findings of Castro and Moraga (2020)

regarding the need to renew evaluative procedures, strengthen metacognition, and encourage self-assessment and peer-assessment among students. This is particularly relevant in contemporary dynamics, fostering personal autonomy and progressively evaluating performances supported by criteria applicable to diverse educational scenarios and contexts.

The findings confirm the conclusions of Black and Wiliam (2018) regarding the use of formative assessments and constructive feedback to enhance meaningful learning. As indicated by the results and student perceptions, timely and specific feedback helps them adjust their study strategies and consolidate their learning.

Although feedback should not be limited to pointing out errors, but should also provide clear guidance for improvement, in this study, it appeared as a diminished dimension that should be addressed in future studies. However, the formative assessment conducted during the process, prior to the summative submission, was considered a valuable exercise by the students, contributing to their advancement with greater certainty.

Another confirmed aspect from the results is the contribution of Andrade and Cizek (2010) regarding the promotion of self-assessment and peer-assessment as powerful strategies to develop metacognitive skills, such as self-reflection, self-awareness, and responsibility for one's own learning process.

Similarly, the use of precise instructions, clear rubrics, and evaluation criteria aligns with the approaches of Pool Cibrián and Martínez Guerrero (2013) and Andrade and Du (2007). Knowing in advance the evaluative procedures, what is expected as evidence, and progressing according to an evaluative guideline, such as analytical rubric, allows students to better understand and achieve a deeper level of comprehension. This not only increases their motivation but also provides them with concrete guidance to direct their efforts and improve their performance.

The rubric acts as a map guiding the learning process, enabling students to self-assess and adjust their strategies based on established standards. Additionally, teachers can use these tools to provide specific feedback focused on key aspects of knowledge and skills, thus promoting a more fair, reflective, and formative evaluation process.

Therefore, the objectives of deep learning assessment in higher education are multiple and encompass measuring acquired knowledge, promoting essential skills for

students' future professional lives, validating meaningful learning, fostering self-confidence and academic self-efficacy, developing critical and reflective skills, and providing valuable information about the teaching delivered to students. Consequently, promoting participatory evaluation processes directly contributes to consolidating deep learning in students.

The results align with the incorporation of authentic and contextualized tasks as key to connecting learning with reality. Herrington et al. (2014) found that students agreed that addressing real problems in their own subject area, such as high student failure rates, allowed them to apply their knowledge in real and timely contexts.

From the students' perspective, active participation in the evaluation process had a positive effect on their learning, fostering collaboration and mutual support. This confirms the assertions of Ponce-Aguilar and Marcillo-García (2020). The findings of Gómez and Quezada (2020) are also verified, as students became active agents in their own learning, assuming responsibilities, negotiating disagreements, and being autonomous in meeting the required evidence.

The results also align with the proposals of Johnson and Johnson (2018) regarding the need to establish formal evaluation procedures that include clear instructions, correction guidelines, rubrics, and a variety of evaluative tasks, so that students collaborate based on learning objectives.

5 CONCLUSIONS

The benefits of promoting deep learning in university students are diverse. Firstly, such learning improves academic performance, as students who thoroughly understand the content tend to achieve better grades and show greater interest in their discipline. Secondly, this learning favors the development of critical thinking and problem-solving skills, and fundamental capabilities in the contemporary work environment. Additionally, it fosters self-efficacy; that is, students who feel competent in applying their knowledge are more inclined to face challenges and actively participate in their educational process.

Another fundamental aspect benefited by promoting evaluations centered on deep learning is the development of advanced cognitive skills. In higher education, students are expected not only to acquire theory but also to develop practical and transversal

competencies such as effective communication, group collaboration, and adaptation to new contexts. These types of learning enable the formation of more comprehensive and versatile professionals capable of combining their knowledge to make informed decisions and innovate with effective solutions within their professional field.

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All authors contributed equally to the development of this article.

Data availability

All datasets relevant to this study's findings are fully available within the article.

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