

ARTICULATION BETWEEN SECONDARY AND HIGHER EDUCATION: CHALLENGES AND RESULTS IN THE REGION OF NARIÑO

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ABSTRACT

This article is the result of a study on the relevance and quality of articulation processes between secondary and higher education in Nariño, Colombia. A mixed-method approach was used, employing both statistical methods and qualitative analysis to understand managers', teachers', and students' perceptions of educational articulation. In a non-experimental, cross-sectional design, data were collected at a single point in time, with no intentional manipulation of variables, observing the processes as they occurred in their natural academic context. The study analysed the articulation processes based on propaedeutic cycles, the public policies of the Ministerio de Educación Nacional of Colombia and the inter-institutional experiences that link secondary education with technical and vocational training programmes. Through this analysis, the motivations and educational interests of the students were identified, as well as the strengths and weaknesses of the articulation programmes. It was concluded that articulation between educational levels is essential to improve the transition of students to higher education, but the need to review and adapt the curricula of educational programmes to align them with the demands of the labour market and regional realities was highlighted. Furthermore, the lack of a consolidated governmental strategy was highlighted, which limits the impact of these policies at the local level. It is suggested that inter-institutional strategies should be deepened and teacher training strengthened in order to improve the quality of the educational articulation process in the future.

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Keywords: perceptions; quality; articulation; higher education; students; teachers.

Articulación entre educación media y superior: retos y resultados en la región de Nariño

RESUMEN

Este artículo es el resultado de un estudio sobre la pertinencia y calidad de los procesos de articulación entre la educación media y la educación superior en Nariño, Colombia. Se utilizó un enfoque de métodos mixtos, empleando tanto métodos estadísticos como análisis cualitativos para conocer las percepciones de directivos, docentes y estudiantes sobre la articulación educativa. En un diseño no experimental, de corte transversal, los datos fueron recolectados en un único momento en el tiempo, sin manipulación intencional de variables, observando los procesos tal como ocurrieron en su contexto académico natural. El estudio analizó los procesos de articulación a partir de los ciclos propedéuticos, las políticas públicas del Ministerio de Educación Nacional de Colombia y las experiencias interinstitucionales que vinculan la educación media con los programas de formación técnica y profesional. A través de este análisis, se identificaron las motivaciones e intereses educativos de los estudiantes, así como las fortalezas y debilidades de los programas de articulación. Se concluyó que la articulación entre niveles educativos es fundamental para mejorar la transición de los estudiantes a la educación superior, pero se destacó la necesidad de revisar y adaptar los planes de estudio de los programas educativos para alinearlos con las demandas del mercado laboral y las realidades regionales. Además, se destacó la falta de una estrategia gubernamental consolidada, lo que limita el impacto de estas políticas a nivel local. Se sugiere profundizar las estrategias interinstitucionales y fortalecer la formación docente para mejorar la calidad del proceso de articulación educativa en el futuro.

Palabras clave: percepciones; calidad; articulación; educación superior; estudiantes; profesores.

Introduction

The articulation between secondary and higher education in Colombia is implemented through inter-institutional agreements carefully structured in educational projects that promote comprehensive training and greater access to higher education for secondary school students, consolidating life projects aligned to their needs (Fernández Quintana, 2020, Gómez Campo, 2000, Jaimes-Lara, 2013, Pérez Dávila, 2018). This is achieved through the implementation of propaedeutic cycles (Ministerio de Educación Nacional, 2018), which allow students in grades 10 and 11 to link early to technical, technological and professional training programmes (Velasco Peña, 2025; Gaviria Hincapié, 2024). This articulation not only facilitates the transition between secondary and higher education, but also, through comprehensive training routes to 'improve professional performance and achieve the purposes of the organisation and/or institution' (Cejas et al., 2019, p. 2), helps to respond to the needs of the environment and improves employment and entrepreneurship opportunities for young people (Sánchez Echeverri, 2024; Barrero et al., 2022).

Igua-Alfonso (2016) stresses that training must transcend the limitations of traditional education, stating that “it is not possible for students to continue receiving training that restricts their possibilities” (p. 26). 26), which highlights the need for reforms to educational policies that promote the closing of the gaps between secondary and higher education, in order to open up opportunities for entry to higher education in the regions, as stipulated by Law 30 of 1992 (Melo-Becerra, Ramos-Forero and Hernández-Santamaría, 2017), specifically in the perspective of Latorre-Villacís, (2020) who upholds the idea that “social struggle of students to demand their desired careers” (p. 13).

Therefore, educational articulation as an academic and administrative process allows for social transformation and is a necessary bet for inclusion and improvement of basic education (Vera-Guzmán et al., 2018). This makes it possible to manage the expectations of students in relation to their transition to higher education, given that, in general, basic education institutions do not have the tools for the development of learning, affecting the low level of incorporation of high school graduates into higher education (Sanes-Álvarez & Santamaría, 2018, p. 15).

In view of the above, the Ministerio de Educación Nacional has generated various strategies aimed at strengthening secondary education and facilitating access to higher education, of which the Call for Proposals of the Secondary Education Promotion Fund (FEM) held in 2013 and 2015 stands out (Ministerio de Educación Nacional, 2015, Ministerio de Educación Nacional, 2013). This call financed projects, including «*Promotion of Secondary Education and Transit to Higher Education*», which was presented and implemented by the Universidad Mariana, led by the Marketing programme with the pedagogical support of three teachers from the INDAGAR group of the Master's Degree in Pedagogy. In this project, a Professional Technical Programme in Marketing was implemented with secondary education institutions in the department of Nariño, within the framework of a process of articulation. In this context, the study focused on characterising the articulation process with participating secondary school students, as well as exploring the perceptions of directors, teachers and students in this regard (Trejo-Chamorro et al., 2022).

