Falta de orientación vocacional como factor en la deserción universitaria. Caso de estudio: zona Oriente del Estado de México

Lack of vocational orientation as a factor in university dropout. Case study: Eastern zone of the State of Mexico

A falta de orientação profissional como fator de abandono universitário. Estudo de caso: Zona Leste do Estado do México

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Resumen

En este estudio se presentan los resultados obtenidos a partir de la aplicación de un instrumento de evaluación, el cual tuvo como objetivo mostrar la falta de orientación vocacional y cómo esto puede motivar la deserción universitaria. La investigación se llevó a cabo en la Escuela Preparatoria Oficial n.° 143de la zona Oriente del Valle de México. Para ello, se implementó la metodología mixta. En la parte de la investigación documental se utilizó el método explicativo, el cual consiste en interpretar una de las causantes de los fenómenos (en este caso, la deserción escolar a nivel universitario); y para el análisis de los datos se empleó la metodología cuantitativa. Asimismo, se aplicó un cuestionario con siete preguntas sobre el contexto de la orientación vocacional a 231 estudiantes de nivel medio superior con edades entre 15 y 20 años. Los resultados muestran que la falta de orientación vocacional es un factor relevante en la deserción universitaria. Además, el 36.8 % de los estudiantes afirmó que la escuela no les proporcionó algún tipo de herramienta de orientación vocacional. En consecuencia, 87 % están interesados en utilizar algún tipo de herramienta que les ayude a tener una mejor orientación vocacional. Estos resultados indican la importancia de contar con herramientas en dicha área accesibles y eficientes para los estudiantes de bachillerato, lo cual podría reducir el nivel de deserción escolar de nivel universitario.

Palabras clave: deserción escolar, desorientación vocacional, educación media superior, factores institucionales.

Abstract

This study presents the results obtained from the application of an evaluation instrument, with the objective of showing the lack of vocational orientation and how this can be a reason for dropping out of college, this study was carried out at Official High School No. 143 in the Eastern zone of the Valley of Mexico. For the above, a mixed methodology was used: in the documentary research part, the explanatory method was used, which consists of interpreting one of the causes of the phenomena, in this case, school dropout at the university level; and for the analysis of the data, the quantitative methodology was used. A questionnaire with seven questions on the context of vocational orientation was applied to 231 high school students between 15 and 20 years of age. The results showed that the lack of vocational orientation is a relevant factor in university dropout. Some 36.8% of the students affirmed that the school did not provide them with any type of vocational orientation tool. In addition,

87% of the students surveyed are interested in using some type of tool to help them have a better vocational orientation. These results indicate the importance of having accessible and efficient vocational guidance tools for high school students, as this could reduce the dropout rate at the university level.

Keywords: school dropout, vocational disorientation, high school education, institutional factors.

Resumo

Este estudo apresenta os resultados obtidos a partir da aplicação de um instrumento de avaliação, que teve como objetivo mostrar a falta de orientação profissional e como isso pode motivar a evasão universitária. A investigação foi realizada na Escola Preparatória Oficial nº 143, na zona leste do Vale do México. Para isso, foi implementada a metodologia mista. Na parte da pesquisa documental foi utilizado o método explicativo, que consiste em interpretar uma das causas dos fenômenos (neste caso, a evasão escolar no nível universitário); e metodologia quantitativa foi utilizada para análise dos dados. Da mesma forma, foi aplicado um questionário com sete questões sobre o contexto da orientação profissional a 231 estudantes do ensino secundário com idades compreendidas entre os 15 e os 20 anos. Os resultados mostram que a falta de orientação profissional é um fator relevante na evasão universitária. Além disso, 36,8% dos alunos afirmaram que a escola não lhes disponibiliza algum tipo de ferramenta de orientação profissional. Consequentemente, 87% têm interesse em utilizar algum tipo de ferramenta que os ajude a ter uma melhor orientação profissional. Esses resultados indicam a importância de se ter ferramentas nessa área que sejam acessíveis e eficientes para os alunos do ensino médio, o que poderia reduzir o nível de evasão escolar no nível universitário.

Palavras-chave: abandono escolar, desorientação profissional, ensino secundário, factores institucionais.

Introduction

Vocational guidance has been a topic of little relevance for students due to two main reasons (Hofer and Sagli, 2017). Firstly, most teachers lack the necessary specialization in the psychological field to guide students in vocational issues, which is perceived by the students themselves. Secondly, the lack of tools, such as vocational guidance courses or work materials, provided by schools to high school teachers is insufficient or non-existent to support students in strengthening and developing their skills to make informed vocational decisions.

