

## Management of technical training in secondary education, employability and public policies.

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**Abstract** : In the current context, the relationship between upper secondary education and the labour insertion of graduates is essential to improve employability and reduce social inequality. Technical training in secondary and upper secondary education must be adapted to the needs of the labour market, not only transmitting academic knowledge, but also preparing students with technical and soft skills. This comprehensive approach allows graduates to have greater opportunities to access quality jobs, contributing to poverty reduction and promoting more inclusive economic development. Effective public policies must strengthen technical education, guarantee its accessibility in all regions and align it with market demands. Research suggests that an educational system that combines technical training and work skills can significantly transform the employment opportunities of young people, improving their quality of life and their insertion in the labour market.

**Keywords** : technical training, secondary, upper secondary, employability, public policies

### Gestión de la formación técnica en educación secundaria o media superior, empleabilidad y políticas públicas

**Resumen**: En el contexto actual, la relación entre la educación media superior y la inserción laboral de los egresados es fundamental para mejorar la empleabilidad y reducir la desigualdad social. La formación técnica en la educación secundaria y media superior debe adaptarse a las necesidades del mercado laboral, no solo transmitiendo conocimientos académicos, sino también preparando a los estudiantes con habilidades técnicas y blandas. Este enfoque integral permite que los egresados tengan mayores oportunidades de acceder a empleos de calidad, contribuyendo a la reducción de la pobreza y promoviendo un desarrollo económico más inclusivo. Las políticas públicas eficaces deben fortalecer la educación técnica, garantizar su accesibilidad en todas las regiones y alinearla con las demandas del mercado. Las investigaciones sugieren que un sistema educativo que combine formación técnica y habilidades para el trabajo puede transformar significativamente las oportunidades laborales de los jóvenes, mejorando su calidad de vida y su inserción en el mercado laboral.

**Palabras clave**: formación técnica, secundaria, media superior, empleabilidad, políticas públicas

### Gerenciamento do treinamento técnico no ensino médio, empregabilidade e políticas públicas

**Resumo**: No contexto atual, a relação entre o ensino secundário e a inserção laboral dos diplomados é essencial para melhorar a empregabilidade e reduzir a desigualdade social. A formação técnica no ensino secundário e secundário deve adaptar-se às necessidades do mercado de trabalho, não só transmitindo conhecimentos acadêmicos, mas também preparando os alunos com competências técnicas e interpessoais. Esta abordagem abrangente permite que os diplomados tenham maiores oportunidades de acesso a empregos de qualidade, contribuindo para a redução da pobreza e promovendo um desenvolvimento econômico mais inclusivo. Políticas públicas eficazes devem fortalecer o ensino técnico, garantir a sua acessibilidade em todas as regiões e alinhá-lo com as exigências do mercado. A investigação sugere que um sistema educativo que combine formação técnica e competências profissionais pode transformar significativamente as oportunidades de emprego dos jovens, melhorando a sua qualidade de vida e a sua inserção no mercado de trabalho.

