AN EVALUATION OF STUDENTS PROFICIENCY IN DIGITAL LITERACY AT ECONOMIC SUBJECTS

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Abstract: *Contemporary education relies heavily on new technologies, which have an undeniable impact on learning and are considered a crucial component. In order to acquire technical skills relevant to the 21st century, students need to adapt to the evolving technologies. Education in digital literacy is essential, and as such, it ought to be included in the curriculum of all courses in educational systems. This study set out to assess the degree of digital literacy among students in a high school that placed a strong emphasis on economics, with a particular emphasis on the need for skill development in the context of a culture that values digital knowledge. In addition, the study used a framework derived from earlier research to assess the contribution of nine literacies to digital literacy. The investigation, which was based on a survey of 217 students, revealed that their levels of digital literacy ranged from average to high. The statistical study showed that every suggested literacy in the framework significantly contributed to digital literacy.*

Keywords: *Digital literacy; high school, learning; 21st century education; economical education; digital age*

JEL Classification: *A 20; O 33.*

1. Introduction

Today's world has integrated electronic devices in almost all sectors of activity. Understanding this reality is essential for any individual because his success academically, professionally, in business or in other aspects of his existence depends on how he masters technology. The education system, like the other social sectors, is obliged to adapt to this paradigm shift in teaching and learning, by adopting electronic means. Educational institutions must rethink learning environments, expanding the possibilities of learning through digitalization and ensuring the improvement of digital skills, as key points in the new learning scenarios (Tejedor et al., 2020).

The implementation of innovative technologies has resulted in new directions for education that were not previously possible. Inclusion and market rationales have led to processes of mobilization and globalization of education (Martin, 2006). This has resulted in the development of distance education, which enables learning from anywhere and at any time. Digital technologies have made it possible for a community of remote learners to connect teachers and students, as well as students with each other, despite significant geographical distances.

The development of technology has demonstrated that basic abilities like reading, writing, and arithmetics, which were formerly adequate for successful integration into society and the workforce, are no longer sufficient. The development of new abilities known as the 21st century skills is required for the use of digital technology to access, assess, and share information in today's diverse environments. These abilities comprise a broad spectrum of cognitive and socio-emotional abilities that help people adapt to a digitally-driven culture. They go beyond simply knowing how to utilize digital tools or software (Eshet-Alkalai, 2004). The literature has coined the term "digital literacy" for these skills, which is seen as a natural evolution of traditional fundamental skills rather than a replacement for them. A low level of digital literacy can negatively impact an individual's innovation, creativity, and participation in society, ultimately affecting economic development as a whole.

Initially, digital literacy was mostly concerned with computer knowledge and technology use, but as time has gone on, it has come to place more focus on the internet and its effects on other facets of human life. Social media platforms, where individuals engage in a variety of activities, have become more and more popular as new technology continue to provide new kinds of online engagement. Because of this, digital literacy programs have developed from emphasizing the use of fundamental tools to more intricate forms that entail analyzing and producing a variety of information (Feerrar, 2019).

Researchers have paid a lot of attention to the growth of digital literacy, leading to a large number of definitions and frameworks throughout time. This issue is still important and hasn't been fully explored. The significance of digital literacy for people has also been acknowledged by national and international public policies, which have developed several frameworks for implementation in educational institutions. The objective is to lay the groundwork for educators to include parts of digital literacy in their curricula and for students to keep track of their own progress in this area.

Thus, since 2006, the EU has included digital literacy among the 8 key competencies for any European citizen, and the European Commission considers digital literacy as one of the 7 pillars in the *European Commission's 2010 Digital Agenda for*

Europe. Moreover, the elaboration by the European Commission of the *EU Digital Competence Framework for Citizens (DigComp)* in 2017 led to the adaptation of policies in most European countries and not only (Kluzer and Pujol Priego, 2018). We can also talk here about the *Global Framework of Reference on Digital Literacy Skills (UNESCO, 2018)*, a synthesis of the relevant digital literacy skills. The *Coalition for Digital Intelligence*, which is an initiative launched in 2018 by the OECD, IEEE Standards Association and the World Economic Forum, also represents a global framework for the development of digital skills and digital literacy, being a useful tool for governments, educators or technology companies.

