Propaedeutic Programme to Prevent Student Dropout at the Specialized University of the Americas in Veraguas, Panama

Pablo Díaz
Universidad de Panamá, Extensión Universitaria de Soná
Sistema Nacional de Investigadores, Panamá (SNI)

Analinnette Lebrija
Universidad Especializada de las Américas (UDELAS)

Luz Mariela Saavedra
Universidad de Panamá, Extensión Universitaria de Soná

The objective is to design and validate a student dropout prevention programme at the Specialized University of the Americas in Veraguas, Panama. The research has a quasi-experimental design, pre-test and post-test, with a descriptive and explanatory type of study, which allowed us to respond to the research problem, hypotheses and objectives. The population consisted of sixty-six (66) students. The students' need to know the level of development of multiple intelligences and learning styles was proven, and that, based on this knowledge, they learn to use the most appropriate learning strategies for them, in addition to structuring their study habits.

Keywords: student desertion, higher education, prevention programmes, retention, university

INTRODUCTION

Enrollment in Higher Education is increasing very rapidly, yielding great benefits for all taxpayers; however, new evidence shows that universities may not offer careers, and people may not choose, the study areas that promise the greatest opportunities in the formal labor market (Vieira *et al.*, 2020).

And the possibility of students not graduating leads to an important issue according to (Ferreyra *et al.*, 2017) and that is that investment in Higher Education carries risks that affect some students more than others, as some are less academically prepared and more likely to drop out.

Rousserie *et al.*, (2017) and Montoya *et al.*, (2017) state that Higher Education - HE - is involved in major problems such as: inequity in access to the detriment of young people from low economic strata, disarticulation with other educational levels, limited linkage with the productive sectors, inadequate support for research in universities, growth of enrollment in private institutions and desertion at different levels and for multiple causes.

Etiology of the Student Dropout Phenomenon

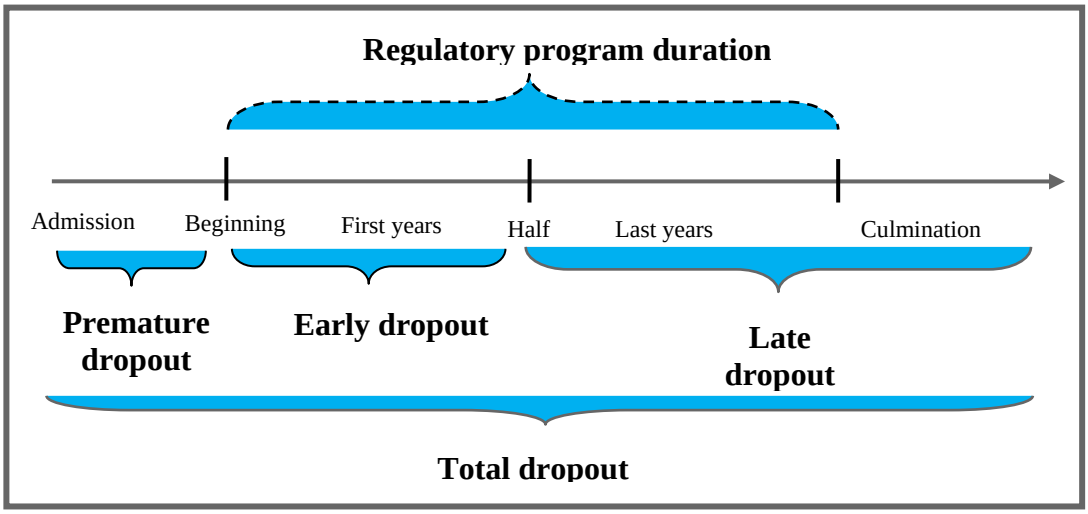
Student dropout is a complex phenomenon with multiple negative impacts both for the student and for the educational institution itself and, by extension, for the region and society (Rojas, 2009). However, the way in which these factors are made operational will depend on the point of view from which the analysis is made, be it individual, institutional, state or national.

Patiño and Cardona, (2012, p.10) argue that (...) *when studying this phenomenon, there is no doubt that in countries with more selective systems of admission to higher education, dropout rates are lower than in countries with more open systems.*

Klein, (2011) makes reference to dropout; as the fact of leaving unfinished the route designed by the educational system. He states that this is the culminating point in the chain of school failure and most often, before dropping out, they have repeated the year or subjects, lengthening their school career and weakening their self-esteem.

Although dropout is multifactorial, it is possible to differentiate between two types of dropout among students: time-related and space-related. According to Malagón et al. (2006), dropout with respect to time is classified as follows: premature dropout, early dropout, and late dropout, as shown in Figure 1.