Consequently, this study designed an information-gathering instrument composed of closed and open-ended questions, which made it possible to identify the motivations and interests of the participants, as well as to analyse their participation and ownership of the process. Subsequently, the results were analysed from a perspective of quality and educational relevance, using statistical methods to identify trends and, through qualitative analysis, emerging categories that facilitated an in-depth interpretation of the educational context of the study (Díez-Gutiérrez, 2020; Nadal-Masegosa, 2022; Piña-Osorio, 2013).

The results of this research made it possible to understand the impact of the articulation process in terms of educational quality and relevance. Through this process, it was possible to identify the multiple motivations and educational interests of students, providing empirical evidence that can guide future educational articulation actions at regional and national levels. In this sense, the findings reported constitute valuable inputs for the structuring of more contextualised and effective public policies.

Methodology

The methodological approach used in this research was mixed, combining both qualitative and quantitative analysis, in order to obtain a comprehensive view on the impact of the

articulation between secondary and higher education. For this purpose, qualitative research methods such as semi-structured surveys and documentary analysis were implemented in the context of the project 'Promotion of Secondary Education and Transition to Higher Education'. The purpose of the study was to describe the phenomenon in question by analysing the perceptions of students, teachers and managers regarding the educational articulation between secondary and higher education. In order to gather information, document review matrices and monitoring sheets were used to evaluate the results of basic and specific competency-based training. The use of these tools made it possible to explore teachers' perceptions of the articulation process through the use of guiding questions, providing an opportunity for exchange and open reflection.

The population of this study comprised students, teachers, and administrators from educational institutions in the Department of Nariño, Colombia, who participated in the articulation project. A non-probabilistic convenience sampling was implemented for the selection of the participants. This sampling method was used to select a sample of 200 students, 20 teachers, and 10 directors. These participants were randomly selected from 10 secondary education institutions. The fieldwork methodology was implemented through the application of a semi-structured survey, which was designed with the purpose of gathering detailed information on the articulation process and collecting the perceptions of the educational actors involved. This study addressed an exhaustive review of the management reports submitted by the Ministry of National Education between 2016 and 2018. These reports constituted a component of the documentation subjected to analysis in order to evaluate educational quality and relevance. The study under consideration was developed within the framework of an evaluation project that took place after the culmination of the cycles of the articulation process, extending for approximately two years, between 2021 and 2022.

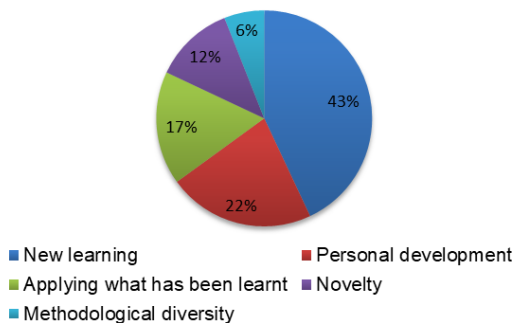
In the research process, reliability and fidelity criteria were implemented, such as the validation of the instruments by experts, in order to ensure consistency in both qualitative and quantitative analysis. For the qualitative information, deductive categories with guiding questions were implemented and validated by expert jurors. For quantitative information, the data obtained from the surveys were organised into tables and graphs, which allowed for the identification of trends and emerging categories through detailed statistical analysis. The methodological procedure was divided into several phases: initial theoretical review, instrument design, fieldwork, analysis and systematisation of the information. The analysis was carried out through the triangulation of qualitative and quantitative data, which allowed a more complete view of the articulation process to be obtained. Once the research process was completed, the results obtained were consolidated. After a thorough comparison between the theory examined and the empirical results, conclusions were drawn and integrated into the final report.

The research was carried out in strict compliance with ethical principles, ensuring confidentiality, informed consent and the voluntary participation of students, teachers and administrators. An inclusive environment was fostered with respect for the rights and perspectives of participants. The principles of beneficence, nonmaleficence and autonomy guided the process, ensuring that the results were transparent, fair and useful in improving education policy.

Results

The results of the study were grouped into three categories: course content, teachers and methodologies. The results of the study were then compared with the expectations of the students and teachers involved in the project, the aim of which was the promotion of secondary education and the facilitation of transition to higher education through the Professional Technical Programme in Marketing in propaedeutic cycles. Each category was subjected to a rigorous statistical analysis, complemented with graphical and tabular representations that reflected the expectations of the process.

Course content. Student ratings revealed heterogeneous levels of satisfaction. The students highlighted various aspects, such as the quality of learning, its applicability in everyday life, personal development, innovation and methodological diversity (Graph 1).

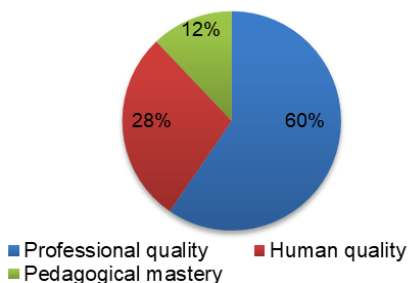


Graph 1.
Expectations of courses

As shown in Graph 1, the students' expectations in relation to the content of the courses taught within the framework of the Professional Technical Programme in Marketing are presented. It is evident that 43 % of the students stated that their expectations in relation to the learning acquired were satisfied, due to the fact that it was a quality process and that it contributed significantly to the development of competences. On the other hand, 22% of the students indicated that the process contributed to their personal development. In addition, 17% considered it applicable to everyday life, while 12% considered it innovative. The methodology implemented, i.e. the way in which the teaching-learning processes were carried out, was considered important by 6 % of the study subjects. This consideration allowed the study subjects to learn first-hand what the learning experience was like at a higher academic level. This aspect favoured the transition between secondary and higher education.