International organizations have generally concentrated on creating guidelines and studies on digital literacy for people of all ages, with just a few explicitly targeted at children to help them adapt to the digital world. One such program is the *Digital Kids Asia-Pacific* project, which was created by the UNESCO Asia and Pacific Regional Office with the sole purpose of concentrating on creating digital citizenship activities for kids.

No matter the digital literacy framework we take into consideration, it prioritizes the learning process because it is of the opinion that anyone can aquire digital literacy skills (Feerrar, 2019). It's vital to remember that not everyone is equally interested in developing their digital literacy. There are substantial discrepancies and differences in this regard, which may be caused by elements like age, gender, socioeconomic class, geography, degree of economic development, sophistication of the educational system, and level of societal digitalization.

Due to the ubiquitous use of technology in everyday life, there is a perception in society that all students are digitally literate, but it is often evident that there are large differences in how students use technology and in terms of their level of digital skills. For this reason, digital literacy should not be seen as a separate set of skills to be trained, but incorporated together with the other skills of the 21st century in all core subjects (Voogt et al., 2013). The interest in digital literacy is increased in a range of disciplines, but a very diverse use of the concept at the trans-disciplinary level is found, which still produces ambiguities and still requires the attention of researchers (Spante et al., 2018).

Studying economic subjects, as part of the basic curriculum, today requires the existence of some digital literacy skills, and on the other hand, it can help a lot to improve these skills. This research aims to evaluate the level of digital literacy of high school students enrolled in a school with an economic profile in order to identify the real training needs of students and to help teachers implement high-quality teaching approaches. Therefore, it is desired to design a digital literacy framework with the most relevant literacies for these students.

2. Literature Review

2.1. Digital Literacy concept

The concept of "digital literacy" appeared at the end of the 1990s, being defined in educational terms by Gilster (1997), who brought to the world's attention the revolutionary role of the Internet in education. He identified the digitally literate student as possessing a set of information skills that he applies to text and multimedia information obtained from the Internet, within a school learning context. Starting from this definition, a multitude of other concepts and definitions have emerged to explain digital literacy. These have evolved from references to what an individual should be able to do, to broader perspectives that focus on what a digitally literate individual should be able to achieve. Thus, we can recall the definition given by Martin (2006:155), which says that "Digital Literacy is the awareness, attitude and ability of individuals to appropriately use digital tools and facilities to identify, access, manage, integrate, evaluate, analyze and synthesize digital resources, construct new knowledge, create media expressions, and communicate with others, in the context of specific life situations, in order to enable constructive social action; and to reflect upon this process". Another definition that reflected a broader perspective says that "Digital literacies are those capabilities which fit an individual for living, learning and working in a digital society" (Jisc, 2014).

The definitions of digital literacy have been continuously changing as new technologies emerge and innovations in the digital field occur at a rapid pace, transforming the ways in which people use technology to accomplish different tasks (Reddy and Sharma, 2020). As a result, the term digital literacy has been associated with various terms, such as "digital skills," "digital competence," or "21st century digital skills," which have been used interchangeably by researchers (Audrin and Audrin, 2022).

There is also a concern among researchers regarding the levels of engagement in digital literacy. Thus, Martin (2006) identifies the following three "stages": *digital skills* (knowledge, understanding and skills related to digital in the context of a real life situation), *digital usage* (application of digital skills in a specific professional context) and *digital transformation* (the acquired digital skills determine innovation and creativity, leading to transformations in the professional and knowledge field).

Different digital literacy frameworks have been developed by researchers with the aim of structuring the recommended set of digital skills needed in a contemporary economy and society. The purpose of these frameworks is to be used in educational policy documents, school curricula, academic papers, assessment and certification systems (Reddy et al., 2022; Feerar, 2019; Martin, 2006). There are a multitude of

such frameworks, also developed by international or national organizations, as exemplified in the introduction. The present research also considers one of the most well-known frameworks, *A Global Framework of Reference on Digital Literacy Skills for Indicator 4.4.2* (Law et al., 2018). This framework was used to identify the required competence areas from the model proposed in the present research, i.e. the digital competences needed by students in learning economics.