Furthermore, it is important to note that 30% of parents consider that vocational studies are not suitable for their children, resulting in a lack of knowledge of traditional and electronic tools designed to provide vocational guidance. By not considering these tools adequate, they are not used, which leads to the choice of a university career being generally hasty and carried out without the necessary knowledge.

According to a statement from the Economic Commission for Latin America and the Caribbean (ECLAC) (2002), 37% of adolescents aged 15 to 19 leave school before completing the school year, which reduces the number of people with knowledge and specific professional skills to obtain well-paid jobs without having completed a professional career.

In the case of education in Mexico, it has been significantly affected by the covid-19 pandemic. In fact, the prolonged disruption to in-person classes has created gaps in skill development and resulted in lost learning opportunities due to the shift to distance education. Therefore, it is pertinent to use vocational guidance tools, specifically focused on this type of education, that contribute to the informed choice of a professional career.

According to the National Survey on Access and Permanence in Education (ENAPE) (2021), 95.6% of the population aged 3 to 29 enrolled in the 2021-2022 school year has a smart cell phone, 77.5% have digital television, 50.9% have access to a computer, and 22.7% have a tablet. Furthermore, it has been observed that as the educational level of enrollment increases, the percentage of people who reported having a desktop or laptop computer in their home also increases: 36.6 % in preschool, 46.1% in secondary school, 60.6% on average higher and 85.1% at higher level. Simply put, distance education has been a key tool in keeping students connected to their studies and avoiding disruption to their education.

Reference frame

According to the *Dictionary* of the Royal Spanish Academy (RAE), desertion is the "disappearance or abandonment that someone makes of the appeal they had filed." Miranda and Guzmán (2017) comment that dropout is also defined as abandoning the study program without having obtained the title or degree, or as the passage of a considerably long time that makes the idea of a possible reintegration into the institution difficult.

Due to this phenomenon, Seminara (2020) maintains that higher education institutions must evaluate their efficiency and effectiveness in their educational work, since the results of their management can be one of the causes of dropout. Therefore, dropout can be associated with the deficiencies that educational institutions present in terms of efficiency and effectiveness.

In accordance with the above, González and Arismendi (2018) consider that dropout should not be assessed as an isolated and decontextualized situation. Furthermore, according to these authors, dropping out does not necessarily imply definitive resignation from the institution, since to be classified as such, the student should formalize his withdrawal from the institution where he is pursuing his university studies.

For his part, Díaz (2008) argues that dropout is equivalent to the decrease in the student's initial intentions, which is based mainly on beliefs and attitudes, which influences their decision to continue or not with their education. In this regard, Lagunas and Piña (2007) add that desertion is related to the academic planning of the various careers, the pedagogical and academic profiles of the teaching staff, as well as the infrastructure and services that the institution provides to adequately facilitate the process of study.

Logically, university dropouts are a problem that affects not only Mexico, but also different countries around the world, hence if it is not resolved satisfactorily, the problem could worsen in the future.

In the case of Chile, Ortiz and Del Valle (2020) point out that in the last decade access to higher education has experienced a significant increase, especially for the first socioeconomic quintiles. However, despite the increase in access, it is notable that the number of students who manage to stay in university and graduate remains low. This poses new challenges for academic institutions; In particular, the importance of vocational guidance is highlighted and the high cost of making wrong decisions in choosing a career is emphasized, which is even more burdensome for students from less privileged families.

In this sense, Casas Rojas (2022) provides evidence on the correlation between vocational orientation and the degree of satisfaction of students with the university career

they choose. Their study focuses on high school graduates trained under the Specialty Areas Project (PAE) at the Enrique Lindemann B Educational Unit. The results support the proposed hypothesis, as it demonstrates that an adequate implementation of the vocational guidance process leads to the choice of a career that generates high satisfaction during university education. Likewise, it is highlighted that the PAE enriched the vocational guidance process through modifications in the curriculum and the development of life projects. The survey applied revealed a strong relationship between the vocational guidance received and the degree of satisfaction with the chosen university career.

