

DIDACTIQUE DES LANGUES / LANGUAGE TEACHING METHODOLOGY

Visual Literacy in Higher Education

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Abstract

This research paper examines the role of visual literacy in academia and its impact on students' education and professional lives. The study explores theoretical perspectives on visual literacy, its presence in university curricula, and student perceptions of its relevance. Using a qualitative analysis of the Bucharest University of Economic Studies (ASE București) curricula and a questionnaire, the findings reveal that visual literacy remains an overlooked competency, despite its importance in modern education. The article argues for the integration of structured visual literacy training in higher education to enhance critical thinking and professional preparedness.

Keywords: Visual literacy; academic curricula; professional skills.

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Introduction

In the digital age, images are essential in how people receive and interpret information. The rise of social networks, AI-generated content, and fake news has made visual literacy—a person's ability to interpret, evaluate, and create visual media—more critical than ever. Understanding visual messages is essential for media consumption, academic success, and professional development. Despite this, visual literacy (VL) remains an often-overlooked aspect of education, with limited focus on its systematic integration into curricula.

This study examines the presence (or absence) of visual literacy training in academia and its relevance to students' education and future careers. As defined in the "ACRL Visual Literacy Competency Standards

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for Higher Education”, visual literacy is a set of skills that enables people to find, analyze, evaluate, use, and create visual media (Hattwig et al., 2011: para. 2). Although this concept has been discussed since the 1960s (Michelson, 2017: 59), competency standards in higher education were formalized only in 2011. Given the increasing role of visuals in communication and the growing reliance on digital platforms, the necessity for structured visual literacy training has never been greater.

Visual literacy (VL³) is crucial to modern education and professional life. Students are frequently required to engage with visual materials, whether through interpreting graphs and charts, analyzing visual media, or presenting information visually. However, most students receive limited formal training in these areas beyond occasional assignments involving PowerPoint presentations. This lack of structured education in visual literacy creates gaps in their ability to analyze critically and effectively use visual media, impacting their academic performance and career readiness.

This topic is relevant for both academic and professional environments. Visual materials are used in communication, education, and various professional fields, including science, business, the arts, and the social sciences. Studies indicate that people with good visual literacy skills are better prepared to analyze complex information, make educated decisions, and communicate effectively. Despite its recognized value, VL is often seen as an auxiliary skill rather than an essential element of formal education, limiting its integration into curricula.

After defining visual literacy and its role in education, this paper presents a case study analyzing the curricula of the Bucharest University of Economic Studies (ASE București) and students’ perspectives on their training in visual literacy. The main research premise is that students are not adequately instructed in visual literacy and that its use is restricted to a few specific contexts rather than being systematically integrated into the curricula. This assumption is based on the observation that visual literacy skills are generally developed through self-directed learning or extracurricular activities rather than structured academic training.

In today’s digital world, students are constantly exposed to visual content that shapes their understanding of information from social media, online learning platforms, and different digital tools. However, since not all visuals are trustworthy with the rise of misinformation, manipulated

³ The acronym VL will be used for virtual literacy throughout the present article.

images, and AI-generated content, it is increasingly difficult to distinguish fact from distortion. Developing strong analytical skills is essential for critically evaluating visual messages and ensuring students can responsibly navigate and contribute to digital spaces. Proper training in VL can help individuals assess the reliability of the content they encounter or produce, leaving them better equipped to deal with misinformation and biased narratives.

Beyond academia, visual literacy is an essential skill for various professional domains such as marketing, journalism, design, healthcare, and technology, which increasingly rely on analyses of visual content. Marketers, for instance, leverage visual storytelling to enhance audience engagement, while data analysts use graphical representations to communicate complex findings in a clear and accessible manner. Developing visual materials reinforcing key messages and ensuring clarity and impact are also important to designers. In these and many other fields, the ability to critically assess and produce visual content is not merely advantageous but a fundamental requirement for professional success.

The present research analysis suggests that universities should incorporate visual literacy training into their curricula to address these concerns. Courses and workshops focusing on image analysis, media interpretation, and visual communication strategies in higher education institutions can better prepare students for the needs of the modern workforce. Furthermore, interdisciplinary approaches to VL education can encourage students to apply these skills across different domains, promoting a more extensive understanding of visual communication.

Our case study highlights the extent to which the ASE București curricula address visual literacy. It examines whether existing courses provide adequate training in visual analysis, graphical representation, and media literacy. Moreover, it examines students' self-assessment of their visual literacy skills and how well-prepared they feel to engage with visual materials in academic and professional settings. Our findings will contribute to ongoing discussions about the role of visual literacy in higher education and offer recommendations for improving VL instruction.

By dwelling on theoretical frameworks and analyzing student experiences, this study will try to demonstrate that VL should be essential to academic education. With the continuous evolution of technology and media, ensuring students become visually literate is imperative for their academic success and professional adaptability. Integrating VL classes into

university curricula could empower students to engage with visual media critically and prepare them for careers that demand visual interpretation and communication proficiency.

