Self-regulation and strategies of learning in students' workers in continuing studies[1]

Autorregulación y estrategias de aprendizaje en estudiantes trabajadores en estudios continuados

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Abstract

The purpose of this research is to demonstrate self-regulation and learning strategies in worker students. A sequential mixed research methodology is used, in whose quantitative stage the MSLQ questionnaire is applied in its learning strategies construct to 65 engineering students from a continuing studies program. In the qualitative stage, the 16 top-ranked students are selected and semi-structured interviews are conducted to deepen their learning strategies. It is concluded that strategies related to elaboration and metacognition, organization and seeking help are relevant factors in their self-regulatory processes to make work and study compatible. The results also highlight the social factor of learning and the applicability of learning to work. It is expected to provide important information on the strategies used to guide coherent and dialogic educational processes with the needs of students who reconcile academic and work life.

Keywords: university student, self-learning, lifelong learning, higher education.

Resumen

El propósito de esta investigación es demostrar las estrategias de autorregulación y aprendizaje en estudiantes trabajadores. Se utiliza una metodología de investigación mixta secuencial, en cuya etapa cuantitativa se aplica el cuestionario MSLQ en su constructo de estrategias de aprendizaje a 65 estudiantes de ingeniería de un programa de estudios continuados. En la etapa cualitativa, se seleccionan los 16

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estudiantes mejor evaluados y se realizan entrevistas semiestructuradas para profundizar en sus estrategias de aprendizaje. Se concluye que las estrategias relacionadas con la elaboración y la metacognición, la organización y la búsqueda de ayuda son factores relevantes en sus procesos de autorregulación para compatibilizar trabajo y estudio. Los resultados también destacan el factor social del aprendizaje y la aplicabilidad del aprendizaje al trabajo. Se espera aportar información importante sobre las estrategias utilizadas para orientar procesos educativos coherentes y dialógicos con las necesidades de los estudiantes que concilian la vida académica y laboral.

Keywords: estudiante universitario, autoaprendizaje, aprendizaje permanente, enseñanza superior.

Introduction

Normally, self-regulated students have goal-oriented behaviors and strategies for the expected learning achievement. This is because they are proactive, they monitor and reflect on the progress made, aware of their abilities and limitations. (Rosario et al., 2014). In this way, from the current perspective, studies warn the need for the student to become an autonomous being. To know his cognitive processes, learn to control his learning process and not limit himself to acquiring the knowledge provided by others. However, you must manage and build it personally, based on your previous experience. Here, the role of training is to provide you with the tools and monitoring necessary to facilitate this learning process.

Based on the above, university teaching must focus on the student: it is the starting point, the center, and the end, and it must help the new learner learn and think (Torrano et al., 2017). Thus, knowing the students and focusing on their needs is relevant to reorient the educational processes and provide feedback on their academic trajectories, considering their diverse realities.

In this area, it is of particular interest to delve deeper into a sector of students' characteristic of the university sector that is increasingly increasing, and which consists of working students. These students must often reconcile aspects of work, family, and academic life, with complexities that differentiate them from a traditional group of university students. Despite the growing number of students who work and study and the adjustments that have been made in the modalities of teaching classes for these students. There is still a lack of knowledge of their work, balance, and learning strategies.

Very few studies have addressed this problem, which points to different contexts and often responds to a regional or country reality. However, in some cases students go to work first because there is an early job offer for which a professional degree is not needed (Busso and Pérez, 2015). In other cases, as happens in Chile,

there is a delayed entry to university education, from a group of students who already have a technical degree and after a few years of work seek to complement it with a university professional degree.

Research with this type of students, who are also workers, is currently very scarce in the field and their educational process is fraught with challenges that differentiate it from a traditional university student. This student, who on average is over 30 years old, has an amount of knowledge of the professional practice that must be articulated with the theory of educational process; They have knowledge and experience in working with teams, typically leading them; They know how professional performance works in situ and, above all, they must make various areas of their lives compatible. For this reason, self-regulation processes are critical to organize their work, personal and academic life.