Expectations of teachers: This analysis focused on students' expectations of their teachers, which can be summarised in three fundamental aspects: firstly, professional quality, linked to theoretical mastery of the subject; secondly, human quality, associated with values, attitudes and aptitudes; and finally, pedagogical mastery, referring to strategies, teaching-learning processes and assessment criteria. As shown in Graph 2, 60 % of the students considered that the teachers demonstrated competence in the discipline; 28 % pointed out their

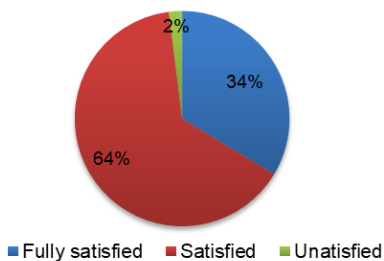
pedagogical mastery, and 12 % highlighted the human quality reflected in their practices, the accompaniment in the development of activities and the formative approach of their work.



Graph 2.

Expectations of Teachers

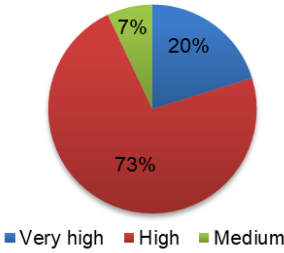
Expectations regarding the methodologies. The students stated that their expectations and motivations at the beginning of the course were satisfactorily fulfilled. In this case, 64% of the subjects were satisfied with the process, of which 34% said they were completely satisfied and 65% said they were satisfied. As can be seen in Graph 3, only 2 % of the subjects were not satisfied for personal reasons. The results obtained show a remarkable acceptance of the methodologies implemented during the course, which suggests a successful adaptation of the students to the proposed pedagogical approaches. This experience facilitated their familiarisation with the dynamics of higher education and contributed to their progress in the transition process from secondary education.



Graph 3.

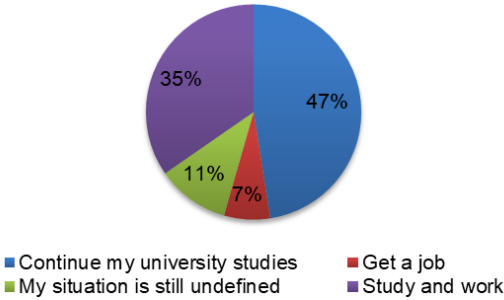
Meeting Expectations

These results reflect a high level of acceptance of the project within the academic proposal, as well as its contribution to the students' life projects. Students who successfully completed the Professional Technical Programme in Marketing gained access to higher education and job opportunities, which underlines the effectiveness of the training received. Regarding the level of knowledge acquired, 73 % of the subjects indicated a high level, 20 % a very high level and 7 % a medium level (Graph 4).



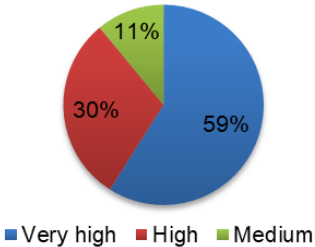
Graph 4.
Knowledge of the articulation process

On the other hand, when students were asked about their commitment to the articulation process, 47% expressed their intention to continue their studies in higher education, while 35% considered the possibility of combining studies and work in order to continue advancing in their education. The remaining 11% had not defined their situation, while the remaining 7% mentioned the need to support their families through work (Graph 5).



Graph 5.
Commitment to the articulation process

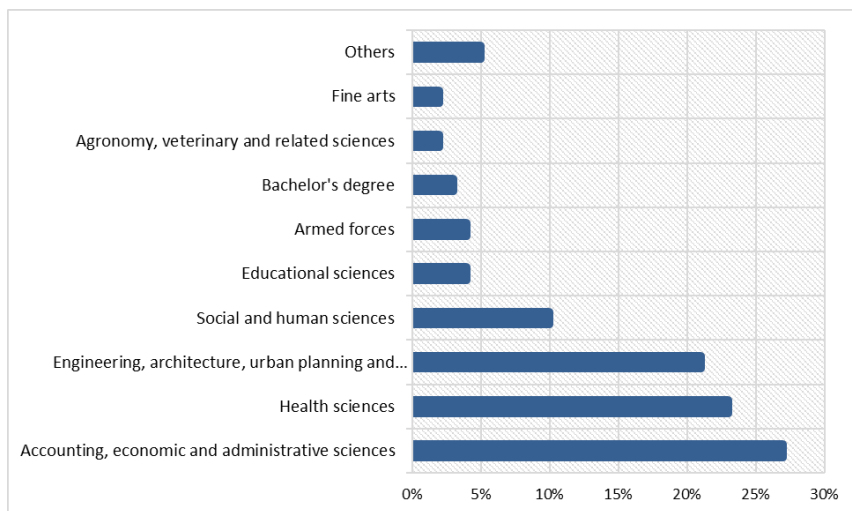
As shown in Graph 6, 59 % of the students expressed their interest in continuing with the articulation process towards another cycle of education. On the other hand, 30 % of the students expressed the need to obtain certainty about their ability to continue, while only 11 % of the students showed that they had a chance to enter university.