On the other hand, Orozco-Rodríguez (2022) identified the possible causes of school dropout in Mathematics degree students and developed a logistic regression model to predict the risk of dropout. Their research found that factors such as the quality of prior education, vocational guidance, teaching performance, and limited economic resources act as protective factors against dropping out of school. Consequently, this author recommends the expansion of financial support programs, an improvement in psychological and academic counseling services, as well as the implementation of a vocational guidance program before enrollment in the program.

Another study worth mentioning is the one carried out by Dillon-Pérez *et al.* (2023), which focuses on the professional orientation process and its impact on the choice of university majors by third-year high school students, both from public and private institutions in Ecuador. The results of the study suggest that career choice is influenced by factors such as the type of school students attend, gender, and the general or specific nature of the field of study. In addition, the study proposes a new methodology to carry out a process of professional advice and guidance that allows students to make informed decisions about their future university careers in order to avoid gender stereotypes and ensure that decisions are based on the individual capabilities and potentialities of each student.

These data collected suggest that one of the main causes of university dropouts lies in the lack of vocational guidance. Furthermore, they show that many students enter university without having a clear idea of what career they want to pursue, which can lead to indecision and eventually dropping out. Likewise, those who lack a defined vision of their professional future may find it difficult to maintain motivation and purpose in their studies, which increases the likelihood of dropping out before completing their academic training. These data highlight the lack of vocational guidance as a critical factor in university dropout and highlight the importance of providing vocational support and advice to students.

Another research developed in Ecuador is that of Santana and Vigueras (2023), who focus on the use of vocational and professional guidance (OVP) in higher education. Although the results presented are preliminary and are part of ongoing research, the model and the findings obtained indicate a positive impact on the number of students aspiring to enter higher education. The study also reflects on the possibility of higher education institutions in Ecuador expanding OVP in the context of assisted virtual education (EVA) and how OVP can become a continuous process of support and guidance aimed at helping students. to develop their cognitive and motivational skills, which would allow them to make informed decisions about their careers and commit to the quality of their training. Likewise, it addresses how the OVP, in conjunction with ICT, can contribute to the design of new learning environments and the reduction of school dropouts based on the occupational choice of students.

Finally, Díaz *et al.* (2009) emphasize that the vocational profile is made up of various elements, such as interests, personality and aptitudes, among others, and is considered a fundamental component for academic success and the prevention of school dropouts.

Types of attrition

According to Vásquez *et al.* (2003), there are different types of dropout at the university level, although the authors highlight three types, as shown in figure 1:

1. Early dropout: The student abandons the program before starting, despite having already been accepted.
2. Early dropout: The student leaves the program in the first four semesters.
3. Late dropout: The student abandons the program from the fifth semester onwards.

Figure 1. Types of attrition

Source: Own elaboration based on Vásquez et al. (2003).

The aforementioned authors also point out that there is a difference between total dropout and partial dropout. In the first, the student completely abandons the educational plan and in the second, he temporarily withdraws and later returns to continue his studies.

For their part, González and Arismendi (2018) point out 6 types of dropout, described in Figure 2: total, discriminated by causes, by faculty, by program, in the first semester of the degree, and accumulated.

Figure 2. Attrition Categories

Source: Own elaboration based on González and Arismendi (2018)

Factors causing dropout

Vasquez *et al.* (2003) expose both external and internal variables that influence the risk of student dropout. The most frequent causes tend to be academic and socioeconomic in nature, while those of an individual and institutional nature have been explored to a lesser extent.

It is important to highlight that situations in which students change from one institution to another within the state education system should not be considered as dropouts in the strict sense of the word, since they are simply internal transfers within the educational system.

Bravo and Mejía (2010) explain that one of the factors that can lead to university students dropping out is the lack of fundamental skills. For example, reading comprehension is a crucial skill at all educational levels, as it allows students to extract essential information for their academic development. However, educational institutions face the challenge that

many of their students have not adequately developed this skill, which can lead to additional problems.

In summary, and as stated by Vásquez *et al.* (2003), the factors that can gradually lead a university student to abandon their studies cover academic, socioeconomic, individual and institutional aspects.

Individual factors

Individual factors refer to aspects that are directly related to the individual, such as their personal goals and the motivation they experience to achieve them. According to the study by Moreta *et al.* (2017), motivation is defined as an intrinsic quality of the human being, which acts as a driving force to carry out actions that are planned or executed at the moment. It is a force inherent to the person that is not subject to external circumstances and manifests itself autonomously, as mentioned in Figure 3, hence the lack of motivation is perceived as a factor that can cause loss of interest in the completion of a process.