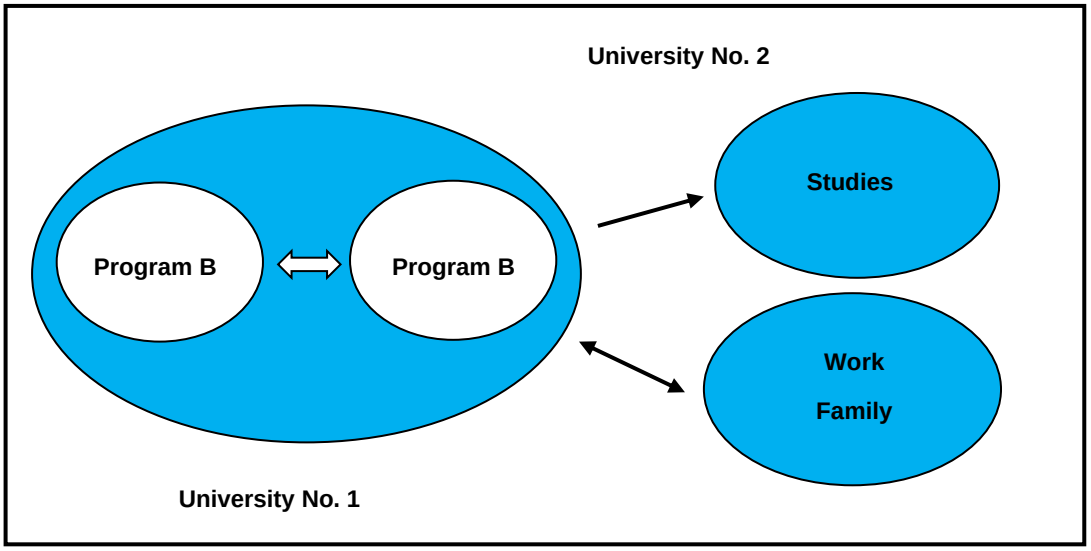
FIGURE 1
DIAGRAM ABOUT THE CLASSIFICATION OF EDUCATIONAL DROPOUT ACCORDING TO THE TIME IN WHICH IT OCCURS



Source: Taken from Malagón *et al.,* (2006).

As the author outlines, premature dropout is when students take the admission exams and although they have paid the enrollment fee, they do not attend the corresponding semester; early dropout occurs in the first semesters of the career and late dropout occurs after having advanced more than half of the career, when they decide to abandon it. All of these elements affect the statutory program duration or total dropout. On the other hand, dropout is classified as internal or academic program (i), which refers to students who decide to change their academic program for another offered by the same university; institutional (ii), where the student decides to transfer to another university; and that of the educational system (iii) (Malagón *et al.*, 2006).

FIGURE 2
DIAGRAM SHOWING THE CLASSIFICATION OF EDUCATIONAL DROPOUT ACCORDING TO THE SPACE WHERE IT OCCURS



Source: Malagón *et al.,* (2006).

In relation to this issue, the literature refers to possible causes that lead to dropouts of this nature: dissatisfaction perceived by dropped students with the permanence and re-entry strategies implemented by the institution, rigorous curricula, inconsistent teaching and learning methods, which lead students to seek other programs, higher educational institutions that may meet their expectations, or to drop out definitively (Londoño, 2013).

Within this type of dropout, it is important to take into account the international migratory student movement that not only changes institutions, but also countries, as stated by Gutiérrez and Romero (2020).

In this sense, it is necessary to study and analyze the dropout, due to the fact that dropout is a phenomenon that is inherent to student life that will surely be maintained, due to the relationship with dynamic processes of selection, academic performance and the efficiency of the educational system in general (Díaz, 2008; Seminara and Aparicio, 2018). Therefore, several authors study the factors, expressing it as follows:

The Psychological Factor considers that personality traits are what differentiate students who complete their regular studies from those who do not (Ethington, 1990 *apud* Donoso and Schiefelbein, 2007; Attinasi, 1986 *apud* Torres, 2012; Díaz *et al.*, 2021; Balleza *et al.*, 2022).

The Sociological factor emphasizes the influence on dropout of factors external to the individual (Spady, 1970 *apud* Rodríguez and Londoño-Londoño, 2011; Díaz and Tejedor, 2016). ***The Economic factor*** adopts a cost/benefit approach that includes both the lack of resources in the household to face the expenses demanded by school attendance, as well as the need to work or seek employment (De Vries *et al.*, 2011; Miño de Gauto, 2021).

The Organizational factor approach to dropout is based on the characteristics of the university institution, taking into account the services offered to its students (Salcido *et al.*, 2012; Díaz *et al.*, 2021). ***The Adaptation factor***, which is based on the students' interest in studying a career against the structure it offers and the responsibilities that the university field demands (Díaz and Tejedor, 2017).

And ***the factor focused on the teaching-learning process*** that promote student dropout. When students access higher education, they have not been able to develop autonomy and self-regulation of their learning processes, as a result of the lack of study habits, learning strategies, lack of knowledge of their learning styles and multiple intelligences (Cartagena, 2008; Lebrija, 2021).

Dropout Prevention Models Used in Latin American Universities

The concern for finding solutions to the problem of dropout in universities has become widespread in recent years and the educational system in the process of transformation has been characterized by a significant increase in the coverage and admission of new students (Espinosa-Castro, 2020). Therefore, it is necessary to design, develop and implement tools that allow for a diagnosis of the student population at risk of dropping out of higher education institutions (Díaz *et al.*, 2021).

The system for the prevention of dropout in Higher Education (SPADIES): consolidates and organizes information that allows for monitoring the academic and socioeconomic conditions of students entering Higher Education in the country. Thus, it allows knowing the status and evolution of the characterization and academic performance of students, which is useful to establish some of the factors determining dropout, to estimate the dropout risk of each student and to design and improve support actions for students, aimed at promoting their permanence and graduation (Ministry of National Education, 2012).