These students who are classified as "non-traditional" are also characterized by being a group that presents a wide dropout from their educational processes because they are more frequently affected by variables external to the teaching and learning context (Sánchez-Gelabert and Andreu, 2017). For this reason, it is essential to investigate the strategies used by students with more self-regulation and autonomy. To generate models of action, direct classroom management and decision-making, to make systems more flexible, to generate a compatible offer, not only from the programmatic or curricular perspective, but also from the methodological one.

One of the groups that most select this type of modality for their studies are the students from the engineering area. As they need to be constantly updated due to the quickness of the economy and the industry, to advance many times from a technical area of training to the professional area, which is highly valued by their employers. In the field of engineering, it seems essential that self-regulatory capacities that allow adaptation to the changes in the knowledge

society are considered and put into practice (Capote et al., 2023).

Furthermore, students' beliefs about their own learning are factors that can affect their performance, as has been shown in other studies (Cabanach, 2016). Thus, knowing their perspective on the strategies they use to achieve academic success is key (Franco-Rojas, 2021) to understand how they approach their studying process, in parallel to other aspects of work and family life. Other studies have observed the relevance of the level of self-regulation in procrastination (Barría et al., 2020); therefore, it becomes interesting to observe what happens with the strategies of the most self-regulated students.

This research aims to investigate how engineering students, in the continuity of their studies, can self-regulate their academic performance and demonstrate their learning strategies in their educational process. For this, it is essential to deepen from their perspective into the learning strategies that apply to. These are the intentional, deliberate, planned, and consciously committed activities that guide the actions to be followed up to achieve specific goals or objectives (Masso et al., 2021).

To evaluate the self-regulation of learning in these students, from the perspective of learning strategies, the levels of self-regulation of learning in worker students of continuity of engineering studies will be determined. It will be determined the most self-regulated worker students to achieve the description of the strategies used by them for their academic work.

Methodology

Type of study

To understand self-regulation and learning strategies in worker students, a sequential mixed design research was carried out, considering instruments and quantitative and qualitative analysis, which consists of two stages: the first quantitative, with the application of the MLSQ questionnaire or Motivated Strategies for Learning Questionnaire (Pintrich, et al., 1993) and based on their responses, the most self-regulated students were characterized, who were invited to participate in interviews about the learning strategies construct that constituted the second qualitative stage.

Participants

The sampling was non-probabilistic, in which the first students to respond were those who participated in the study. A sample of 65 students was obtained, corresponding to 5% of Engineering degree students from the University of Aconcagua, Calama campus. Of them, 18 belong to the Civil Industrial PCE degree and 47 corresponds to the Electrical Engineering PCE degree. The inclusion criterion for participating in the study was to be a student and also have a dependent work activity in parallel to be considered a worker student.

After obtaining informed consent in the quantitative stage, the MSLQ questionnaire was applied to the students who agreed to participate. Subsequently, an intentional sampling is carried out, in which the results from the quantitative stage make the selection of the students who obtained the highest score are considered as the most self-regulated. This results in 16 of them with the highest score being invited to participate in the qualitative stage, with the implementation of a personal interview.

Materials and instruments

The quantitative instrument used is the validated version in Chile with university population for our study, the MSLQ, which consists of 81 questions, structured in two scales, 31 questions aimed at Motivation and 50 questions at Learning Strategies (Burgos & Sánchez, 2012).

The Learning Strategies scale, the focus of this research, has two components: a Cognitive and Metacognitive component, and another Resource Management component. The first component is divided into five subscales: Rehearsal Strategies, Preparation Strategies, Organization Strategies, Critical Thinking, and Metacognitive Self-Regulation. And the second component has four subscales that are: management of time and the study environment, regulation of effort, learning with peers and seeking help.

Each of these items considers a statement in which the student must respond according to the degree of identification with what was said, choosing between one of seven options on a Likert scale. 1 indicates the lowest agreement and 7 indicates the highest agreement with the proposition. The analysis of the data collected in the form was analyzed in Excel, in which mainly descriptive analysis was carried out.