Figure 3. Types of motivations in students

Source: Own elaboration based on Marín and Velasco de Lloreda (2005).

Individual factors, according to Moreta *et al.* (2017) are described below:

1. Emotions: Refers to the tools that the student has emotionally to face and adapt to the pragmatics of the educational area, for example: low or high self-esteem, depression, factors related to their economy, etc., which gives way to the next point.

2. Misadaptation: As mentioned in the previous part, these factors are essential to be able to adapt both socially and academically.

3. Interest in the career to study: Refers to a taste and possible curiosity about the career offered at a university; However, with the passage of time the student realizes that he does not meet the standards originally planned , so he considers dropping out as a possible way out.

Institutional factors

For De Vries and Grijalva (2021), institutional factors encompass aspects such as the availability and diversity of study programs, entry requirements, the quality of the services offered, schedules and shifts, the difficulty of the subjects, as well as the attitude of the teaching staff, among others.

In particular, pedagogical and academic profiles are of great relevance in institutional factors, since they determine the opportunities and possibilities that educational institutions provide to initiate and maintain university studies. This may include financial support programs or incentives that facilitate the continuation of studies. According to De Vries and Grijalva (2021) and Camarena Gómez *et al.* (2009), some of the institutional factors related to desertion are the following:

1. Performance: It is understood as the time dedicated to activities, the loss of the semester and subjects. This may have the possible consequence of educational lag and dissatisfaction with the academic program, as well as unrest, dissatisfaction and insecurity with the activities they carry out or with what they have learned.

2. Vocational disorientation: It is the lack of adequate guidance, primarily at the middle-higher level, which can result in an erroneous choice of the career to be studied.

Currently, institutions are required to develop accommodation strategies that allow students to be trained so that they can adapt to new situations.

Scenario in Mexico

In 2021, a comparison was carried out between the total enrollment of higher level students in Mexico, for which data provided by the National Institute of Statistics and Geography was used (Inegi, 2022). The analysis focused on the student population of Mexico City (CDMX) and the State of Mexico (EDOMEX), and considered information collected during the last decade. The purpose of this comparison was to identify the most recurrent factors in school dropout.

Table 1 presents the number of students enrolled in higher education institutions in Mexico in the years 2010, 2015 and 2020. An increase is observed in university enrollment in Mexico City, which went from 462,581 students in 2010 to 560,680 in 2020. Similarly, the State of Mexico also experienced an increase in the number of enrolled students, going from 314,472 in 2010 to 460,578 in 2020.

In terms of growth, it is notable that the most significant increase in the number of enrolled students occurred between 2010 and 2015, with an increase of 17.8%. However, growth between 2015 and 2020 was more moderate, increasing by 7%.

Table 1. University enrollment

UNIVERSITY

YEAR	2010	2015	2020
CDMX	462 581	530 036	560 680
Mexico state	314 472	415 399	460 578
Total enrollment	777 053	945 435	1 021 258
% growth	0	17.8%	7%

Source: Inegi (s.f)

Desertion

Table 2 shows that the dropout rate at higher level in 2010 was 11%, for a total of 85,475 students. In 2015 the dropout percentage was 13.3%, giving a total of 125,743 students and in 2020 the dropout percentage was 17.1%, for a total of 174,635 students.

Table 2. University dropout

UNIVERSITY			
YEAR	2010	2015	2020
Cdmx	3.8	3.7	7.0
Mexico state	7.2	9.6	10.1
Total attrition	eleven	13.3	17.1
Total students	85 475	125 743	174 635

Source: Inegi (s.f)

Table 2 shows data on university dropouts in two regions of Mexico in the years 2010, 2015 and 2020. In Mexico City, the university dropout rate increased from 3.8% in 2010 to 7.0% in 2020. In the State of Mexico, went from 7.2% in 2010 to 10.1% in 2020. The total university dropout rate in both regions increased from 11% in 2010 to 17.1% in 2020.

Furthermore, it can be seen that the total number of students in both regions increased significantly from 85,475 in 2010 to 174,635 in 2020, indicating growth in university enrollment. However, it can also be seen that the dropout rate has increased.

Since dropping out of school can have a significant impact on students' academic and career success, it is important to try to address the factors that contribute to dropping out. For example, the lack of career guidance may be one of these factors, as it may lead students to enroll in study programs that are not suitable for them and therefore increase the risk of dropping out. Consequently, it is important to ensure that students receive appropriate career

guidance to help them make informed decisions about their studies and increase their chances of academic and professional success.