SPADIES is part of the National Higher Education Information System - SNIES - and consists of a particular module that is applied to the follow-up of a phenomenon of special interest to the sector, such as student dropout.

On the other hand, the Compass Platform is a permanence management model that is strengthened in the use of strategies for measuring and minimizing the risk of dropout, which performs guidance, monitoring and accompaniment processes for students in order to support their comprehensive training process, identifying possible alerts from the first semester of admission to the Higher Educational Institution. Authors León and Montejo, (2016) state that:

> When students are already in their academic process, the information is uploaded to the Compass Platform, generating a report and follow-up in order to guide them where required; and the risks are classified as follows: financial, psychological, vocational and academic. And when the alerts are generated, the student is called to establish an assessment of how he/she is doing (p. 3).

The Comprehensive School Trajectory System (Sistema Integral de Trayectoria Escolar - SITE), according to Barraza *et al.*, (2017) the Technological Institute of Sonora (Instituto Tecnológico de Sonora - ITSON), which represents one of the main universities in the State of Sonora, Mexico, made an effort that involved various areas and key actors to generate an information system that manages to automate the generation of reports that accurately show the statistics of the traits and characteristics of the students.

The ADVISER, (BerSoft, 2019) is a tool that allows you to have an accurate diagnosis of your student population at risk of dropping out and with the information to be able to make a relevant attention to avoid the dropout of your students. This instrument integrates and standardizes all the support provided to the student from the different areas, thus significantly reducing the operating time of the professionals and allowing them to dedicate time to the generation of student support strategies.

In this sense, the objective of the research is to design and validate a student dropout prevention program at the Specialized University of the Americas UDELAS in Veraguas, Panama based on prevention and psycho-pedagogical intervention.

METHOD

The research includes two phases, which are detailed below. The first has a non-experimental, single-measurement design. Through two validated and reliable instruments, in which the characteristics of students at risk of dropping out of the Specialized University of the Americas, University Extension in Veraguas, Panama, were obtained.

The type of study is quantitative, diagnostic, descriptive, and the data obtained are interpreted to analyze the characteristics of first-time students who have obtained scores that show a risk of university dropout.

In the second phase, the study has a quasi-experimental design, pre-test and post-test, with the purpose of validating a university dropout prevention program; the study is descriptive because it provides important

data and specific characteristics that allow comparisons, analysis and dropout prevention; finally, it is explanatory because based on the diagnostic evaluation and the intervention, the strengths and weaknesses of the program will be explained.

The population is composed of students of the Faculty of Social Education and Human Development of the University Extension in Veraguas of UDELAS, who will be the first students to enter the program in 2022.

TABLE 1
SCHOOLS, CAREERS AND ENROLLMENT IN THE SCHOOL OF SOCIAL EDUCATION AND HUMAN DEVELOPMENT THAT WILL PARTICIPATE IN THE RESEARCH IN VERAGUAS

Schools	Careers	Enrollment
School of Social Education	Bachelor's Degree in Criminal Investigation and Security.	35
Human Development School	Bachelor's Degree in Psychology.	31
	Bachelor's Degree in Bilingual Tourism Management.	---

Source: Data provided on the page of the Specialized University of the Americas in Veraguas, Panama.

The sample is made up of a group of undergraduate students in Psychology and Criminal Investigation and Security. The type of statistical sample for the first phase is census (López-Roldán and Fachelli, 2017), all first-time students are evaluated. In the second phase, the type of sample is probabilistic by cluster (Hernández *et al.*, 2014), based on the Psychology and Criminal Investigation and Security degrees where students with lower scores in the diagnostic evaluation participate. In order to perform the analysis of the results, a set of validated and reliable instruments was prepared, as shown in the table below:

TABLE 2
VALIDATION AND RELIABILITY OF THE INSTRUMENTS USED IN THE RESEARCH

Instruments	Content validation	Reliability
Questionnaire to measure educational factors involved in college dropout, (Multiple Intelligences, Learning Strategies, Study Habits and Learning Styles) adapted from Lebrija, (2021).		0.84
Socioeconomic survey of students.	0.82	0.68
Questionnaire to analyze the opinions of teachers with first-time academic courses.	0.98	0.83
Self-evaluations aimed at students participating in the university dropout prevention program.	--	--

***Note:** -- The self-evaluations are part of the student's training process and are therefore validated by the Institution of Higher Education.*

In the process of content validation and monitoring of the instruments to measure the educational factors involved in university dropout and the opinion questionnaire addressed to teachers who attend first-year students, they are considered suitable for analyzing the phenomenon both individually and in groups; in the socioeconomic questionnaire, the questions (2, 8, 10 and 13) were reordered within the categorizations for a better understanding and to increase its reliability.

The procedure comprises six (6) phases, which are explained below:

Phase 1: The scientific structure of the research is made up of theoretical references that have been selected to complement the study, on incident factors of dropout as well as international and national university student dropout prevention programs.

Phase 2: Selection, elaboration, validation and reliability of the measurement instruments, based on Lebrija's (2021) proposals.

Phase 3: The confidentiality of the participants was assured and the informed consent form was prepared. The authorities are informed about the scope and interests of the research: Deanship of Research and Graduate Studies, Regional University Director of Veraguas of UDELAS and Coordinators of the careers in which the research is being carried out.