Graph 6.

Plans after completion of the articulation process

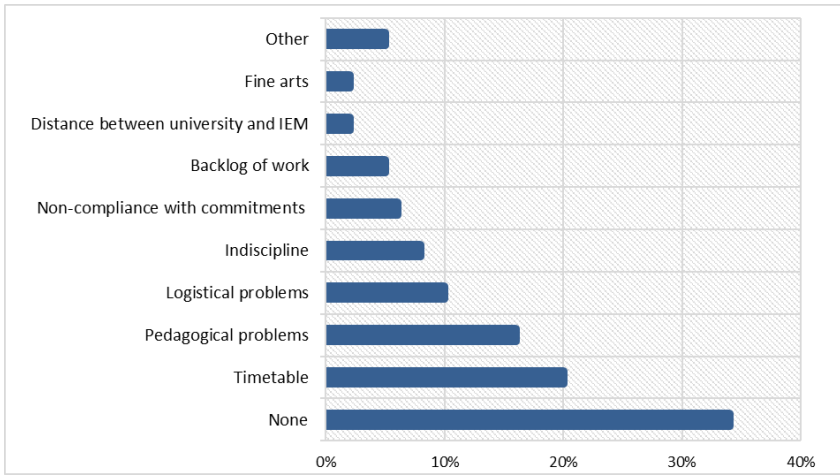
When it came to choosing a field of study, 27 % of students opted for accounting, economics and administrative sciences, particularly in programmes such as marketing, public accounting or business administration. In second place came the field of health sciences, with 23 % of students opting for this area, which covers disciplines such as medicine, nursing, physiotherapy, dentistry, pharmacy and nutrition. In the technical field, nursing assistants and occupational health were added. In third place, disciplines such as environmental, civil, systems, electronic, mechanical, automotive and mechatronics engineering, together with architecture and systems technology, were positioned. Social sciences are in fourth place with 10 %, with psychology being the most popular, followed by law, political science, philosophy and social work (Graph 7). In the field of research, education has been found to account for 4 % of the sample, the armed forces for 4 %, studies for 3 %, agronomy, veterinary science and fine arts for 2 %, while professions such as fashion design, gastronomy, geology, aesthetics and the priesthood make up the remaining 5 %.



Graph 7.

Area of knowledge

On the other hand, regarding the obstacles identified during the process of articulation with the Marian University, 65% of the students reported having experienced some difficulties, while the remaining 34% indicated that they had not faced any obstacles (Graph 8).



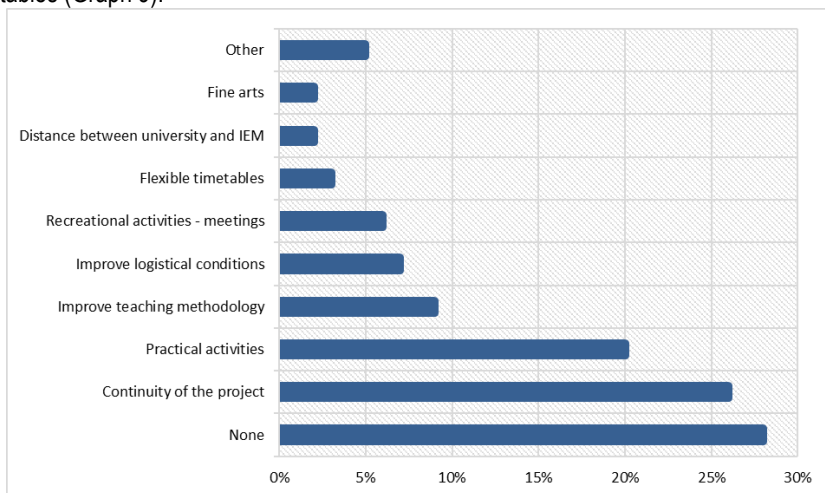
Graph 8.
Problems in the articulation process

The most frequently reported difficulty (20 %) was related to the timetable for completing the programme, which resulted in long working hours, moving and wear and tear, leading to demotivation and drop-out from the Technical Marketing programme. For 16% of the students, there were pedagogical difficulties associated with the methodologies used by certain teachers, which did not meet the academic expectations of the students. Students stated that some courses were characterised by an excessively theoretical approach, suggesting the need to incorporate practical activities, such as visits to entrepreneurship and marketing centres, as well as to fairs and other places that have demonstrated success in the field of sales.

10 % of the students faced logistical problems, most notably organisational problems that sometimes prevented planned classes and activities. Related to the above, for 2 % of the students, the distance between the university and their educational institutions represented a challenge, mainly due to lack of integration and poor communication channels. Lack of discipline, irresponsibility, lack of commitment, disorganisation and non-attendance were mentioned by 8% of the students as factors that hindered successful completion of the programme. The non-fulfilment by the coordinators of the agreed commitments regarding the delivery of grades, field trips or academic and business internships to strengthen knowledge was considered significant by 6 % of the students. In contrast to the above, 5 % of the students indicated that the accumulation of academic work in the school environment represented a restrictive factor for the full deployment of the processes inherent to the Professional Technical Programme in Marketing.