The effort to build a framework that meets all the challenges and takes into account all the skills that can be associated with the term, led to the inclusion of several literacies in digital literacy. Thus, Covello (2010) put several sub-disciplines or "literacies" under the digital literacy umbrella such as: information literacy, computer literacy, technology literacy, communication literacy, media literacy, visual literacy. However, these literatures no longer fully reflect the evolution of new tools and technologies, the six components lacking the skills that are needed today (Reddy, Sharma and Chaudhary, 2020). Thus, in the literature we also meet the newer terms of digital content creation literacy, safety literacy, problem solving, branching literacy, socio-emotional literacy and others.

Further research in the field shows that there are several essential components of digital literacy that can be taken into account considering the realities of today's digitized society and economy. In order to evaluate the level of digital literacy of the students enrolled in the economics courses participating in this research, the 6 literacies nominated by Covello (2010) and incorporated in the *South Pacific digital literacy framework* (SPDLF) were used (Reddy et al., 2022), as well as 3 more literacies taken from *A Global Framework of Reference on Digital Literacy Skills for Indicator 4.4.2.* (Law et al., 2018). The choice of these 9 literacies was considered the most relevant for the purpose of our research.

2.2. Digital literacies

Media literacy refers to the skills to find, evaluate, use and communicate information, as well as the ability to produce original or remixed content in various media forms, from print to video, thus contributing to the volume of information available online (Bigelow et al., 2017). This literacy is now recognized as a lifelong process that involves not only technical skills, but also the ability to recognize and evaluate different messages, understand their impact on one's values and beliefs, and make informed decisions about their use of digital media (Reddy, Chaudhary and Sharma, 2019).

Problem-solving literacies refer to solving technical problems, adapting digital environments to personal needs, using digital tools to innovate processes and products, understanding one's own needs and skill gaps. Problem resolution can be

found in any of the other important competence areas (Sánchez-Cruzado, Campión and Sánchez-Compaña, 2021), but due to its importance in the use of technologies and digital media, it seems convenient to highlight it as an independent component as well (Santiago and Bergmann, 2018).

Information literacy refers to the skills to search, evaluate, use and create content effectively in order to achieve personal or professional goals. This literacy is a determining factor of skills regarding the efficiency of online search (Aavakare and Nikou, 2020), the assessment of the credibility of sources, the correct and legal citation. Print-based culture is becoming more and more overtaken by the online environment, major technological innovations continuously forcing information literacy to reconceptualize existing perceptions (Špiranec and Banek Zorica, 2009).

Computer literacy refers to understanding how computers work, digital technologies and their application for practical purposes (Reddy et al., 2020). Harris (2015:13) referred to these as "turning [digital devices] on and off; keyboarding; using a mouse; using a touchpad; right- and left-clicking; double-clicking; and long-pressing ... knowing how to create, save, locate, and edit computer files as well as how to open, use, and close a variety of computer applications".

Technology literacy involves the ability to use technology to improve learning, productivity and performance (Reddy et al., 2020). Effective technology literate individuals are able to easily use a wide range of devices and interfaces (e.g. internet, social media, cloud computing) to communicate and solve problems. Students must develop technology literacy skills and the ability to follow technological innovations in professional skills as a prerequisite for using technology in the profession (Saltanat et al., 2022).

Communication and colaboration literacy refers to the effective use of digital technologies in communication, collaboration with their help using publishing technologies, the Internet and digital technologies (Reddy et al., 2020). Communication literacy represents essential skills that high school graduates should possess. Their training is included among the tasks of preparing students for life in the information society and in the digital economy (Avdeeva, Uvarov and Tarasova, 2023).

Visual literacy is translated into the ability to see, interpret, understand graphic images, to communicate information, transforming it into visual representations (Reddy et al., 2020). The development of visual literacy skills in students has become increasingly important due to the great pressure, both in personal and professional life, to be proficient in communication. For this, it is recommended to adopt visual literacy pedagogy that can increase students' level of understanding of different materials (Kalaf-Hughes, 2022).

Safety literacy refers to skills related to protecting devices, personal data and privacy, to be able to avoid health-risks and threats to physical and psychological well-being while using digital technologies, to be aware of digital technologies for social well- being and environment. The digital environment presents numerous risks, which cause concerns about the digital safety and well-being of students, as well as the impact on personal, academic and social roles and identities (Medina and Todd, 2019).