Investigation objectives

The purpose of this research was to know the factors of appreciation, understanding and knowledge of vocational orientation in high school students from the Eastern area of the State of Mexico, through the application of an evaluation instrument (questionnaire) with the purpose of exposing Lack of vocational guidance as a factor in university dropout. For this, the following activities were carried out:

- Analyze the experience that high school students have regarding vocational guidance through a questionnaire.
- Evaluate the data obtained to present the results.
- Determine the impact that the lack of vocational guidance has as a factor in school dropout.

Materials and methods

The methodology used for this work was mixed; The documentary research was qualitative, for which the Redalyc repository and the Google Scholar search engine were used with the objective of searching for reliable information on the subject. Likewise, the explanatory method was used, which consists of interpreting one of the causes of the dropout phenomenon, particularly in the eastern area of the Valley of Mexico, to determine if vocational guidance impacts student dropout.

To analyze the results, quantitative methodology was used, which refers to the collection of numerical and statistical data for interpretation. Consequently, a questionnaire was applied to a convenience sample of high school students to know the current level of knowledge and expectations. The questionnaire contained a total of seven questions about the opinion that high school students have regarding vocational guidance. The purpose was to specify students' knowledge about vocational guidance tools.

Results

The quantitative data analysis was carried out through the application of an online questionnaire, which was answered by 231 students, aged between 15 and 20 years of high school level from the municipality of San Vicente Chicoloapan of the Official Preparatory School No. 143, distributed between first, second and third year. It is worth highlighting that in this research the students surveyed responded anonymously so that their answers were completely honest. In addition, a statistical and text analysis was carried out to interpret the information obtained.

Discussion

Group of students at the high school level

The results of the online survey allowed us to determine that 24.2% are in the third year, 40.7% in the second year and 35.1% in the first year (table 3). Of this population, 63.2% state that the school provides them with some questionnaire or vocational guidance tool (e.g., an elective course during the curriculum), while the other 36.8% state that nothing is provided to them. style.

Table 3. Percentage of students surveyed depending on their school grade.

SCHOOL GRADE	10%	twenty%	30%	40%	fifty%
First year			35.1%		
Second year				40.7%	
Third year		24.2%			

Source: self-made

Table 4. Vocational knowledge indicator

ANSWER	PERCENTAGE (%)
Yeah	63.2%
No	36.8%

Source: self-made

Table 5, which is based on the positive percentage (63.2%) in Table 4, reflects that 50% of the students surveyed indicate that the school offers online career guidance questionnaires. On the other hand, 35.6% mention that they are provided with conventional orientation questionnaires in printed form. In addition, 11.6% affirm that they receive courses on vocational guidance, and 2.8% report that they participate in activities related to the development of life projects. Some students also mention attending talks on vocational guidance and occasionally participating in video conferences with various universities. The latter aim to provide information to make informed decisions about your career choice, although they often focus on the career offerings of those particular universities.

Table 5. Tools offered by the institution **.**

TYPE OF TOOLS	PERCENTAGE (%)
Online Vocational Guidance Questionnaires	50%
Written Vocational Guidance Questionnaires	35.6%
Courses on vocational guidance	11.6%
Others	2.8%

Source: self-made

Table 6 shows that 87% of students express interest in using a tool to guide them in their vocational choice, while only 13% express disinterest in using support tools. Within the group with interest (87%), 59.6% prefer to answer vocational guidance questionnaires online, in contrast to 38.9% who opt for printed paper questionnaires. Only 1.5% show a preference for participating in a face-to-face course where topics are addressed that will help them make a satisfactory decision about their future university career, as detailed in table 7.

Table 6. Interest in new tools

ANSWER	PERCENTAGE (%)
Yeah	87%
No	13%

Source: self-made

Table 7. Tools of interest

TOOL TYPE	PERCENTAGE (%)
Physical questionnaire	38.9%
Online questionnaire	59.6%
Presence course	1.5%

Source: self-made

Because vocational guidance begins in the high school stage, although it is essential to follow it up in university education, table 8 addresses the knowledge of high school students about the tools provided by universities. It is observed that 84.8% of students are not aware of any university that offers vocational guidance tools accessible to all. On the other hand, 15.2% of students claim to be aware of one or more universities that provide support tools for adequate vocational guidance.