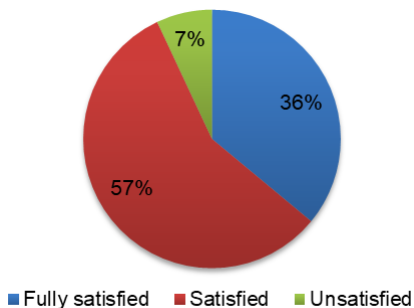
In reference to the recommendations provided within the scope of the articulation process, it was observed that 28 % of the participants did not issue any specific recommendation related to the development project and its implementation in the various stages. On the other hand, 26% of the subjects advised to maintain the continuity of the ongoing project. In addition, 20% of individuals considered it imperative to carry out activities of a practical nature, while the remaining 9% suggested the need to optimise the methodologies employed by teachers. At the research level, it was noted that 7% of the participants suggested the need to optimise logistical conditions

to facilitate the development of activities. On the other hand, 6% highlighted the importance of including recreational activities and meetings with other students and institutions. Finally, 3 % pointed out the importance of modifying the timetables of the counter-days or adopting flexible timetables (Graph 9).



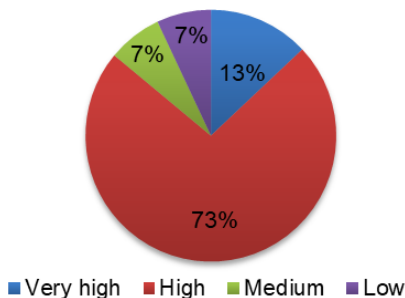
Graph 9.
 Student recommendations

Perceptions of Teachers and Principals. Concerning the perceptions of the degree of fulfilment of teachers and principals with respect to their expectations of the articulation process, it was observed that 93% of the participants considered that the project met the expectations set, of which 36% expressed total satisfaction and the remaining 57% were satisfied. The remaining 7 % rated the project as deficient in terms of meeting expectations, mainly due to problems related to communication, logistics, traditional structures of educational institutions, lack of resources, parental commitment and academic rigour (Graph 10). The results showed a general approval of the articulation process, as both teachers and principals recognised its importance in facilitating the transition between secondary and tertiary education. However, they also pointed out areas for improvement that could strengthen this articulation in the future.



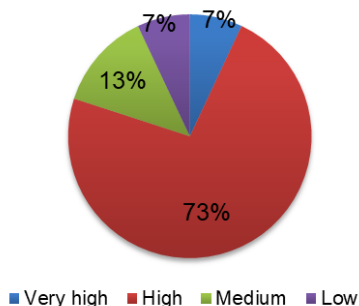
Graph 10.
Meeting Expectations

Likewise, on the fulfilment of teachers' expectations, 13% considered it to be very high, 73% high, 7% medium and the remaining 7% low. These expectations were related to the level of teachers' commitment, i.e. to their contributions, as well as to the problems identified by teachers during the development of the process. Commitment was associated with positive and negative perceptions, i.e. contributions and obstacles mentioned by teachers during the programme. Graph 11 shows the level of teachers' commitment.



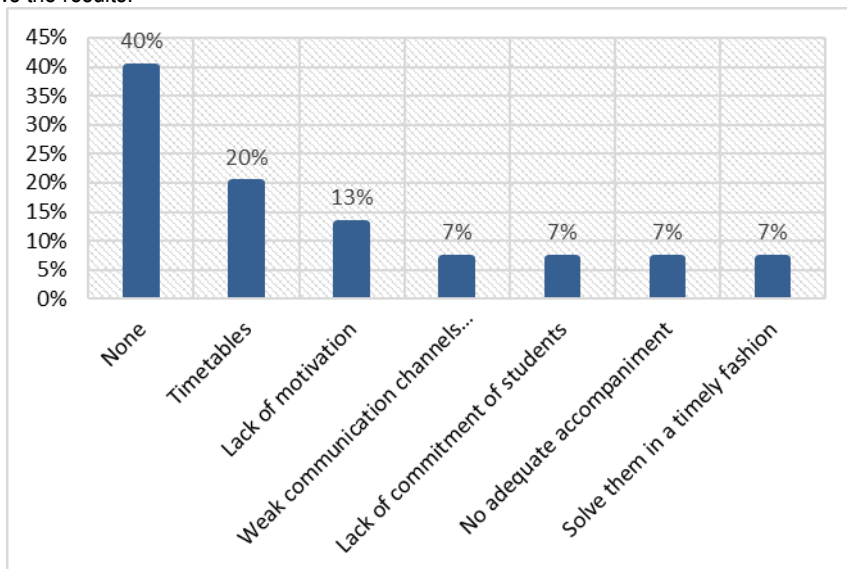
Graph 11.
Level of teacher commitment

Meanwhile, in terms of the perceptions of secondary school principals and teachers, 80 % of the respondents expressed satisfaction with the development of the articulation programme. Ten per cent of the study subjects expressed that the programme did not meet their expectations, while the remaining 10 per cent did not express an opinion on the project's delivery. 80% of the study subjects considered that the course contents were adapted to the project's objectives. According to the perception of the directors, 60 % expressed that the students showed interest in continuing their higher education and, at the same time, gained more professional skills in the process.