Career-related digital competences refer to a set of skills regarding the identification and use of appropriate digital tools and technologies for a particular field, the economic one in the case of our research; understanding, analyzing and evaluating data, information and digital content from the economic field in a digital environment. Digital literacy plays a crucial role in the successful digital entrepreneurship mindset. The identification and training of entrepreneurial talents in the digital economy, the formation of attitudes to identify opportunities to obtain entrepreneurial advantages in the digital economy require digital learning aptitude (Young et. al., 2020).

3. Research Objectives

This research proposes an adapted framework for evaluating the level of digital literacy of high school students enrolled in the economic profile. Thus, the following objectives were taken into account:

- Evaluation of the strongest predictors for digital literacy among the 9 literacies;
- Evaluation of the most important predictors for each individual literacy;
- Evaluation of the most important predictors among the 54 attributes for digital literacy;
- Measuring the level of digital literacy skills for the students included in the research.

4. Methodology

In this paper, an exploratory research was carried out for the validation of a framework that allows the evaluation of predictors for digital literacy and the level of digital literacy skills. In this sense, a quantitative analysis was used by applying a questionnaire with a Likert scale in 5 points to a number of 217 students enrolled in an economic college (high school), from all levels of studies (9th grade 27%, 10th grade 22%, 11th grade 23%, 12th grade 28%). With the help of a Google Forms, the

students had to evaluate their level of skills for the 54 attributes. As an initial step, a mathematical and numerical analysis was performed to identify and evaluate the relationships between the variables. For this, spearman's correlation analysis was used to evaluate the relationships between 9 literacies and the relationships between them and digital literacy, as well as the importance of each literacy. To evaluate the contribution of each attribute, as independent variables, multiple linear regression (MLR) calculations were performed. This statistical method is used to predict the outcome of a variable based on the value of two or more variables. Also, using MLR can determine the variation of the model and the relative contribution of each independent variable in the total variance (Taylor, 2023). In this research, the identification of the value of digital literacy was aimed at certain values of the attributes included in the framework, as independent variables.

Figure 1 shows the proposed model for evaluating digital literacy through the lens of the 9 literacies described above: Computer literacy (CL), Technology literacy (TL), Information and data literacy (IDL), Communication and collaboration literacy (CCL), Media literacy (ML), Visual literacy (VL), Safety literacy (SL), Problem-solving literacy (PSL), Career-related literacy (CRL). A set of competencies (attributes) were designed for each literacy.

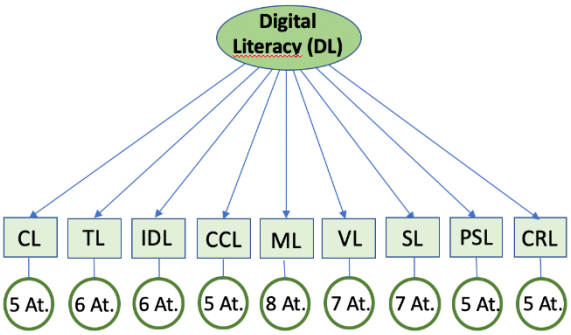

Figure 1. The framework model proposed for the evaluation of digital literacy skills (literacies and the number of related attributes)
Source: Figure made by the authors.

5. Results and discussion

5.1. Validation of data

The current study utilized an exploratory factor analysis (EFA) as a method to extract a few factors from a large set of associated factors, to be used for subsequent statistical analyses like multiple regression or analysis of variance. This approach is particularly useful when data is collected through questionnaires as it helps identify and remove irrelevant questions (Shrestha, 2021). To test the sampling adequacy of each variable in the model, as well as the entire model, the Kaiser-Meyer-Olkin

(KMO) test was employed. A KMO value between 0.8 and 1 is considered adequate while a value below 0.5 to 0.6 is considered inadequate (Keiser, 1974; Samuels, 2017). In this study, all attributes had KMO values above 0.8 and 40 out of 54 attributes had values above 0.9, indicating that the sample was valid and adequate for analysis.