Phase 4: The intervention program is prepared, which consists of a series of steps structured as follows:

- Introduction
- Theoretical background
- Educational structure (Objectives, population)
- Evaluation instruments
- Educational planning of workshops
- Implementation schedule (Dates, timetable)

Phase 5: The development and application of the prevention program, which in turn consists of three stages: (I) the diagnostic evaluation, (II) the development of workshops to promote the knowledge, development and permanence of the students and (III) the final evaluation.

Stage 5.1 Diagnostic: application of the evaluation and analysis of multiple intelligences, learning strategies, study habits, learning styles, socioeconomic situation and academic average at the intermediate level.

Stage 5.2 Implementation: application of the workshops, the purpose of which is to promote systemic development in students, thus avoiding university dropout.

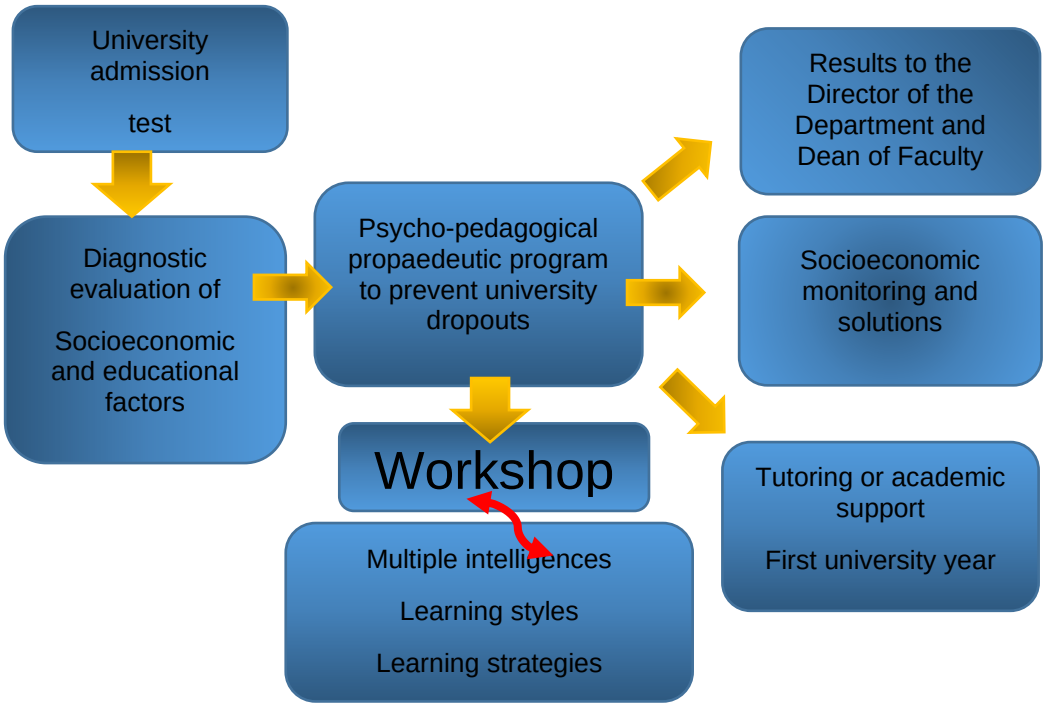
Stage 5.3 Closure evaluation.

Phase 6: The inferential statistics are used, applying the SPSS statistic to analyze the changes in the students who participated in the workshops and in this way measure the efficiency of the program. For the descriptive one, the opinions of professors are analyzed to know their perception about the importance and functionality of a student dropout prevention program as an educational tool for university prevention. The results of the focus group are also analyzed with the objective of describing their impressions about the program, the usefulness of the topics covered and how they felt during the workshops and suggestions. Finally, the opinion questionnaires of the students regarding the usefulness of the program and its importance for them in the university learning process.

Model to Prevent University Dropout

The scientific study validates the model that corresponds to the educational propaedeutic program that promotes that students know their strengths and weaknesses in the teaching and learning process.

FIGURE 3
PSYCHOPEDAGOGICAL MODEL TO PREVENT UNIVERSITY STUDENT DROPOUT



Source: Díaz, 2021

The model considers that the university must follow up at least in the first year and a half of those students who have a low socioeconomic level and may require a scholarship or counseling in these matters. Students who are evaluated and have limitations in their study habits and learning strategies must participate in a tutoring program with a teacher from the Institution of Higher Education.

Evaluation Instruments

For the diagnostic evaluation, a questionnaire is considered to analyze the risk characteristics of university student dropout; and a socioeconomic questionnaire, for which the validity and reliability process is carried out as shown in Table 2. In the process evaluation phase, self-evaluation of the different workshops is carried out and a digital portfolio or compilation (prepared by the expert) is elaborated.
In the final evaluation, the two questionnaires are applied again. When a questionnaire of open-ended questions is applied to teachers attending students, parts of the study.

Academic Components of the Educational Propaedeutic Program

It consists of six workshops selected for the implementation of the intervention project over a period of two (2) months in a face-to-face manner. Distributed as follows: (1) Diagnostic Evaluation Workshop, (2) Multiple Intelligences Workshop (two hours per week), (3) Study Habits Workshop (two hours per week), (4) Learning Strategies Workshop (two hours per week), (5) Learning Styles Workshop (two hours per week), and (6) Closing Workshop. Each workshop is structured in sections as follows: Knowledge activation, goal setting, what do I want to learn? new knowledge, and closure or metacognitive analysis. Requesting the corresponding permissions from the administration, departments and professors attending the selected students.