Based on the results of the quantitative stage of the questionnaire, a semi-structured interview

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plan was developed as a qualitative instrument. It consisted of seven questions developed based on the dimensions of the questionnaire and which were submitted to expert judgment. The interviews aimed to go deeper into the study strategies of the worker students.

Table 1

Link of areas of inquiry, questions, and dimensions addressed. Resource: Self-made.

Areas of inquiry	GUIDING QUESTIONS	SUBSCALES MSLQ
Cognitive and Metacognitive Component	1. There are students who use as a strategy the creation of summaries for studying, what strategies do you use for studying? 2. What do you do to understand the contents of studies? 4. Being on lessons whether it is online or face to face, what resources do you use for your learning? 7. How do you apply your acquired knowledge to resolve critical situations, for example at your job?	Essay Elaboration Organization Critical Thinking Metacognitive Self-Regulation
Resource Management Component	3. How do you organize your time for studies? 5. When you are studying and get distracted, what do you do to come back and focus again? 6. How do you resolve your doubts in lessons or when are you studying?	-Time Management and Study Environment -Effort Regulation -Parallel Learning -Seeking Help

The analysis for categories was performed in Atlas TI software version 9.1.3.0., based on the areas of inquiry previously defined for the questions.

Procedure

With prior authorization from the Ethics Committee of the University of Aconcagua for this research, students were invited to participate in the questionnaire via email for the quantitative study, using the Google Forms application. In its first part, the objective of the study was explained, and the informed consent was presented. A series of questions appeared regarding sociodemographic variables of interest, with the purpose of characterizing the sample, such as age, sex, marital status, previous higher education and employment situation, and then show the specific questions of the MSLQ questionnaire.

For this study, only the responses belonging to the Learning Strategies scale with its components were considered, which consists of nine subscales, with some specific questions for each of them, making a total of 50 questions that allows us to tabulate the levels of self-regulation in terms of students' strategies, arbitrarily applying a higher average (5.56) than the general one, (from 1 to 7), registering 16 of 65 students with highly satisfactory answers, which is equivalent to 24.6%, with the general average defined.

These students were contacted via email to invite them to participate in an interview that constitutes the second part of the study. Interviews were carried out via Meet, which allowed them to help reinforce the objective of delving into the strategies used by the most self-regulated student workers.

Results

Quantitative Results

In this research, only the Learning Strategies scale is used, which contains two components: one Cognitive and metacognitive, and the other Resource Management. The global application provides a Cronbach's alpha of 8.24 for the scale used, and a value over 0.7 for the subscales, therefore, adequate reliability.

From the 65 students who answered the questionnaire, there are results that were obtained from the first sociodemographic questions that are found in Table 2:

Table 2

Datos Sociodemográficos

Criteria	Characteritic	Quantity	Percentage
Age	Older than 40 years	21	32 %
	31 y 40 years	28	43 %
	25 y 30 years	13	20 %
	18 y 24 years	3	4,6 %
Marital Status	Single	23	35 %
	Married	24	37 %
	In a relationship	14	21,5 %
	Divorced	4	6,1 %
Employment Situation	Working	63	97 %
	By duties	40	63,4 %
	Daytime	23	36,4 %

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	Are not working	2	3 %	
Studies	Other institution	51	78 %	
	UAC	14	22%	
Sex	Male	61	93,9 %	
	Female	4	6,1 %	

It may be observed that most worker students come from other institutions, provided the opportunity that the university provides with the continuity of studies to continue from a technical degree to a university professional one.

Regarding their marital status and age, they have a responsibility component that appears to be very relevant, since the majority belongs to the age range between 30 and 40 years old. Regarding their marital status, approximately 50% are married or in a couple and about 94% are men.

Table 3 contains the statistical data (average, standard deviation) from the total of survey respondents.