5.2. The correlation analysis

Spearman's correlation analysis was used to evaluate the relationship between the 9 literacies and between each literacy and digital literacy. The results presented in Table 1. show that all literacies have a significant relationship with digital literacy. Thus, 5 literacies (CL, TL, CCL, PSL, CRL) have a "strong" correlation with digital literacy, having a value above 0.6, and the other 4 literacies (IDL, ML, VL, SL) have a "very strong" correlation" having values above 0.8 (statstutor, 2019). Regarding the correlations between literacies, the results indicate only two "weak" correlations between *Safety literacy* (SL), *Problem-solving* (PSL) and Computer literacy (CL), for that their values ranged between 0.2 and 0.39. The correlations between the other literacies take values between 0.40 and 0.88, which indicates moderate to very strong correlations (statstutor, 2019).

Table 1: Correlation between the different literacies

	DL	*CL*	*TL*	*IDL*	*CCL*	*ML*	*VL*	*SL*	*PSL*	*CRL*
DL	1.000									
CL	0.627	1.000								
TL	0.758	0.522	1.000							
IDL	0.813	0.525	0.570	1.000						
CCL	0.756	0.445	0.552	0.526	1.000					
ML	0.880	0.602	0.584	0.734	0.661	1.000				
VL	0.837	0.452	0.594	0.650	0.618	0.751	1.000			
SL	0.803	0.354	0.566	0.606	0.625	0.636	0.598	1.000		
PSL	0.790	0.346	0.572	0.613	0.638	0.619	0.645	0.709	1.000	
CRL	0.760	0.404	0.497	0.639	0.488	0.633	0.580	0.594	0.599	1.000

Source: Computed by the authors

5.3. Significant contributors to digital literacy

To identify the strongest predictors of digital literacy, among the 9 included in the framework proposed by us, we performed an exploratory factory analysis of the the data. Each literacy is considered the independent variable, and digital literacy is considered the latent variable. Standardized beta values β were thus calculated, which indicate that all literacies contribute significantly to digital literacy (Figure 2). Analyzing the results, it can be seen that Media literacy (ML), Information and data

literacy (IDL) and Visual literacy (VL) are the most important contributors to digital literacy, and Computer literacy (CL) has the smallest contribution.

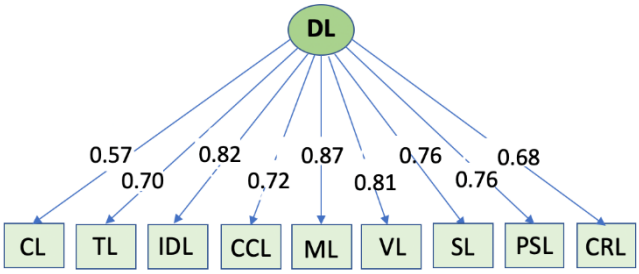

Figure 2: Significant contributors to digital literacy
Source: Figure made by the author.

5.4. Significant contributors to each literacy

For each of the 9 literacies, competencies were thought up based on the analyzed literature review. Those skills that are necessary for students in learning economic subjects with the help of technologies and digital devices were pursued. In this sense, an attribute analysis was carried out for each individual literacy. An EFA analysis was performed and standardized beta β values were determined in a simplified model in which each literacy was studied as a latent variable with associated attributes. The results for β values are presented in Figure. 3 for all 9 literacies. It is found that all attributes are relevant, 23 out of a total of 54 attributes having a high β (>0.7), only one attribute, *ML4*, having a factor lower than 0.3. As a result, the analysis performed indicates that the considered attributes are relevant in the EFA analysis.