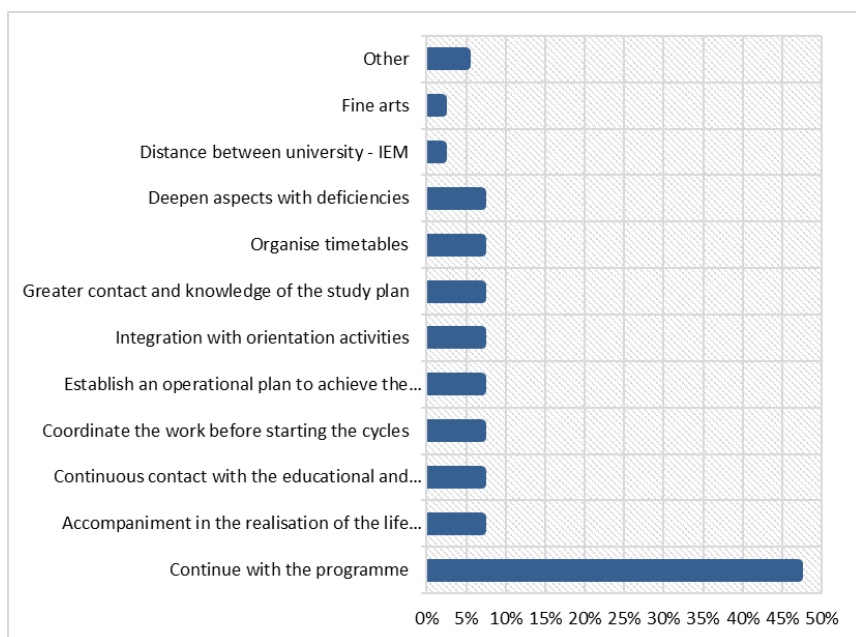
Graph 12.
Students' knowledge level

In this order, 40% of the teachers reported that they had no difficulties with the articulation process, while 60% reported a variety of problems, including 20% with class timetables, 13% with student demotivation, and 7% with weak communication channels, lack of student commitment, lack of support and lack of timely solutions to problems by the project's executors. Graph 13 shows the results.



Graph 13.
Main problems of the articulation process

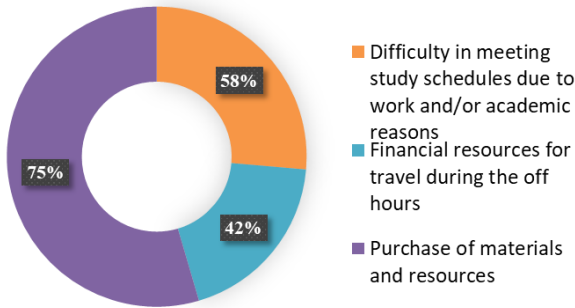
Regarding the recommendations of the teachers and directors, 47% considered that the articulation projects did not have continuity to benefit other institutions with the technical programme in marketing, to open other offers; but they highlighted the use of vocational and professional orientation strategies, aspects that in the educational institutions were very low. Among others, life project orientation and PROVOCA (vocational and professional orientation programme) were considered important (Graph 14).



Graph 14.
Teacher and management recommendations

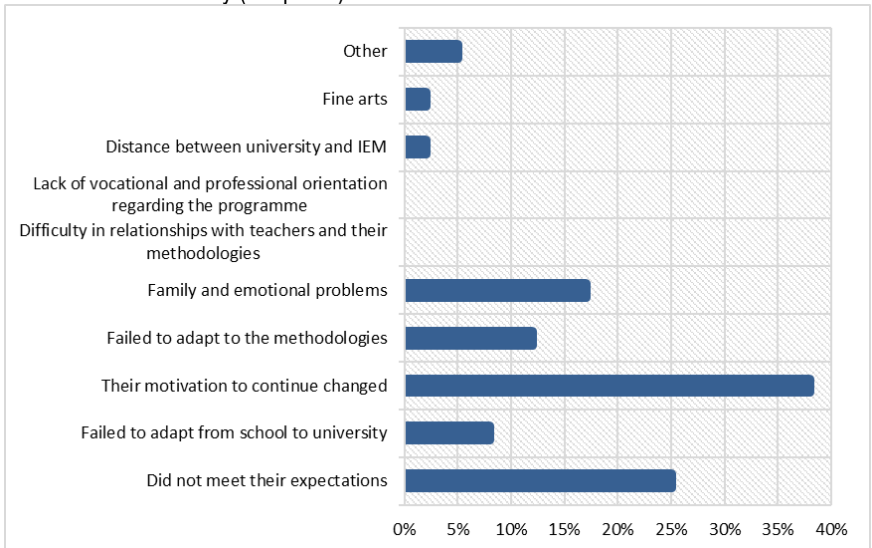
Finally, 20% of the evaluated directors considered that the process did not meet expectations, emphasizing that the content was not fully aligned with the objectives and that the methodologies were not sufficiently effective in strengthening students' practical learning. However, the process was determined to be predominantly favorable, underscoring the importance of persevering in implementing similar initiatives, albeit with modifications aimed at optimizing the teaching-learning methodologies and the logistical management of the process.

Reason for Withdrawal. Regarding the reasons for student withdrawal from the articulation process, it was identified that 58% of the cases were related to the schedule of the Marketing Technician program, which ran on the opposite schedule, making regular class attendance difficult. Added to this was the fact that many students, during that same schedule, were taking on work responsibilities to financially support their families. Furthermore, 42% stated that transportation was a decisive factor in their withdrawal from the process, as their families did not have sufficient resources to cover the additional costs associated with it. These factors, both economic and logistical, highlight the structural barriers that limit student retention in the process of linking secondary education and technical training.