Tabla 3
Average of Learning Strategies among students

Component	Subscales	Average	Standard Deviation	Variance
Cognitive and Metacognitive Component	Essay	5,07	1,56	2,43
	The Elaboration	5,45	1,41	1,99
	The Organization	5,00	1,74	3,01
	Critical Thinking	5,27	1,41	1,98
	Metacognitive Self-Regulation	5,04	1,63	2,64
Resource Management Component	Time and Study Environment	4,82	1,92	3,67
	Effort Regulation	5,44	1,56	2,44
	Learning with peers	4,48	1,88	3,54
	The Seeking Help	4,32	1,90	3,62

As illustrated in Table 3, the first component of the Learning Strategies scale is divided into five subscales, which are: Rehearsal Strategies, Elaboration Strategies, Organization Strategies, Critical Thinking, and Metacognitive Self-Regulation. And the second component of

Resource Management has four subscales that are: Time management and the Environment Study, Regulation of effort, Learning with peers and Seeking help.

Regarding the first variable mentioned, in other words, the cognitive and metacognitive variable. In the Elaboration subscale, which consists of selecting important information, reorganizing and structuring what they intend to learn, it is the one that obtains the highest average of students. In the major part, they respond at the highest levels of the scale. On the other hand, the lowest average is in the organization subscale.

In relation to the questions on the Critical Thinking subscale, understood as the degree to which students report the application of prior knowledge to new situations to solve problems, decide, or make critical evaluations related to standards of excellence. It is ranked as the second scale with the highest average among the participants.

However, regarding metacognitive self-regulation, meaning, the self-regulation of cognitive activity that measures the degree to which students can become aware of their abilities, to modify them according to the conditions of the environment. Only 30.7 % respond located at the highest levels, even considering that it is not the last average on the scale. However, both groups exceed the average established in the elaboration subscale. It should be noted that in general, the averages have little margin of difference in the subscales of the first component of the questionnaire.

Regarding the averages of the second component, the highest averages are found in the Effort Regulation, with more than one point of difference from the lowest of the same scale, which is Seeking Help.

It is confirmed that none of the subscales exceeds the established average in the students' responses, where it is described that in the Effort Regulation subscale 44.6% obtain answers that do not exceed the established average. In the Peer Learning subscale, 35.4% obtained answers did not exceed the established average. The subscale that corresponds to Time and Environment Study, which measures the degree to which the student plans their study time in advance, only 23% respond to the 5 questions, without exceeding the established average. In the Help Seeking subscale, only 15.4% respond at the highest level, exceeding the general and established average. This variable delivers

significantly low results, being the lowest average that does not exceed the established average.

The most remarkable is that in Preparation, 18 students obtained an average score (5.99) above the established average. In Critical Thinking, 15 students obtained an average score (5.90). In Organization, 11 students obtained an average score (6.11). In Effort Regulation, 17 students obtained an average score (6.20) higher than the established average.

If we compare the general results obtained between students who work both in duties (7×7, 14×14, etc.) and the daytime mode of 45 hours a week, there are no major differences in each of the subscales.

It is worth mentioning that 16 students (24%), those recruited for the second stage, obtained results higher than the rest on the global scale. In these cases, their general averages are above the established average, even with results above 6 points in 7 of the 9 subscales. This group is the most self-regulated in the study, standing out in the Elaboration and Critical Thinking subscales of the Cognitive and Metacognitive components, except the Seeking Help subscale of the Resource Management component. As additional information, although the general results of the 16 students are higher than the established average, some of them do not exceed it in some subscales of the cognitive and metacognitive component, such as Essay. Here, 5 of 16 students are recorded with a lower result to the average. In the Elaboration and Critical Thinking subscales, the 16 students register a value higher than the general average. Regarding the Resource Management component, it can be noted that in the Seeking Help subscale, 9 students out of 16 are registered, with a result lower than the general average, being overall low for all students.

- **Qualitative Results**

Based on the questions in Table 1, two categorical trees were created to specify the responses from the interviews with the most self-regulated students. These were categorized into the two components of the Learning Strategies area: Cognitive and Metacognitive Component, and Resource Management Component.

These responses, once analyzed, gave rise to the areas of investigation in the two trees categories.