Table 8. Percentage of knowledge of vocational tools

ANSWER	PERCENTAGE (%)
Yeah	15.2%
No	84.8%

Source: self-made

According to the above, 15.2% of the students mentioned the name of a university that has provided them with various vocational guidance tools, which include everything from questionnaires and vocational guidance courses to guides or university entrance exam simulators. However, this information is known to a minority of students. Below is a list of responses provided by students who are aware of universities that offer these tools:

- The National Autonomous University of Mexico (UNAM).
- The Autonomous University of the State of Mexico (UAEM).
- National Polytechnic Institute (IPN).
- Autonomous University of Mexico (UAM).
- Autonomous University of Chapingo (UACH).
- Technological University of Mexico (UNITEC).
- Humanist University.
- Technological Institute of Higher Studies of Chimalhuacán (TESCHI).

- University of the Valley of Mexico (UVM).

Table 9 highlights that 88.3% of the students surveyed express their desire for the results of their vocational guidance to be delivered automatically to avoid long waiting times. In contrast, 11.7% indicate that they do not mind receiving the results automatically and are willing to wait the time necessary to obtain them.

Table 9. Automatic results

ANSWER	PERCENTAGE (%)
Yeah	88.3%
No	11.7%

Source: self-made

According to the results obtained, it is essential to highlight the role of educational institutions, which not only provide pedagogical and academic resources to their students during their time at the institution, but also play a crucial role in preventing institutional factors related to dropout (De Vries and Grijalva, 2021; Camarena Gómez *et al.*, 2009). In this sense, as Santana and Vigueras (2023) point out, it is essential to provide students with vocational and professional guidance (OVP) tools as an integral part of their academic training, which could be achieved through the timely provision of professional materials before who enter university higher education. Furthermore, as indicated by Moreta *et al.* (2017), when students are in tune with their choice of university career, they have greater intrinsic motivation to successfully complete their professional studies.

Conclusions

A questionnaire was applied to 231 students between 15 and 20 years old with the purpose of evaluating their opinions and knowledge about vocational guidance. These students belong to the Eastern area of the State of Mexico, specifically to the Official Preparatory School No. 143. The results revealed that the lack of vocational guidance is perceived as an influential factor in university dropout. In general terms, these findings highlight a high demand by students for vocational guidance tools that help them in choosing their university majors.

The questionnaire served to measure aspects of appreciation, understanding and knowledge of vocational guidance in students. The objective was to determine if they recognized the importance of this topic, if they were open to receiving guidance in this regard, and if they were aware of the methods and tools available for vocational guidance. Their perception of the usefulness and effectiveness of these tools in making vocational decisions was also evaluated. The results of the survey application highlight the following: a) there is a general lack of knowledge of vocational guidance techniques on the part of students; b) when they become familiar with these techniques, they show a preference for digital format surveys that provide immediate results.

Now, although 63.2% of the 231 high school students surveyed stated that their schools provide them with vocational guidance, 87% of them express interest in having accessible and efficient vocational guidance tools to help them choose their career. university (see table 7). These results suggest that providing adequate information about career options and the skills required for each profession could allow students to make more informed decisions about their academic and professional future.

Regarding the vocational guidance modality, 59.6% show interest in answering online questionnaires, 38.9% prefer printed paper questionnaires, and 1.5% prefer to attend face-to-face courses.

However, it is worrying that 84.8% of students are not aware of universities that offer vocational guidance tools accessible to all. This lack of access to relevant information could be a contributing factor to university dropouts. Therefore, improving and strengthening vocational guidance from upper secondary education could help students make decisions that are more aligned with their objectives and convictions.

The appropriate choice of university major is crucial for the internal motivation of students and to prevent abandoning their studies. When students choose majors that fit their interests, skills, and values, they tend to increase their motivation and engagement in college, which in turn can contribute to their completion. Therefore, it is imperative that educational institutions, from the high school level to the professional level, work together with vocational guidance professionals to provide students with the necessary support and information and prevent the lack of vocational guidance from being a factor that influences university dropout.

Future lines of research

Among future works, it is planned to design a free computational tool that, through artificial intelligence algorithms, provides information on vocational guidance, so that it is provided to the student automatically. Another point to consider is to follow up, with the developed *software,* the students who have already chosen a university degree to verify the efficiency and effectiveness of the computational tool. Also, make the necessary modifications and updates to the system.

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