RESULTS

To test whether a propaedeutic prevention program decreases the factors that promote dropout, a paired samples statistic (related samples t-test) was used to analyze the before and after learning strategies and study habits. The statistic made it possible to show the change in the variables.

Regarding the components of multiple intelligences and learning styles, the post-test averages are shown, which show the level of multiple intelligences and learning styles of the participating students, which is intended to support the fact that the students are able to know their abilities and ways of learning, information that supports them to enhance their learning process. The data obtained for each variable are presented below. In the Learning Strategies, the table below is observed.

TABLE 3
DEVELOPMENT OF LEARNING STRATEGIES IN THE PARTICIPATING STUDENTS

Matched sample statistics					
		Mean	N	Standard deviation	Standard error mean
Pair 1	Pre-learning strategies	2.7423	26	.58783	.11528
	Post-learning strategies	2.9981	26	.44575	.08742

Paired samples test									
		Paired differences							
					95% confidence interval of the difference				
		Mean	Standard deviation	Standard error mean	Lower	Upper	T	gl	Bilateral Meaning
Pair 1	E. pre-learning E. post-learning	.25577	.44907	.08807	-.43715	-.07439	-2.904	25	.008

Source: Prepared by the authors.

When comparing the pre-test and post-test means of the learning strategies, it can be observed that there was a positive increase (pre-test: 2.74, post-test: 2.99) with a significance level of 0.008, indicating that the program improves the use of learning strategies in the students. In the analysis of study habits it is observed.

TABLE 4
STUDY HABITS OF PARTICIPATING STUDENTS

Matched sample statistics					
		Mean	N	Standard deviation	Standard error mean
Pair 1	Pre-study habits	2.6827	26	.41856	.08209
	Post-study habits	2.8239	26	.44058	.08641

Paired samples test									
		Matched differences							
					95% confidence interval of the difference				
		Mean	Standard deviation	Standard error mean	Lower	Upper	T	gl	Bilateral Meaning
Pair 1	Pre-study habits - Post-study habits	-.14119	.02203	.00432	-.15009	-.13230	-32,682	25	.001

In the means (pre-test: 2.68 and post-test: 2.82) of the study habits, a positive change is observed with a significance level of 0.001, which shows that the students with the propaedeutic program improved their study habits. This in turn motivates young people to achieve their goals.

By analyzing the means of the four variables individually and knowing the level of development of the students in terms of multiple intelligences, learning styles, study habits and learning strategies, interesting data were obtained.

TABLE 5
DEVELOPMENT LEVEL OF THE MULTIPLE INTELLIGENCES OF THE PARTICIPATING STUDENTS

Multiple intelligences	Mean
Linguistics	3.06
Logical Mathematics	2.71
Musical	2.76
Kinesthetics	2.63
Spatial view	2.88
Interpersonal	3.05
Intrapersonal	3.47
Naturalist	3.08

As shown in Table 5, in terms of the development level of multiple intelligences, the most developed is Intrapersonal intelligence (3.47), which implies healthy relationships among peers, followed by Naturalist intelligence (3.08), which indicates that they have knowledge of and respect for the environment. An interesting fact is that students also show a development of Linguistic intelligence, one of the most required in the teaching and learning process. It would be interesting to investigate further with other practical tests, if the student's perception of their development is correct.

For example Mesa, (2018) in his research sustains that people with developed Intrapersonal intelligence have the ability to observe their own neurocognitive states and processes, both at the intellectual and affective levels, and thus understand their behaviors.

However, it is interesting to note that the multiple intelligences Kinesthetic body has the lowest development (2.63) where the student can perform sports, manual work, a situation that brings into play a series of elements that allow the development of skills and creativity of the student, as well as the interaction with others. Another aspect to consider in the study is the learning styles shown.

TABLE 6
LEARNING STYLES IN PARTICIPATING STUDENTS

Learning styles	Mean
Active	3.08
Thoughtful	3.07
Theoretical	3.17
Pragmatic	3.15

The most common style among students is theoretical (3.17). According to Lebrija (2021), this implies having greater strengths to think logically, understand theory, be critical and organized.

Cantú and Rojas, (2018) state that people with theoretical learning style are characterized by being disciplined, systematic, orderly, synthetic, reasoners, thinkers, perfectionists, seekers of theoretical models that facilitate the way of learning. The above data and analysis support that the propaedeutic program carried out during the two months works to decrease the risk factors that promote dropout. It strengthens

capacities, strategies, habits, skills and knowledge about learning styles and the development level of multiple intelligences, thus preventing student dropout.

TABLE 7
STUDY HABITS OF PARTICIPATING STUDENTS

Study habits	Mean
Place of study	3.29
Time dedicated to study	2.94
Study habits during classes	3.00
Study methods	2.96
Submission of tests and papers	3.08

Regarding study habits, it is observed that the minimum score is the indicator: time dedicated to study, (2.94) and the maximum: place of study with (3.29), this indicates that the students have a suitable place to study, although they do not make an adequate distribution of time throughout the week. In this regard, study habits are fundamental to organize time and space, techniques and methods for study, and imply discipline and dedication. Thus, Zárate-Depraect et al. (2021) state that many university students do not have adequate study habits to cope with university academic demands. However, Mondragón et al., (2017) consider that the individual learns faster and deeper than others due to his/her successful study habits.