Figure 1

Categorical Tree Cognitive and Metacognitive Component
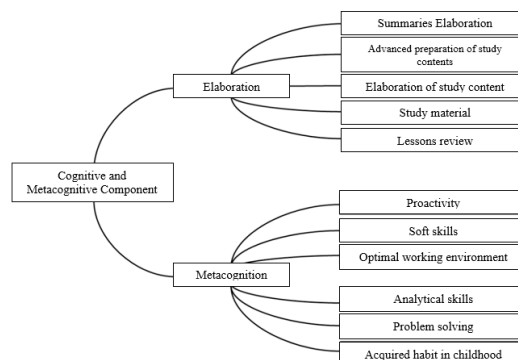
In the analysis of the Categorical Tree (Figure 1) it can be seen that the majority of the responses point to the subscales of the cognitive and metacognitive component, which are: Elaboration and Metacognition. The following paragraphs show some textual sentences from the interviewees that describe the findings. Regarding the categories of this tree, the Elaboration has a key role; responsibility in the fulfillment of the academic activities of worker students is the greatest objective to achieve the proposed goal of finishing their degree. *"As a worker, the part of my break is 100% to get ahead with study contents, even if the teacher is not passing content, I am already researching information to know what it is about."*

About the preparation of study material and summaries, it appears that these tools are common in the worker students with higher levels of self-regulation in this study. *"Today, my first day of rest, I spent almost the entire day doing a fluid mechanics exercise and tomorrow I have to continue because I have the test. "I was summarizing the last study content. Later, when the test was near, I had all the summaries."*

A finding can be noted in general terms, in which the most cognitively self-regulated students have a previous trajectory before facing in a better manner the academic activities that studying a degree implies. There is a personal motivation and appreciation of the autonomous process that is being carried out, considering that they manage their academic present, which denotes a sense of responsibility. *"As a life experience, I tell you, I was waiting approximately 15– 20 years to be able to support myself and pay for a degree. I think that one puts more effort into it. Much more effort than a person who gets paid everything."*

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Apparently, the most self-regulated student-workers apply the acquired knowledge to solve problems in their work environment. *"I have worked as a supervisor for a long time, so I am going to apply many things that I have been taught, apart from the fact that I have learned things that are fresh to me."* At this point, the elaboration is not only carried out in an academic environment but also in its work applicability. Making that meaningful connection allows you to hold latent memories in memory, assimilating and making sense of them in direct application.

The interviewed group has developed interest in complex skills for their studies and work, which would be consistent with the learning methods they use. *"As I told you, the hallmark of the course that we did in the communication part, the way of expressing yourself. They are important when communicating with others."* Skills in social use are more valued, the relational aspect is considered relevant, and thus socio-emotional skills will mark new professionals. (Vera, 2021)

It appears that study habits would be reflected in the most self-regulated students from their life path, long before starting their higher education, just like one interviewee who refers that she has had these study habits since her childhood. *"I always had a study habit, since elementary school, my mother was always doing a general review of all the study material. In mathematics it was every day"* That means, there is a group of students who have already acquired certain study habits that they use as a tool for their current teaching and learning process.

Regarding their metacognitive process, it appears that the most self-regulated worker students use reading analysis and application of study content, giving importance to reading comprehension as a grounding for study. *"I try to look for a person who had more reading comprehension skills. To analyze the narrative."* Assessing and reflecting on these aspects that go beyond the contents themselves is essential to work on their development and use them as a tool for learning. Regarding the second component, the following tree category is presented:

Figure 2
Categorical Tree Resource Management Component
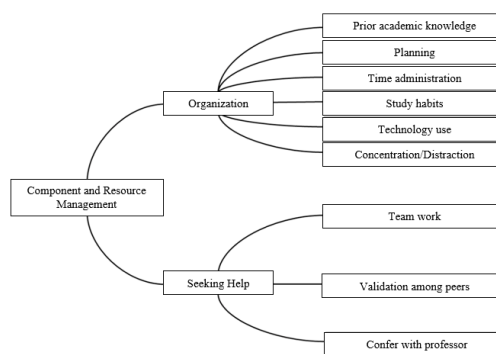
In the analysis of Categorical Tree No. 2, the majority of the responses point to the subscales of the Resource Management component related to Organization and Seeking Help.