**Palavras-chave**: formação técnica, ensino médio, ensino médio, empregabilidade, políticas públicas.



## 1. Introduction

Technical training management at the secondary and upper secondary education levels aims to solve a complex problem that has profound repercussions on the social and economic development of nations, especially in contexts where socioeconomic disparities are marked. This phenomenon is reflected in multiple dimensions ranging from limited access to quality educational programs to the inability of the educational system to align with the dynamic demands of the labor market, which perpetuates social exclusion and limits opportunities for progress, particularly for young people from vulnerable sectors. One of the most critical aspects of this problem is unequal access to technical training. In many regions, especially in rural and marginalized areas, the lack of adequate infrastructure, pedagogical resources, and specialized teachers restricts the possibility of students receiving relevant and quality technical education. This lack reinforces social inequalities, since young people in disadvantaged contexts face greater difficulties in entering the formal labor market, often being forced to resort to informal or low-paying jobs. This not only reduces their prospects for personal development, but also limits their contribution to overall economic growth, perpetuating vicious circles of poverty. Furthermore, the mismatch between the technical skills imparted in educational institutions and the real needs of the labour market is a determining factor in the increase in youth unemployment. Graduates frequently lack the specific skills required to perform in key sectors of the economy, which generates an underutilization of the workforce and a waste of available human potential. This mismatch not only affects individuals, but also represents a barrier to the productivity and competitiveness of companies, which in turn negatively impacts national economic growth. At the regional level, the disparities are even more evident. Rural areas and marginalized communities often have less access to quality technical training, which widens the development gap between these areas and urban areas. This imbalance reinforces the dynamics of migration to cities, aggravating the problems of urban overpopulation and job insecurity in these areas. On the other hand, rural areas face a decrease in the availability of qualified labor, which limits their possibilities for local economic development and perpetuates poverty. The absence of effective and well-articulated public policies to address this problem is another key factor that perpetuates these inequalities. Government strategies often lack a comprehensive approach that considers the specific needs of the most vulnerable communities, as well as mechanisms to guarantee the sustainability and quality of educational programs. Insufficient investment in educational infrastructure, the lack of incentives for teacher training, and the disconnection between educational institutions and productive sectors contribute to perpetuating a system that does not respond effectively to current challenges. Addressing this problem implies recognizing the strategic importance of technical training as a driver of social inclusion and economic development. Guaranteeing equal access to quality technical training programs would allow all young people, regardless of their socioeconomic origin or geographic location, to have the necessary tools to successfully enter the labor market. Furthermore, promoting a stronger link between the education system and the demands of the productive sector would facilitate the creation of formal and well-paid jobs, thereby reducing informal employment and fostering more stable and sustainable economic growth.

De la Cruz, G. (2019) examines how Comipems cut-off lines influence access to higher education in Mexico City, with implications for youth employment opportunities. He highlights the relationship between urban development and educational aspirations.





## 2. Methodology

This research is of an applied type with a qualitative approach, designed to explore and analyze the work described follows a comparative qualitative approach, focused on the analysis of educational management in Peru during two years. The comparative approach of research on the management of technical training and labor insertion in Peru focuses on the discrepancies between the perspectives of teachers and students, and is compared with international contexts. Both the teacher and the student agree that technical training is not sufficiently prioritized in the educational curriculum and that the acquired preparation is not sufficient to face the challenges of the labor market. This lack of training negatively impacts labor insertion, with the teacher pointing out that it limits access to competitive jobs and the student experiencing difficulties in finding work related to their training.

Regarding public policies, both agree on the need to improve the link between technical education and the labor market. The professor proposes increasing investment in infrastructure and promoting alliances with companies, while the student advocates the creation of government programs that facilitate the employment of graduates.

At an international level, OECD reports are considered, with respect to Peru, to address inequalities in the time devoted to education for work, especially in rural areas, which worsens the gap between different socioeconomic groups. Although the technical skills acquired are useful, both teachers and students agree that they must be more contextualized and updated to meet the demands of formal employment.

A comparison with other countries reveals that public policies must strengthen the connection between education and work, focusing on updating technical skills, improving infrastructure and creating job placement programs. In short, technical training in Peru presents deficiencies both in its curricular approach and in its ability to adapt to the labor market, which affects the employability of graduates.

## 3. Results

Table 1. Comparative information from the Interview with the teacher Interview with the student with respect to each Category

Category	Interview with the professor	Interview with the student
Efficiency in the management of technical training	He believes that the current administration does not prioritize technical training as a central axis of the educational curriculum.	He feels that the technical training he received was not sufficient to meet the demands of the labor market.
Impact on job placement	He points out that limited technical training affects graduates' ability to access competitive jobs.	He reports difficulties in finding employment related to the technical training he has acquired.
Relationship with public policies	He mentions that educational policies must strengthen the articulation between schools and productive sectors.	He believes that there are not enough public programs that connect graduates with the labor market.