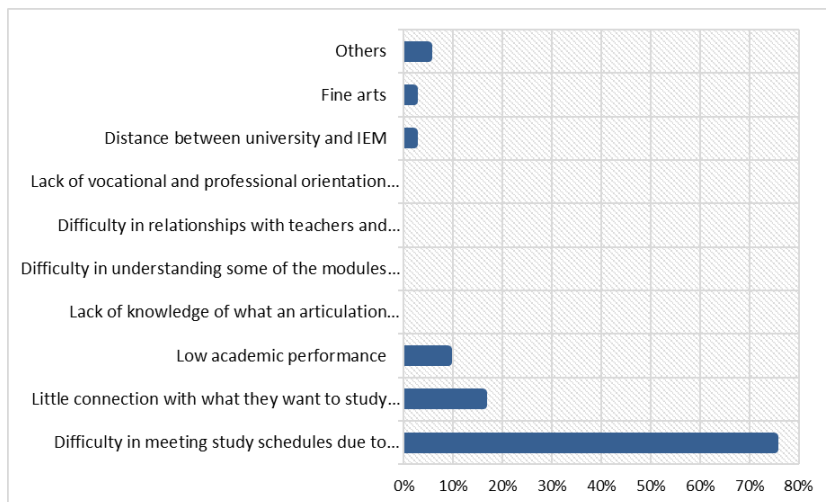
Graph 15.
 Causes of withdrawal for economic reasons

In terms of academic reasons for withdrawing, 75% of the students withdrew due to timetable conflicts. The second factor cited by 16% of the students was their low motivation towards the Technical Marketing programme. The third factor with 9% of the students was poor academic performance, which became a requirement to value the articulation activities. Likewise, for 38% of the students, the cause of withdrawal was their lack of motivation during the training process; 25% withdrew because the expectations of the project were not met and they expressed a lack of interest in the study (Graph 16).



Graph 16.
 Causes of withdrawal for personal reasons

In effect, with 17% of the students stated that the problems were of a family and emotional nature; with 12%, students who did not adapt to the methodologies of the process, and associated with this, with 8%, are the students of the courses offered in the Labour Technical Programme in Marketing. Graph 17 shows the causes of withdrawal for academic reasons.



Graph 17.
Causes of withdrawal for academic reasons

Finally, with regard to the expectations of entering university, dropping out of the programme and the desire to continue with their studies, 70% of the students expressed interest in joining an academic programme within 2 years; however, 30% considered it a distant possibility, within 5 years, mainly due to economic factors and the limited availability of educational programmes for propaedeutic cycles. The final report highlights that the PROVOCA (Vocational and Professional Orientation Programme) strategy revealed personal, family, economic and academic difficulties, as indicated in the University Welfare Plan.

Discussion

The articulation of academic processes for the transition from secondary to higher education is based on the frameworks and referents proposed by the Ministerio de Educación Nacional (2007), the educational public policies of propaedeutic cycles (Malagón-Plata, Rodríguez-Rodríguez, & Machado-Vega, 2019), the guidelines established in the Ten-Year Education Plan (Ministerio de Educación Nacional [MEN], 2017), together with the Project for the Promotion of Secondary Education and Transition to Higher Education - Calls 2013 and 2015 - FEM Fund. Its final evaluation highlighted the added value of the project, as well as new perspectives and visions for the future of education in Nariño (Ministerio de Educación Nacional [MEN], 2020).

Indeed, due to the changing needs of the education sector, contextual trends (Mosquera-Ayala, 2019) and educational crises (Velasco-Forero, 2020; Gutiérrez-Moreno, 2020; Mollis, 2014), a continuous review of policies, programmes and projects in upper secondary and higher

education is necessary to strengthen the development of basic skills and competences, as well as specific labour and/or professional competences for integration into the university system. With the changing needs of the education sector, educational trends (Mosquera-Ayala, 2019), crises (Mollis, 2014; Velasco-Forero, 2020; Gutiérrez-Moreno, 2020) and the articulation of education are key strategies to transform educational institutions, reinforcing the development of basic skills and competences and training professionals in specific occupations, introducing them to university with programmes in the propaedeutic cycles. Ocegueda-Hernández et al. (2017) argue that these educational cycles constitute a pillar for the development of people and the local economy, if the programmes are expanded, relevant and articulated for the development of students' skills.

Vargas-Montealegre (2013) argues that 'education faces a need for change and reorganisation in its structural approach to the training of young people, in response to an increasingly dynamic society' (p. 37). In this sense, Vargas-Montealegre (2013) also states that the articulation of higher education for secondary students "provides tools to improve the quality of education, addressing current needs, and represents a commitment to value and opportunities for young people" (p. 51). The Ministry of Education considers that articulation not only strengthens academic competencies, but also the academic continuity of students from socio-economically vulnerable strata; it also broadens the possibilities of the life project and improves the quality of education in the regions where the programmes operate. It seeks to reduce drop-out rates and improve enrolment rates in higher education.

In this way, the educational relevance and quality of the articulation contributes to the fulfilment of the purposes outlined by the Ministerio de Educación Nacional (MEN) (2009), in terms of «emphasising knowledge transfer practices (...) through new forms of articulation that reflect the flexibility, speed, modernisation, productivity and competitiveness that are transforming a globalised society» (p. 7). In this sense, it is worth noting that one of the most significant achievements of the project has been its academic relevance. It has been possible to adapt the curriculum of the Marketing Technician programme to the needs of secondary schools, making the curricular and pedagogical proposal more flexible through the use of different methodological and didactic strategies according to the educational contexts of the students. Specifically, the competency-based recommendations for higher education proposed by Tobón (2007) and Velasco (2019) support the identification of professional profiles, employability needs, teaching quality, strategies, methodologies, the importance of socio-emotional contexts for students, as well as interventions and support for the families of students benefiting from the articulation process.

Indeed, achieving the articulation between higher education and the programme required the establishment of an inter-institutional agreement to strengthen competency-based work (Velasco, 2019) and the participation of teachers trained by the pedagogical team of the Universidad Mariana. The team helped them to adapt the curriculum to their classes, which allowed them to better prepare students in the university context. According to Vargas-Montealegre (2013), this pathway was crucial for the training process, as it is necessary to guide students towards academic continuity and provide them with adequate preparation to enter the world of work.

