

HIGHER EDUCATION IN PROGRESS: STUDENTS' RESEARCH SKILLS DEVELOPMENT TO ENHANCE THEIR SUCCESS TO THE MODERN LABOR MARKET REQUIREMENTS

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Abstract

In the era of Information and Communication Technologies (ICT), robotics, artificial intelligence (AI), and the Internet, a university degree with good grades is no longer enough to obtain a job according to the specialisation. The question arises: What do employers need? Although university education is crucial for theoretical-practical training, there are underlying skills that can be cultivated in students before entering the global labor market. Focusing on employability, especially at a global level, this interest revolves around promoting fundamental skills such as common skills, problem-solving, appropriate use of ICT, creative skills, critical thinking, informal logic, and decision-making. Since the 90s, Higher Education Institutions have made progress in promoting employability through courses and skills suggestions. Still, as societies evolved, the demand for higher qualifications and ICT skills in the labor market has increased effectively.

The article seeks an analysis of the possible answers to the key questions:

- How do we implement and integrate research competencies in knowledge for labor market requirements?
- How do we transform a real learning environment to improve graduate employability?
- How do we teach to improve student job prospects during their studies as university students?
- How does explore the intra- /interpersonal perspectives of university students and observe unregulated realities for their overall career success, empowerment, and development of research and transfer skills?
- How does implement and integrate research competencies in knowledge for labor market?

Keywords: Employability; research skills development; job market; curriculum modernization; knowledge with new skills.

1 Introduction

The OECD¹ and OECD Library² has developed skills frameworks that underline the importance of specific skills for student employability. It is crucial to consider emerging ICT labor markets that influence current hiring requirements and serve as future predictors. Predicting a specific job market is challenging, but it is possible to address and minimize the problem by incorporating specific content into university education. An example is the inclusion of research components and put them into practice.

Existing literature often focuses on labor market demand for skills, graduate attendance, job seekers, employment itself, and the courses studied. In the face of global economic changes and unforeseen events that rapidly alter the world order, daily work skills are closely linked to these changes. The integration of job skills into teaching processes remains a source of controversy among academics, although some argue in favor of the feasibility of designing and implementing curricular changes for employability skills. Globalization presents a challenge to the labor market, and the implications of a (global) labor market can be a reason for unemployment.

Addressing this challenge involves aligning educational offerings with employer demands. Universities play an important role on the employability of graduates, but the high number of graduates and modern labor market requirements contribute to high unemployment rates among them. The relationship between graduate research for employment and the possibility of obtaining desired positions is closely related to the soft skills required by active participants in the labor market. In summary, the project arises from the current global technological- labor landscape and recent research and projects (2022).

The Higher Education Institutions try to promote students' skills according to the modern job market requirements under the development of the relationship between HEIs and employers by realizing the 'synergy' form. The main factor of curricula transformation is considered research and research in practice components teaching as a responsible instrument graduates skills development as are follow: problem-solving, creativity, analytical thinking, computer skills, teamwork, and communication in the sense of internationalization. At the same time, increasing students' motivation is based on the problems today according to the fast developments of IT and of course, modern job market requirements.

1.1 Main Findings in Research Literature Review on the Relationship Between Higher Education Institutions, Graduates, and Skills Expected by Employees

Given that the global economy systematically changes—and there are unforeseen causes that drastically and rapidly alter the world order (Díaz-García, 2022)—it is advisable to bear in mind that everyday work skills are closely related to such changes. For example, due to the emergence of SARS-CoV-2, educators had to conduct classes virtually, people had to stay confined, etc. Despite the above, according to Autor (2013), academics are skeptical about incorporating work skills into the teaching process by enriching

¹ <https://www.oecdskillsforjobsdatabase.org/#FR/> “Skills for Jobs”

² https://www.oecd-ilibrary.org/employment/getting-skills-right-skills-for-jobs-indicators_9789264277878-en

curriculum programs. Conversely, Knight and York (2002) assert that it is possible to design and implement curriculum plans, courses, or other training for the development of employability skills at universities. With regard to globalization, authors like Kavar (2011) indicate that it also constitutes a challenge for the job market. Thus, the implications of a (global) job market could be considered as a reason for unemployment. Economic and Social Councils (CES) observed such an issue in job markets, and the results were discussed as a discrepancy between the requirements of the job market with the growing needs and skill formation of graduates by Higher Education Institutions. According to Hernández-March et al. (2011), the employer's perspective framework often provides an interesting direction with well-defined objectives:

- What skills are required in the job market?
- How can the supply and demand be regulated in the context between:
 - Higher education institutions and graduates;
 - higher education institutions
 - graduates and employers.