Relevance of technical skills	Indicates that the technical skills developed are useful, but need greater contextualization to the current work environment.	He claims that the technical skills acquired are basic and do not meet the requirements of formal employment.
Suggestions for public policies	Proposes increasing investment in infrastructure, technical equipment and partnerships with companies.	Recommends creating government job placement programs for high school graduates.

Source: Own elaboration.

*Interpretation of Table 1:* Efficiency in the management of technical training: Both the teacher and the student agree that technical training is not adequately prioritized within the educational curriculum. While the teacher highlights that it is not given the necessary centrality, the student reflects that the training received was not sufficient to face the challenges of the labor market.

Impact on job placement: The lack of a robust technical training has a negative impact on the job placement of graduates. The professor observes that this lack limits the possibilities of access to competitive jobs, while the student experiences direct difficulties in finding work related to his training.

Relationship with public policies: Both agree that current educational policies are not sufficiently oriented to connect technical training with the needs of the labor market. The professor suggests that the articulation between schools and productive sectors should be improved, while the student believes that there is a lack of public programs that facilitate the labor insertion of graduates.

Relevance of technical skills: Although the acquired technical skills are seen as useful, both the teacher and the student consider that they should be more contextualized. The teacher emphasizes the need to update these skills to the demands of the current work environment, and the student perceives the acquired skills as too basic to meet the demands of formal employment.

Suggestions for public policies: Regarding possible solutions, the professor proposes an increase in investment in infrastructure, technical equipment and the creation of alliances with companies. The student, for his part, advocates the creation of government programs that facilitate the employment link between high school graduates and the labor market, suggesting a greater orientation towards direct employability.

*That is to say:* Current technical training presents deficiencies both in its curricular approach and in its ability to adapt to the needs of the labour market, which negatively impacts the labour insertion of graduates. Both perspectives, that of the teacher and the student, agree on the need to improve the link between education and work, proposing public policies that strengthen this connection, with emphasis on updating technical skills, improving infrastructure and creating specific programmes to facilitate employability.

*Comparison of teaching loads for work-related education in some countries*



"Inequality in education and work in Peru": This article analyzes the gap in access to education and its correlation with job opportunities. It examines how factors such as the rural and urban context influence the time spent on education, highlighting that residents in urban areas tend to have a higher educational level compared to those in rural areas. This generates disparities in the hours dedicated to vocational training Minedu (2020a).

"Peru in the context of education for work": This OECD report offers a comparative perspective on how Peru positions itself compared to other countries in terms of time devoted to education for work. It highlights that, despite progress, significant inequalities persist that affect various socioeconomic groups, limiting equitable access to educational and employment opportunities (OECD, 2022).

Both articles offer a detailed overview of the situation in Peru and allow for a comparison of the time spent on work-related education with other international contexts.

#### 4. Discussion

Factors such as students' occupational aspirations, educational expectations and the socioeconomic context in which they develop play a key role in their professional future. The relationship between educational aspirations and job opportunities is clearly reflected in research such as Gestión Humana (2020) referring to the climate and job satisfaction of human capital: differentiated factors in public and private organizations.

However, the number of hours dedicated to technical and professional training has a direct impact on students' job opportunities upon graduation. The number of hours dedicated to key areas such as science, technology, humanities, and socio-emotional skills determines young people's ability to enter competitive labor sectors. In this sense, the quality and quantity of technical and professional training are determinants for employability, directly affecting their access to high-demand jobs. It is also similar to the work of Caján (2022) on the management of working conditions; although it is important to consider the excessive workload and Living Conditions of the Personnel as pointed out by Barreto & Barreto (2022).

*In comparison, the following studies are available:*

La República (2021) reports on the arrival of Starlink in Peru, allowing users to pre-order Elon Musk's satellite internet service, expanding internet access in remote areas and contributing to digital inclusion in the country.

Minedu (2020a) presents data on enrollment in the Peruvian educational system in 2020, providing relevant information on educational coverage, including the challenges of the health context that affected school attendance and the distribution of educational resources in that year.