Regarding these categories, the focus of the study would be associated with the group strategy over the individual one. *"We are five colleagues who come from the technical degree side and from the same job. We helped each other and for not missing the rhythm for studies, we continued the engineering. Therefore, the social component is a focus key, but above all on the collaboration of processes to achieve common objectives, acquiring roles for this that allow a subdivision of work in a strategic way to achieve the goals. "When we have to do a job, a report, a PPT. There is one person who is responsible for the work, so that person is the one who then transmits the information to the other three. There is a previous meeting".*

It is observed that the students share knowledge and analysis of the contents, fully trusting the permanent work team they make up. *"Online strategy is what we use as a team. To organize times, each one oversaw a subject. We do the work in groups, and we distribute each part among ourselves."*
The organization they carry out with their peers allows them to manage and optimize time on long-term tasks.

It can also be observed that the most self-regulated students would use all tools, both traditional and virtual, to satisfy their study needs. *"I take advantage of today's technology. For example, teachers are generally uploading presentations to the system, so I download them to the phone or a small tablet."*

Regarding their family environment, although it is true that they do not refer to family support, this would exist, as they would be aware of their responsibility and their commitment to share with it, within the organization at their times. *"I*

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try to have discipline. I create a small calendar, so I do not leave my family neglected because they help you to encourage you to continue studying, to move forward." The family also becomes a motivational component for the student, not only from the support they provide but from the example that the student hopes to set from them: *"Children see me as a how I study, so they also get motivated."*

In the category of concentration v/s distraction, they seem to handle distraction very well, concentrating quickly. *"I stop. And I start again, I pause, I pour a glass of water for myself and when I concentrate again, I go back a little further from the point to resume again."* That means, it is evident that they are capable of generating external regulations to organize their times and work appropriately, being very aware of their environment.

In the category of Seeking Help, a permanent interaction with peers and even with the teacher would also be reflected. *"When I went to the lessons, I asked the teacher about my doubts when the lessons ended. I also conferred the teacher through WhatsApp."* Another element that can be seen is that the most self-regulated students, in their capacity as workers based on their experience, spontaneously seek more support to reinforce their learning. *"Before studying, everyone studies the material on their own, and then we get together to practice it. In mathematical exercises we got together with a blackboard to develop the exercise, until we found the logic, understanding why it was solved."* This suggests that the value of working as a team is transversal both to the study and to the work.

Discussion

In terms of the quantitative approach of the study, the reliability of the scores obtained in the subscales is consistent with other studies with similar characteristics with university populations (Dorantes, 2013; Sabogal et al., 2011). The instrument also showed adequate psychometric indices that fluctuate between 90 and 70, which makes it an important tool for the study.

The data obtained indicate that engineering students in study mode can self-regulate their learning mainly by using strategies related to elaboration and critical thinking, with the lowest ones being those related to organization, use of time, and seeking help. This may explain because worker students mention that their studies are carried out, especially by reviewing the contents, summarizing or rereading. In this case, like other research (Urquijo et al., 2014), it is mentioned that 45% of the university students surveyed use the summary as a content development strategy, facilitating the organization due to the requirement of understanding of the topic to its synthesis.

Critical thinking obtains high score; it is related to something that they have been developing in their professional life, and as it is a continuity program they already come with some developed skills, so they are a group that has other training needs. The needs of the world of work require decision-making, feedback on personal and collective performance, creativity, critical thinking, teamwork, problem-solving, among others. (Covarrubias-Apablaza et al., 2019) and these are precisely the aspects that students indicate they value most in interviews to manage their learning processes. It is interesting how skills, especially communicative skills, acquire value in their speech over the study contents themselves.