As mentioned earlier, universities and their relationship with businesses and the job market are considered important aspects of the employability of university graduates. However, the current excessive number of university graduates and the modern requirements of the job market are serious arguments to consider in the high unemployment rate of university graduates since global job markets are equally segmented (Brown et al., 2011). According to a study conducted by Nicolescu and Paun (2009), job markets require properly trained and talented workers, and universities, in their curricular and instructional practices, must consider this requirement from an academic-work perspective. For authors like Rothfell and Arnold (2007), the employability of university graduates and the requirements of employers are in symbiosis and constant interaction with other contextual factors such as the following:

- Skills and Abilities of Students.
- Labor market demand linked to academic performance according to the field of study.

The relationship between research for job searching by university graduates and the possibility of attaining the desired job position is real and proportionally linked to the soft skills required by active agents in the job market (Stojanová & Blašková, 2014). However, opinions of employers and graduates seem to differ on this aspect, and the issue continues to be discussed between higher education institutions and companies or employers (Matsouka et al., 2016). An important approach to the integration of research competencies and applied research (knowledge transfer) would be the creation of new knowledge through the Sciences of Education in general and knowledge of the subject or specific subjects according to the requirements of the current job market—which seems to become more competitive over time. In the framework of discussions about competitiveness, the concept could be integrated into a broader research question to address the issue. Specifically, who are the graduates of higher quality and capability for the numerous existing niches in the job market, and how do higher education institutions enhance the knowledge of these students with the required work skills? Understanding that, currently, the comprehension of competitiveness in this market has reached an interesting point whose indicators can be measured in terms of skills for the job market, it is important in research to consider this factor in terms of potential skills. It is true, however, that it is not so straightforward to assess how the higher education

systems of different countries and continents perceive their graduates as active job seekers for their subsequent integration into various global job markets (Mekvabidze, 2016).³ According to Mekvabidze (2015), high-level skills are associated with technical and professional skills that are acquired through exclusive Teaching-Learning-Inquiry (EAI) and Inquiry-in-Practice (IeP) programs. The implementation of these dual or triadic programs involves the development and implementation of "research teaching" and "research in practice" to stimulate critical and logical thinking in students. Undoubtedly, the implementation of such programs in formal higher education is not an easy task (unless we are talking about business schools), but we firmly believe that such theoretical-practical experience would help mobilize resources to meet the growing – and even innovative – labor demands. In a research conducted by Udine (2021), the employability of business graduates is addressed and, although he proposes to update the curricula, a large part of employers recognize that students have good knowledge acquired during their time at university that serves them and that they apply in their workplace. Such results would be obtained in other areas of study through the introduction of Pedagogies for Employability, through which employers' perspectives on the competencies and skills demanded by the given sector could be addressed (García Álvarez et al., 2022).

2 Relevance and General Objectives

Predicting a specific job market is not straightforward; however, it is possible to address and minimize. The issue is considered when considering the inclusion of certain content in university education. An example would be the curricular inclusion of Applied Research in Higher Education Institutions, as well as the application of research components studied by graduates in specific areas/subjects as job seekers within the framework of university interaction and the current requirements of the job market:

- How do we consider the implementation and integration of research competencies in the creation of knowledge for the requirements of the job market?
- How do we aim to transform a real learning environment for the employability of graduates?
- How do we teach to enhance the employment prospects of students during their university studies?

3 Students' Research Skills Development to Enhance Their Success To The Modern Market Requirements

To solve these issues adapting university graduates to competitive job markets under Project-Based Learning is faced with the increasing requirements today and is the main problem of HEIs. They have to transform study courses together with employers but not separately. In this case, a collaboration between HEIs and Employers has to be considered as a systematical process dependent on the information technology development.

In general, are realistic to consider the next versions:

- The most common problem for both local and international universities is the weak link between the HEIs and employers to adapt to labor market demands despite HEIs trying to find their niche in the business environment to provide labor market by their requirements

³ 'The efficiency of graduates in the job market demands training and knowledge in accordance with the requirements of employers '

- Higher education institutions must address the need for a synergy of the knowledge triangle T-L-R with research in practice which has to be directed toward the synergy of knowledge creation with the needed skills for the modern job market. Considering HEIs from this point of view, it does not have such an adaptation.
- The research is used separately in the knowledge triangle as a separate discipline, while research teaching should be in harmony with the subjects of specialization because it is interesting not only to teach research methods but also to use them in practice concerning the subjects of specialization.
- In most cases, HEIs offer students academic programs and pay less attention to the inclusion of research and research in practice components by main disciplines of specialization which are responsible for the skills of the demands of a competitive labor market.
- The fast development of IT and implementation of its components in the study process. For example, to use research methods by the program software

3.1 Formulation the main objective and mains

To increase students' employability in prospect through the modernization of the curricula by the main subjects area of specialization according to the teaching-learning of research in practice components for the development of future graduates' skills to the modern job market requirements.