Minedu (2020b) offers guidelines for assessing the competencies of Basic Education students in the context of the COVID-19 health emergency, adapting assessment methods to the virtual modality and the restrictions imposed by the pandemic.

Nina and Frederico (2020) analyze the role of libraries during the pandemic, proposing how these institutions can adapt to continue offering essential services in times of crisis, including digital resource management and remote access to information.

Prado (2020) reflects on the importance of digital transformation in Peru to overcome the crisis generated by the pandemic, highlighting government initiatives to promote distance education and the use of technologies for economic and social reactivation.

Minedu (2020a) establishes the implementation of the "I Learn at Home" strategy to guarantee the continuity of the school year in 2020, offering remote access to educational materials to the country's students in the face of the temporary closure of schools due to the pandemic.

In turn, training should not only be technical, but should also incorporate the development of work values and attitudes. Training in strategic areas, such as technology and interpersonal skills, as well as the promotion of work practices within the educational system, are crucial for the successful insertion of graduates into the labor market; which is a serious problem, in case the sources of labor activity become more acute; thus, according to Merino (2022), the study of Cartografía Economía Europa, in a study on the evolution of youth unemployment in the European Union, Spain and Greece are today the countries with the highest youth unemployment in the European Union, and have been for more than a decade.

Another key aspect in the relationship between education and work is the role of public policies. Educational policies that guide students regarding their vocational options and encourage job training within educational programs are essential to improve opportunities for young people. De la Cruz (2019) highlights how access to education policies, such as the Comipems cut-off lines in Mexico City, directly affect the educational and labor mobility of students, especially in urban areas with a highly competitive labor market. These types of policies impact not only the opportunities for access to higher education, but also the employment possibilities for graduates.

Aligned with the results of this work, Garay et al. (2022) mention the importance of the execution of public works and management by results in a regional government of Peru and in this regard Ramos (2022) presented a Proposal for a questionnaire on job performance and human interrelations administered by university directors; likewise Mendizábal et al. (2022) express the relevance of psychomotor management and the right to life, which they question themselves and answer about the Learnings that the COVID-19 Pandemic could provide.

To complement the analysis on the management of technical training in secondary education (upper secondary), employability and public policies, two additional references from the years 2021 and 2022 are included that enrich the understanding of the subject, especially in the context of technical training and its link to employability.



A significant study by Vargas and Ramírez (2021), published in *Educational Review*, addresses public policies in Latin America and their relationship with technical training and the labor market. The authors highlight the importance of aligning technical training programs with emerging labor market needs, especially in sectors such as technology and health, which require specialized skills. The study underscores that Latin American governments must improve curricular flexibility and foster cooperation between educational institutions and the private sector to ensure that graduates are better prepared to face labor challenges (Vargas & Ramírez, 2021).

Along similar lines, González and Pérez (2022), in their article published in the *International Journal of Educational Development*, investigate the implementation of reforms in technical education in Latin American countries, analyzing how educational policies have sought to improve the relationship between technical training and employability. The authors argue that, although there has been progress in the modernization of technical training programs, educational systems still face difficulties in effectively incorporating new technologies and pedagogical methodologies that could improve the employability of graduates. In their analysis, they highlight the need for public policies that not only strengthen educational infrastructure, but also ensure a more inclusive approach, allowing technical training to be accessible to all sectors of the population (González & Pérez, 2022).

These additional studies broaden the discussion on public policies and management of technical training, pointing out the need for more dynamic educational reforms that are adaptable to rapid changes in the labour market.

## 5. Conclusions

An educational system that focuses not only on the transmission of academic knowledge, but also on comprehensive preparation for work, has the potential to transform the lives of high school graduates. Providing them with adequate tools and job skills will allow them to access quality jobs, reduce the youth unemployment gap, and contribute to the country's economic and social development. The research reviewed highlights the importance of an educational approach that integrates technical training, soft skills, and an appropriate public policy framework, which guarantees a more effective educational system aligned with the needs of the labor market.

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