On the other hand, due to their limited time, seeking help and time to study, both quantitatively and qualitatively, is one of the most complex aspects for worker students. On the one hand, it is one of the lowest results obtained in the general application of the test; however, it is one of the points that is highlighted as important in the interviews. This ambiguity can mark a key turning point between the most and least self-regulated students. Due to the group with the best self-regulation, they mention teamwork, division of work, and the constant search for help as one of the strategies that sustain their work, directing resources to achieve the task (Gaeta et al., 2017).

Reconciling meetings to reinforce or ask for support becomes complex due to the reconciliation of family and work life, along with academics. Nevertheless, in the deepening, the most self-regulated students mention that collaborative work is a strategy that they manage to implement and self-manage autonomously and that favors their learning process. Other research coincidentally mentions that time management, collaborative work, and the study environment are predictors of academic performance (Vásquez, 2021).

The generation of networks is mentioned as one of the key aspects from the perspective of the most self-regulated students. There are studies that indicate that students perceive that family

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support and their academic performance are critical to promote and raise academic performance, reduce desertion and abandonment of their studies. (Chong, 2017), which would indicate that it is key to generate these collaborative work possibilities because they work operationally and have strong motivators for achievement.

Finally, the strategy elaboration that is repeatedly mentioned in the speeches works transversally as a relevant element. Its applicability also acquires different levels, ranging from the mere transcription of the study contents, through the elaboration of synthesis, to the recovery to be applied in daily or work experiences. It appears to be relevant that the elaboration of activities is promoted to support students in their learning process because using the learning allows them to become familiar with it and makes it meaningful (Núñez et al., 2016).

Conclusions

Considering the results of the survey applied, there are no major differences in the levels of self-regulation of learning among the students of the Engineering degree in relation to their labor system, in duties and in a regular system. Therefore, daily work, as well as duties, would present the same conditions for the groups. In this case, most of them are between 30 and 40 years old, almost 50% are married or in a relationship and about 94% are men.

This research shows that the most recurrent strategies used by worker students of Engineering from the general group are those of elaboration and effort regulation, while the lowest ones are those of Seeking Help and Organization. Precisely these last two are the most prominent in the most self-regulated students who were interviewed.

The analysis of this research allows us to point out that the 16 most self-regulated worker students seem to be prepared to face the learning process in their degrees. This is because they state that they have already incorporated study habits that they use frequently to organize their academic work. In general, the most self-regulated students value skills development, especially communication and reading skills, as a basis for their learning, and therefore lead their performance to stand in for, improve, and use their performance in those areas.

These students mention being able to organize their environment to manage and self-regulate their performance, to stay motivated with the objective of learning, with academic responsibility being a goal in itself. Furthermore, this goal is often related to their responsibility towards their families for completing their studies. Some of them also mention the importance of their worth and self-efficacy for their work, where being accountable to oneself is also an incentive to accomplish their academic processes.

Within the strategies, the social environment is relevant, teamwork and Seeking Help strategies are highlighted by the most self-regulated students as important factors in academic development. This implies the importance of generating groups in the activities, and the teachers' willingness to answer their questions takes prevalence in the case of worker students. This is due to the social impulse, which acts as a motivating element at the same time.

Review and elaboration strategies are supported not only by technology, but also by peer validation of information and the use of content in non-academic and work environments to reinforce and review ideas. These actions allow students to strengthen their learning with activities that allow them to apply what they have learned to their most immediate work environments.

Finally, the study has a limitation in terms of the sample size in terms of its quantitative stage, which consists of 65 students. It is advisable for future research to increase this number, as well as to incorporate the participation of other courses taught at universities, to obtain a greater vision of the self-regulation process of university student workers. This is because this research focuses on studying only those students of the continuity of studies program.

The contribution of this research is mainly to generate research on study continuity programs and a profile of worker students, an area in which there is scarce developed research. Even less relates to self-regulation and academic success in these contexts, which can be considered for future investigations. On the other hand, it is interesting to study into the strategies for reconciling study and work, which are key to understand how to achieve greater knowledge of this type of student. This type of student is on the rise in higher education systems.

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Conflicts of interest

The authors declare no conflicts of interest.

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