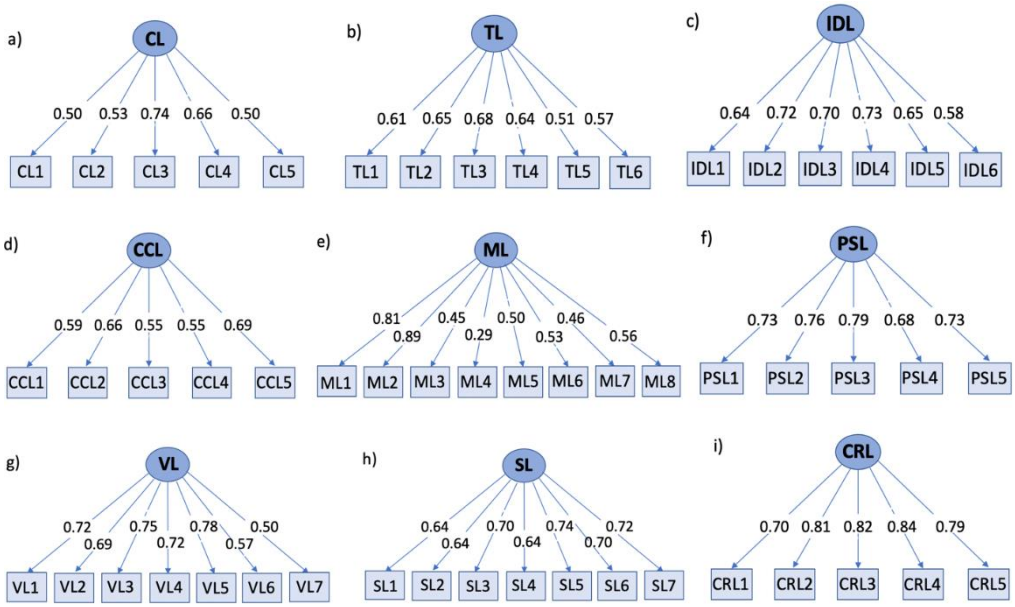

Figure 3: Significant contributors to: a) Computer literacy (CL), b) Technology literacy (TL), c) Information and data literacy (IDL), d) Communication and collaboration literacy (CCL), e) Media literacy (ML), f) Problem-solving literacy (PSL), g) Visual literacy (VL), h) Safety literacy (SL), i) Career-related literacy (CRL)
Source: Figure made by the authors.

5.5. Signinficant contributors to digital literacy from 54 attributes

In this analysis, we consider the digital literacy as having 54 independent attributes. Table 2. shows what are the most important contributors. Analyzing the attributes with the highest β values, the following significant contributors were identified: *ML2* (Interpretation of information from the economic media), *SL7* (Awareness regarding the responsibility of digital technologies towards economic development), ML8 (Understanding the values conveyed by different messages promoted on social networks), *PSL1* (Identifying and solving technical problems when using digital devices or environments), *PSL3* (Using digital tools and technologies to gain knowledge, to innovate processes and products), *CRL2* (Identifying and using apps for the domain economic), *PSL2* (Adopting and personalizing digital environments according to personal needs), *VL1* (Understanding and interpreting visual messages), *IDL5* (Searching for economic information online), *SL5* (Awareness of the responsibility of digital technologies towards social well-being). As all β values are between 0.30 and 0.71, we can say that all attributes can be considered significant contributors to digital literacy.

Table 2: Signinficant contributors to digital literacy

Attributes	Standardized Coeficients β	Attributes	Standardized Coeficients β	Attributes	Standardized Coeficients β
CL1	0.450	CCL2	0.428	VL7	0.608
CL2	0.307	CCL3	0.554	SL1	0.568
CL3	0.383	CCL4	0.395	SL2	0.543
CL4	0.462	CCL5	0.595	SL3	0.562
CL5	0.353	ML1	0.635	SL4	0.523
TL1	0.416	ML2	0.716	SL5	0.656
TL2	0.469	ML3	0.530	SL6	0.585
TL3	0.510	ML4	0.363	SL7	0.687
TL4	0.550	ML5	0.518	PSL1	0.679
TL5	0.518	ML6	0.503	PSL2	0.667
TL6	0.525	ML7	0.566	PSL3	0.673
IDL1	0.565	ML8	0.683	PSL4	0.563
IDL2	0.616	VL1	0.661	PSL5	0.575
IDL3	0.568	VL2	0.597	CRL1	0.579
IDL4	0.637	VL3	0.586	CRL2	0.673
IDL5	0.659	VL4	0.535	CRL3	0.568
IDL6	0.590	VL5	0.630	CRL4	0.624
CCL1	0.582	VL6	0.566	CRL5	0.561

Source: Evaluated by the authors

5.6. Evaluation of the overall digital literacy status and the individual digital literacy competencies

In the online survey, 217 students were questioned with a set of 54 attributes, in which they were asked to self-evaluate them on a scale from 1 (very low) to 5 (very high). The minimum/maximum score that can be obtained is 54/270. Students scored between 140 and 270. Students were categorized on a rating scale proposed by us that introduces 4 relevant levels of L1 – L4 skills, according to Table 3.