TABLE 8
LEARNING STRATEGIES OF PARTICIPATING STUDENTS

Learning strategies	Mean
Reading comprehension	3.32
Taking notes	2.94
Organization	3.08
Written composition	2.97
Problem solving	3.17
Mnemonics	2.69
Study strategies	2.87

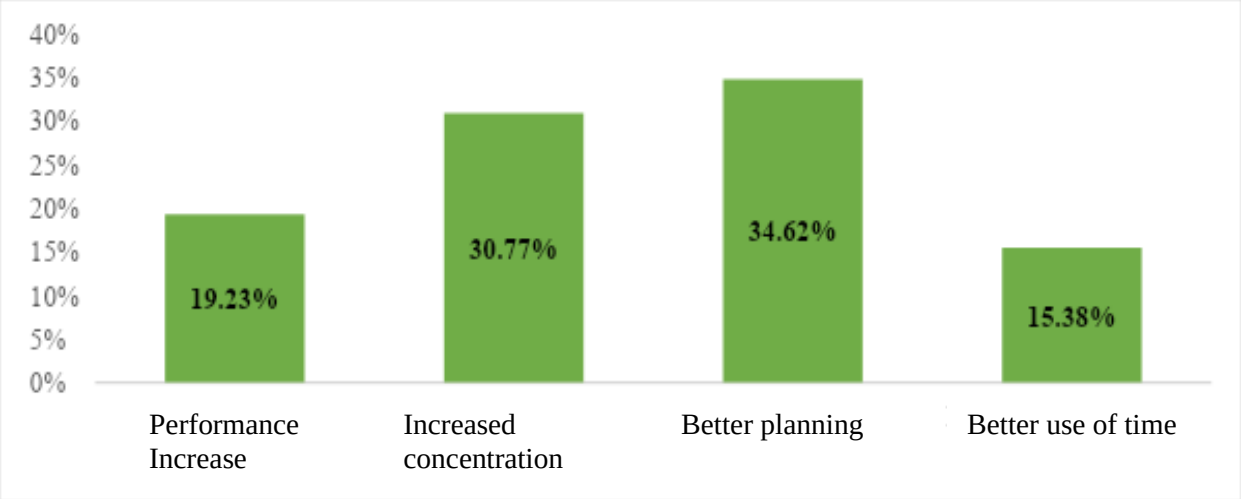
Concerning the learning strategies, the minimum score is presented by the indicator: Mnemonic with (2.69), and the maximum for the indicator: Reading comprehension with (3.32); this indicates that the students read trying to relate the ideas with the previous knowledge in order to understand, although the conceptual and procedural management of mnemonics is poor.

When reading comprehension strategies are applied in the university classroom, students often find it difficult to have the habit of highlighting the main idea, and when they do, they are often not assertive in indicating what is most relevant, do not raise doubts, and find it difficult to relate new information to what they already know.

Learning strategies are essential for students to develop their abilities in comprehension, organization, as well as problem solving with greater ease. Learning strategies are an organized, conscious and intentional set of what the student does (Pegalajar, 2016), however, it is very useful to know them correctly, to check if they meet the requirements of Higher Education so that educational practice can be improved and comprehensive learning can be achieved in university students (Pegalajar, 2020).

The program was also socially valued by the students. 34.62% say that it helps them to improve the way they plan their schedules, strategies and tasks. 30.77% consider that it will help them to have better concentration, 19.23% increase their performance and 15.38% have better use of their time.