Academic relevance was also given to the development of soft skills (De La Ossa, 2022; Guerra-Báez, 2019) and specific skills, where it was sought that young people, before finishing

high school, had a general and specific training; this added value allows linking students with work experience and continuing with higher education offered by public and private universities.

The students benefited were able to strengthen their reading, writing and mathematical reasoning skills, as well as develop programme-specific competencies such as sales techniques, introduction to marketing, general management, creativity, consumer behaviour, economics and accounting. It is important to note that Marian University and the Master's in Education used its institutional strength to provide strategies for student retention, professional and vocational development, family orientation and entrepreneurship. This was achieved through a proposal led by University Welfare, with a professor from the Department of Social Work of the Claretian University Foundation as the author and promoter of the professional and vocational orientation strategy (PROVOCA).

It should be noted that the most critical aspect of this process was not only for the student to come into contact with the subjects of the university programme, but also to broaden their perspective on the professional panorama, contextual factors and technical and technological requirements. As Escribano Hervis (2017) states, 'to favour the autonomous acquisition of learning for life and in all spaces; for this, the school and teachers must prepare themselves to achieve this' (p. 12). It is also essential to highlight Tobón's (2006) proposal for the development of competences that emphasise the management of uncertainty in the social, political and labour spheres in a globalised and constantly changing society (Tobón, 2006).

From this perspective, the Marketing Technician programme has focused on competences that allow students to enter into new learning experiences on the conceptual bases of sales management; mainly, the understanding of market contexts based on the challenges of professional fields. Above all, continuity with the school process, self-improvement, professional orientation and the development of attitudes were identified as important components of the life project (Montilla-Coronado, 2007).

In fact, González-Torres (2016) points out that the educational purpose lies not only in the training provided during the baccalaureate, but also in promoting the development of students' performance, cognitive and attitudinal skills. These skills are fundamental to overcome the lags they face during their schooling, as well as in their family and social environment, and to improve educational quality and teachers' pedagogical practices (Pérez, 2018). It is essential to continue reviewing the objectives of the MEN in the Ten-Year Education Plan 2016-2026, particularly in relation to the impact of the articulation process between secondary and higher education (Ministerio de Educación Nacional [MEN], 2017).

Conclusions

Educational articulation is a state policy designed to reduce the rate of high school dropout, facilitating connectivity between secondary and higher education levels, facilitating the transition to tertiary education, and generating training opportunities that enable students to access professional fields with a high degree of flexibility.

In the context of inter-institutional training processes, the implementation of a flexible, competency-based curriculum with clearly defined learning outcomes, relevant pedagogical approaches, and curricular processes that promote the integration of knowledge, skills, and values throughout the different levels of education is imperative. This approach is designed to

ensure that students are adequately prepared to confront future academic and professional challenges.

The implementation of propaedeutic cycles has been identified as a facilitating element in the transition process from secondary to higher education. This methodology has been demonstrated to optimize resources and reduce completion times. Furthermore, it integrates students into the productive sector from a technical and technological perspective. In this sense, it facilitates continuous monitoring of student progress towards vocational training, thereby enabling gradual advancement that is adapted to individual needs, learning rhythms, available resources, and the particular characteristics of each educational program.

In order to establish a robust connection with higher education at the level of secondary educational institutions, a comprehensive review of curricular programs, institutional educational projects, and educational missions is imperative. It is pressing that this process engender a transformation in teaching practices, orienting them towards an approach that fosters educational continuity and the comprehensive development of students.

Educational articulation between different levels necessitates the development of effective pedagogical strategies that foster new learning experiences. These strategies are intended not only to prepare students for working life, but also to strengthen competencies for personal and social development. Students have come to acknowledge that by recognizing and assessing their capacities, abilities, and skills, they are able to engage in projects and programs that not only contribute to their personal and social objectives but also promote regional development and contribute to the establishment of a more equitable and peaceful society.

Limitations

It is imperative to recognize that the execution of educational articulation processes and propaedeutic cycles may confront substantial challenges. These challenges may include institutional resistance to curricular modifications, variations in resource allocation among educational institutions, and disparities in pedagogical methodologies. The success of these initiatives is contingent upon sustained inter-institutional collaboration and the alignment of educational objectives. However, these factors can vary according to regional contexts and institutional capacities. In the interest of advancing the state of the field, it is imperative that future research take the following elements into consideration to strengthen and enhance articulation processes.

Recommendations

This study emphasises the need for regular review and adaptation of secondary and higher education programmes to meet the changing demands of the labour market and societal challenges. It focuses on strengthening teacher training in competence-based pedagogical approaches, suggesting that this improvement can enhance the quality of learning and facilitate smoother transitions between educational levels. It also highlights the importance of promoting stronger inter-institutional partnerships to ensure the coherence of academic programmes and provide lifelong learning opportunities for students.

The study also explores the benefits of implementing practices or projects that integrate students into the workplace from an early stage of their education. It argues that these strategies

help students to apply their knowledge and skills in real-world contexts, contributing significantly to their professional development and enhancing their future prospects in the labour market.

Declaration of Conflicts of Interest

They do not declare conflicts of interest.

Authors contribution

Author	Concept	Curation	Analysis/ Software	Research/ Methodology	Resources	Supervision/ validation	Initial writing	Final Writing
1	X	X	X	X		X	X	X
2		X	X	X				
3		X	X	X				

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