The aims of the approaches:

- Adaptation of the programs of specialization with the incorporation of research and research in practice components for understanding the interrelationship as the demand and supply process between HEIs and employers under increasing students' knowledge using them as competitive job skills in prospect;
- Development of a good progression of integration of knowledge and competencies of research for practice by subject area of specialization as benefits from research using skills for the future graduates that give the expected professional level for their career;
- Classifying the main approaches for exploration of process modeling study that form successful specialists, and respond to the requirements of the modern competitive job market.

3.2 Needed Analysis and Specific Objectives

The main purpose of the project is to explore the intra- and interpersonal perspectives of university students and to observe other unregulated realities for their overall employment success, their empowerment, and to develop research and transfer skills (Table 1). The aim is to investigate the perspectives of educators, students, and employers to promote employability by integrating research-based teaching methods and transfer. It also aims to analyze existing university curricula to identify gaps in the incorporation of certain research components. It is also intended to propose the implementation of teaching materials adapted to the subjects and areas of specialization. The idea is to design teaching-learning models that can be integrated into the curricular activities developed in university classrooms. The aim is to ensure that the objectives of the project are properly aligned with the broader mission and vision of higher education institutions. Through the project, it seeks to contribute in some way to the

evolution of university education, emphasizing the importance of research in producing graduates who are better equipped to meet the challenges and opportunities of the contemporary global labor market.

Table 1. Representation of the general and specific objectives

Code	Goal (general)
OG_1	To explore the intra-/interpersonal perspectives of university students and unregulated realities for global work success, empowerment, and the development of guild research and transfer skills.
Codes	To examine the interrelationship of teachers, learners, and employers perspectives on graduate employability skills training through teaching research and its implementation in practice.
OE_1.1	Propose the implementation of specific research components in curricula or university teaching activities according to subjects and areas of specialisation.
OE_1.2	Propose the implementation of specific research components in curricula or university teaching activities according to subjects and areas of specialisation.
OE_1.3	Propose precise teaching-learning models for incorporation into the training activities carried out in higher education institutions, taking into account the current influence of scientific and technical progress on employability.

The identified gaps include a mismatch between the skills acquired during university education and the requirements of employers, leading to high unemployment rates among graduates to be managed as follows:

OE_1.1 (Examine Interrelationship of Perspectives)

Indicators

- Unit of Measurement: Survey responses from teachers, learners, and employers.
- Baseline Value: Pre-project survey results.
- Target Value: Increase in the alignment of perspectives post-implementation.

OE_1.2 (Propose Implementation of Research Components)

Indicators

- Unit of Measurement: Number of proposed research components.
- Baseline Value: None (pre-project).
- Target Value: Implementation of proposed components into curricula.

OE_1.3 (Propose Teaching-Learning Models)

Indicators

- Unit of Measurement:
 - Proposed teaching-learning models.
- Baseline Value: None (pre-project).
- Target Value: Integration of proposed models into higher education training activities.

4 Outlines

There are several reasons why the article approaches are important:

First, the demand for graduates with these skills is increasing as businesses become more globalized and technology advances.

Second, research has shown that graduates with these skills are more likely to be employed and have higher salaries.

Third, by developing the needed skills, students will be better prepared to contribute to society and make a positive impact on the world.

It is important to consider the next interesting aspects:

1 EDUCATION AND SKILLS FOR EMPLOYMENT. The article aims to improve the employability of university graduates by developing the skills that they need to succeed in the global labor market.

2 PROMOTING EMPLOYABILITY. The article focuses on developing transferable skills that will be valuable to graduates in a variety of industries.

3 HIGHER EDUCATION. The article results will be suggested in collaboration with the higher universities institutions because it aims:

- to develop and promote innovative approaches to education and skills development;
- to enhance the employability and competitiveness of young people;
- to encourage the exchange of knowledge and experience between higher universities.

Thus, this approach is particularly relevant to the priorities of the modern technology challenges through employability, global cooperation, and research using effective teaching methods

5 Conclusion

1 Observed the relationship between teaching trends in Higher Education Institutions and current labor market requirements, identifying the employability skills of graduates. The ultimate goal is to contribute to reducing the unemployment rate among graduates by promoting global perspectives, transferable skills, and logical, practical, analytical, and creative abilities which aims to investigate the perspectives of educators, students, and employers to promote employability by integrating teaching methods based on research and transfer.

2 Found and analyzed the existing university study plans to identify gaps in the incorporation of certain research components. Likewise, it is intended to propose of implementation of teaching materials adapted to the subjects and areas of specialization.

3 Suggested relevant teaching-learning models that can be integrated into the curricular activities developed in university classrooms and adequately align the project objectives with a broader mission and vision of higher education institutions.

4 Analyzed the university educational trend in terms of developing students' knowledge and the needed skills for the competitive job market through research skills development.

5 Ultimately, the work seeks to contribute to the evolution of university education, emphasizing the importance of research in training graduates more prepared to face the challenges and opportunities of the contemporary global labor market.

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