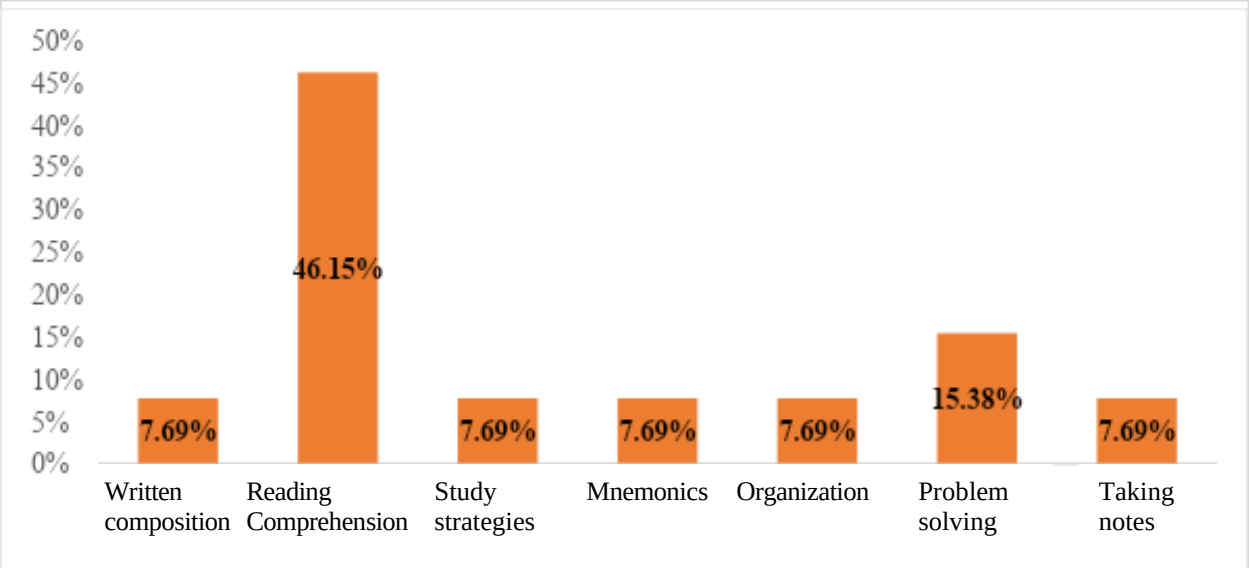
FIGURE 4
OPINION OF STUDENTS REGARDING THE PROGRAM'S USEFULNESS



mnemonics

The students consider that among the reinforced strategies; the ones they are going to use the most during the learning process are reading comprehension 46.15%, 15.38% problem solving; 7.69% written composition, study strategies, mnemonics, organization and note taking respectively.

FIGURE 5
IMPLEMENTATION OF THE KNOWLEDGE ACQUIRED IN THE WORKSHOPS OF THE PROPAEDEUTIC PROGRAM BY PARTICIPATING STUDENTS



It is important to understand how teachers define university student dropout, in which they answer that it is the voluntary or involuntary abandonment of a career caused by endogenous and exogenous factors. Piedra-Martínez *et al.,* (2022) agree with the argument.

Regarding the main factors that promote dropout, 27.3% of the teachers consider that it is the socioeconomic factor; 18.2% that low self-esteem affects the decision to leave the institution; 15.9% that

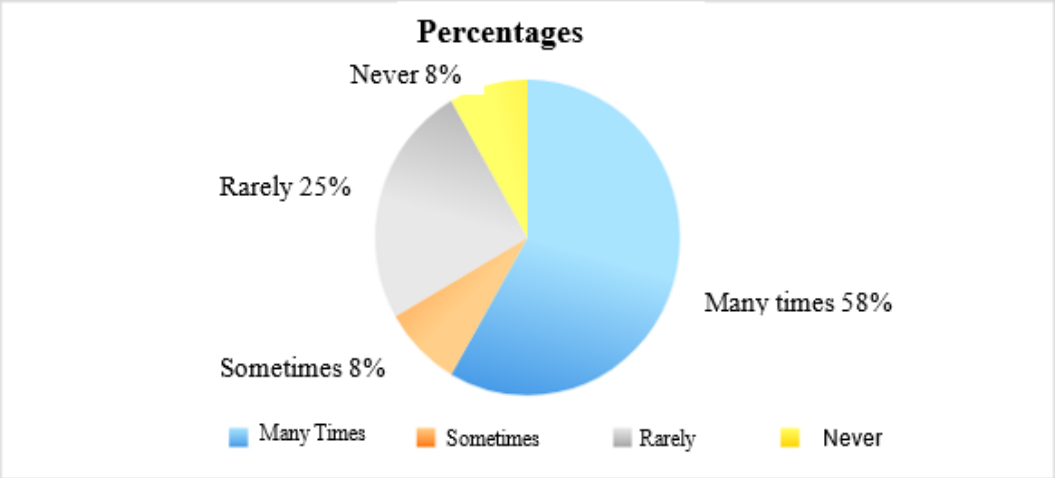
the lack of study habits; 13.6% that the lack of knowledge of how they learn and the lack of previous knowledge to learn at the university level; and 11.4% do not know the development level of their multiple intelligences, so they do not know how to use them.

TABLE 9
FACTORS THAT CONTRIBUTE TO UNIVERSITY STUDENT DROPOUT AT UDELAS ACCORDING TO TEACHERS

Factors that promote dropout	Responses	Case
	Percentage	percentage
Socio-economic factors	27.3%	100.0%
Low self-esteem	18.2%	66.7%
Lack of knowledge of the development level of their multiple intelligences.	11.4%	41.7%
Lack of study habits	15.9%	58.3%
Lack of knowledge of the learning styles	13.6%	50.0%
Lack of prior knowledge to achieve learning at the university level	13.6%	50.0%

Regarding the implementation of a propaedeutic program based on a psycho-pedagogical paradigm that analyzes multiple intelligences, learning styles, study habits, learning strategies and the promotion of autonomy, 92% of the teachers stated that it prevents university dropouts.

FIGURE 6
PERCEPTION OF TEACHERS REGARDING THE FUNCTIONALITY OF THE PROPAEDEUTIC PROGRAM BASED ON A PSYCHO-PEDAGOGICAL PARADIGM



Also, teachers believe that the strategy that students need to strengthen the most is comprehensive reading (21.4.%); information search (19.0%) and 14.3% the strategy of note taking and study strategies.

TABLE 10
LEARNING STRATEGIES PROPOSED BY TEACHERS TO STRENGTHEN KNOWLEDGE IN THE SUBJECT TAUGHT AT UDELAS

Learning strategies proposals	Responses	
	Percentage	Case percentages
Comprehensive reading and forming reading circles	21.4%	90.0%
Strategy for taking notes	14.3%	60.0%
Information organization strategies	14.3%	60.0%
Searching for information	19.0%	80.0%
Encourage them to ask questions (before, during and after each topic).	16.7%	70.0%
Develop study guides as part of tests.	14.3%	60.0%
Total	**100.0%**	**420%**

As a complement, teachers were asked about how to promote multiple intelligences in first year students at UDELAS, Veraguas? 26.2% stated that by providing opportunities for participation and respecting their ideas; 21.4% consider the evaluation in different skills used during academic activities; 19.0% plan evaluations based on multiple intelligences; 11.9% reinforce the abstract knowledge of the subjects and motivate students to support their peers; and 9.5% encourage them to reorder their study habits.
Aliaga *et al.* (2012) sustain that students have a characteristic profile of different intelligences that can be reinforced with the actions of competent teachers, who will be able to optimize those intelligences that are at a high level and compensate those that are at a low level.