Table 3: Levels of digital literacy skills and student statistics regarding them

	Level of overall digital literacy competences			
	L1 Very low Score <140	***L2 Low Score140→183***	***L3 Average Score 184→226***	***L4 High Score 227→270***
Number of students	**0**	**15**	**120**	**82**

Source: Evaluated by the authors

The need to improve the various digital literacy skills among students is obvious if we observe the data in Table 3. This is evident from the fact that the majority of students have been assessed to have an average level of competency, highlighting the importance of implementing targeted measures to improve these skills. However, in order to address specific vulnerabilities that students may have, it is crucial to identify their specific areas of weakness. Table 4 shows the average values and standard deviation for all literacies and for overall digital literacy. As can be seen, the average value for overall *digital literacy* is 4.06, which indicates a medium to high level of skills. A lower level of skills is observed 3.84 in *Career-related literacy* (CRL), i.e. students' skills need to be improved regarding: identifying and using digital tools and applications suitable for the economic field, searching, evaluating and understanding online information and content digital from the economic field.

Other student competencies that require improvement are those related to problem solving, *Problem-solving literacy* (PSL) having an average value of 3.93. We are talking here about the ability to: identify and solve technical problems when using digital devices or media; to adopt and customize digital environments according to personal needs; to understand their own digital skills gaps and needs; of self-development and keeping up-to-date with your own digital evolution. Other Information and *data literacy* (IDL) skills, with an average value of 3.96, that need to be improved are, for example: knowing how to search for information online,

using multiple sources, evaluating the credibility of information sources and information, netiquette, digital identity management in digital communication.

Table 4: Mean Values and Standard Deviation for overall literacy and attributes

Variables	Mean value	Standard deviation	Variables	Mean value	Standard deviation
Digital literacy (DL)	4.064	0.478	Media literacy (ML)	3.978	0.577
Computer literacy (CL)	4.058	0.611	Visual literacy (VL)	4.073	0.619
Technology literacy (TL)	4.255	0.549	Safety literacy (SL)	4.131	0.596
Information and data literacy (IDL)	3.962	0.603	Problem-solving literacy (PSL)	3.930	0.667
Communication collaboration literacy (CCL)	4.348	0.546	Career-related literacy (CRL)	3.848	0.764

Source: Evaluated by the authors

6. Concluzii

This paper proposed a digital literacy framework that included 9 relevant literacies for economic subjects. Through statistical mathematical analyses, it has been demonstrated that all these literacies have a significant relationship with *digital literacy*, serving as strong and very strong contributors. Notably, *Safety literacy* (SL), *Problem-solving literacy* (PSL), and *Career-related literacy* (CRL) serve as novel components of the framework compared to previously established models. Significant contributors to each literacy were also analyzed, by calculating standardized beta values β in a simplified model in which each literacy was studied as a latent variable with associated attributes. The results again showed that all 54 attributes were relevant to our analysis. Regarding the identification of the attributes with the most significant contribution to digital literacy, the study revealed that these involve skills such as to interpret information from the economic media, awareness of the responsibility of digital technologies towards economic development, understanding the values transmitted by different messages promoted on the networks socializing.

The findings of this study suggest that students pursuing economic subjects possess a moderate to high level of digital literacy, which imposes a need to improve these skills through a series of interventions in terms of teaching-learning in economic subjects. The assessment of the level of each individual literacy shows that the greatest needs to improve digital skills are in the field of career-related, problem-solving and information and data. Our results indicate the need to adapt the

curriculum to economic disciplines for the training and improvement of digital skills necessary for future professionals in the economic field.

We are currently witnessing an increase in the pervaisive use of digital technologies, and this reality requires the adoption of measures related to curriculum adaptation, teacher training, changing existing concepts (Liu, 2020). The integration of the digititalized educational process in the vocational education and training systems is determined by several objective factors, which can no longer be ignored. The emergence of the digital economy brings about new requirements for personal skills, as novel digital technologies continuously shape the digital environment, and the current generation of students possess distinct social and psychological characteristics (Bilenko et al., 2019). It is therefore evident that the personal development in terms of digital literacy is crucial, as well as the major role played by digital technologies in education (Audrin and Audrin, 2022). It is recommended that the literacies identified in this research are disseminated among those involved in economic education to ensure the appropriate preparation of students for a labor market that is currently undergoing profound transformations.

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