TABLE 11
HOW WOULD YOU PROMOTE THE DEVELOPMENT OF MULTIPLE INTELLIGENCES IN THE FIRST YEAR STUDENTS OF UDELAS VERAGUAS?

Learning strategies proposals	Responses	
	Percentage	Case percentages
Provide them with opportunities to participate while respecting their ideas.	26.2%	91.7%
Reinforce the abstract knowledge of the subjects.	11.9%	41.7%
Taking into consideration a range of skills in assessments and evaluations	21.4%	75.0%
To encourage the students in the reordering of their study habits.	9.5%	33.3%
Motivate the student to peer support and teamwork	11.9%	41.7%
Plan assessments where multiple intelligences are developed	19.0%	66.7%
Total	**100.0%**	**350.0%**

Teachers recommend that the program should develop the following aspects in students: Autonomy, multiple intelligences, study habits, learning styles, prior knowledge to achieve learning at the university level, and learning strategies.

When assessing the student's socioeconomic factors, it is interesting that the research suggests learning strategies and the teachers recommend them. And to complete the information, the socioeconomic situation of the students, another fundamental factor in the student dropout process, is analyzed.

TABLE 12
SOCIOECONOMIC ANALYSIS IN THE PARTICIPATING STUDENTS OF PSYCHOLOGY AND CRIMINAL INVESTIGATION AND SECURITY CAREERS AT UDELAS, VERAGUAS

Socio-economic Aspects	Mean
Academic background	3.1154
Tendency to own goods and services	1.5897
Grade level of parents and siblings	3.2603
Family income	1.7115
Overcrowding	3.9872

In terms of academic background, a high mean (3.11) is observed, which can be interpreted as meaning that most of the people in the family circle are studying at some educational level.

Regarding the ownership of goods, a low mean (1.58) is observed, which indicates that most of them do not own or have scarce supplies to support their basic needs and, therefore, for an adequate educational development, a fundamental aspect for their stay at the university.

Regarding overcrowding (3.98) indicates that many people live in a small place, which affects the educational process and draws attention to the results versus adequate spaces to study, shown in Table 12.

The socioeconomic level allows knowing the educational, economic and social family situation of the student, for this reason Espejel and Jimenez, (2019) state in their research that the performance of students at different academic levels has positive relationships with the socioeconomic level of the parents.

DISCUSSION

In recent years, the Specialized University of the Americas (UDELAS) has developed research processes in the university community at the national level; however, despite the volume of these contributions and the incorporation of innovations into educational practice, they are still very scarce. In this sense, the research formulated is the first one related to the attention and prevention of university student dropout.

Diagnostic evaluation instruments were developed and validated to analyze risk factors, the opinions of teachers who provide services to first-year students and socioeconomic needs. A pre-test, intervention process and post-test analysis of learning strategies and study habits yielded positive, statistically significant results, indicating that the program is successful in reducing the risk factors for dropping out of the program. Regarding multiple intelligences and learning styles, with the development of the workshops, students get to know their abilities, strengths and weaknesses, and also raise their awareness so that they can take advantage of their talents in the different challenges and tasks during their university education.

The study highlights the need for propaedeutic courses, so that students know their potentialities and limitations and can face the university educational process. By achieving the potential of students' capabilities, the factors that promote student dropout are reduced. The experience allows us to understand that the student's lack of knowledge about their abilities is a problem to solve in the first year of university education in order to obtain more useful and meaningful learning, less mechanical and less focused only on memorizing to pass an exam.

The teachers think that the main factors that promote student dropout are socioeconomic factors, low self-esteem, lack of adequate study habits, lack of previous knowledge to learn at the university level and lack of knowledge of the development level of their multiple intelligences, and that the proposed program helps to improve the way they plan their schedules, strategies and assignments, to have better concentration, planning and better use of their time. In addition, they state that the strategies that students need to strengthen the most are comprehensive reading, information search, taking notes and participation before, during and after each topic.

According to the socio-economic situation of the students, most of them have scarce supplies to support their basic educational needs, limited space to study and low income, which affects their stay at the university.

It is important to analyze that the highest dropout indicators are due to socioeconomic factors, low self-esteem and lack of study habits. It is the responsibility of UDELAS to address these weaknesses with programs and to organize more recreational activities, sports, and social activities that allow students to interact with each other. Also, training is offered to teachers about the importance of putting into practice learning strategies that allow them to strengthen study habits.

UDELAS has nine (9) scholarship modalities (Academic Excellence Scholarship, Special Position, Agreement, Indigenous Communities, Artistic, Cultural and Sports Groups, Administrative Officials and Teaching Staff, People in Vulnerable Situations and Special Scholarships) that allow students to receive financial support according to their abilities and effort; however, more publicity is needed so that everyone can compete with equal opportunities.

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