1. Visual Literacy-Theoretical Background

Understanding the significance of visual literacy requires a broader exploration of literacy itself. As defined by the Oxford Dictionary (Oxford English Dictionary Online), *literacy* refers to the ability to read and write. However, modern perspectives extend this definition to include specialized skills relevant to different domains, such as digital and visual literacy.

The historical development of literacy shows a close relationship between language and writing. While language has existed for millennia, writing emerged only around five thousand years ago (see Kalantzis & Cope, 2011). Literacy was historically reserved for the elite, reinforcing societal divides. Today, literacy encompasses more than just reading and writing – it includes the ability to interpret and analyze various forms of information, including visual data.

With rapid technological advancements, literacy has evolved to include “digital-age literacy” (*EnGauge 21 Century...*, 2002: 15), which consists of scientific, economic, technological, information, multicultural, and visual literacy. Among these, visual literacy is crucial, given the dominance of images in modern communication. John L. Debes (qtd. in Michelson, 2017: 95) was among the first to define visual literacy, emphasizing that children understand visual communication before they acquire verbal language through using and “reading” body language. The rise of television played a crucial role in shaping how younger generations learn and process information. Unlike older generations accustomed to more linear ways of thinking, young people developed a multimedia-driven approach to learning and problem-solving. This shift influenced their cognitive processes and created a distinct contrast in perception and psychological development between the generations. With the proliferation of digital media, visual literacy has become a necessary skill in education.

Visual literacy, the ability to find, interpret, evaluate, use, and create visual media (Hattwig et al., 2011: para. 2), ensures students can critically engage with visual materials and apply them effectively. A visually literate individual can decode information in various visual forms, allowing for a deeper engagement with content across disciplines. Visual literacy also

involves understanding semiotics, the study of signs and symbols. Semiotics plays a vital role in analyzing images, ads, and other forms of visual media.

Students can more effectively engage with and critique media representations by understanding the cultural and contextual significance of visual elements.

1.1 Visual Literacy in the academic world

Visual literacy must be integrated into curricula as education evolves to enhance students' learning experiences. Recent studies show that incorporating VL into education improves comprehension across disciplines. For instance, chemistry students benefit from interactive models that help translate visual data into verbal explanations, as demonstrated by a study on Estonian students from 2012 (Sarapuu & Zinakov, 2012: 51). Moreover, cultural studies courses that analyze film and media strengthen students' critical thinking skills by exposing them to the visual representation of social issues.

In their study, Lundy and Stephens (2015) report that the course "African American Images in the Media" from Clark Atlanta University makes use of visual and media literacy concepts. This course aims to evaluate the impact of positive and negative images of African American people in films, television, and other media on fundamental cognition. The course activities strengthen students' ability to recognize social, cultural and artistic themes, thus equipping them with skills to critically analyze media and become knowledgeable of film terminology, theoretical frameworks and analytical instruments to interpret cinematic productions. This course is significant as it critically examines the representation of African Americans in the media and its role in shaping social, political, and cultural change. Through analysis of various media portrayals, students explore how these representations influence public perceptions, contribute to discourse on racial identity, and impact broader societal dynamics. (Lundy and Stephens, 2015: 1059).

As previously mentioned, visual literacy standards emphasize several competencies, including determining the nature of visual materials, accessing and evaluating images, and understanding ethical considerations in visual media usage (Hattwig et al. 2011). A study at the University of Madrid used memes to explore students' ability to interpret and critique

visual content, highlighting the need for structured visual literacy training (Domínguez Romero & Bobkina 2021). The two scholars led a meme-based activity to expose students to the issue of American politics, precisely Trump's first inauguration day. The study aimed to identify the visual and critical needs of university students. The respondents had to complete a demographic questionnaire and a meme-based assignment, which was evaluated based on the four reader's roles (code breakers, text participants, text user and text analysts), representing visual literacy skills, and the three dimensions of perception, structure and ideology, representing critical literacy, factors collected from Luke and Freebody's Four Resources Model (code breaker, meaning maker, text user, and text critic) (Luke and Freebody, 1999: 1) and Serafini's model (Serafini, 2010: 85-104) (qtd. in Domínguez Romero and Bobkina, 2021: 6).

Despite the growing importance of visual literacy, its integration into curricula remains limited. In Romania, research indicates that science subjects include some elements of visual literacy, particularly in interpreting graphs and charts. However, humanities courses lack structured visual literacy instruction (see Rotaru 2018). This disparity suggests that students from different academic backgrounds may have unequal access to visual literacy training, affecting their ability to effectively interpret and create visual content. The study conducted by Marina Rotaru (2018) highlights that the Romanian curricula emphasize the development of graphicacy skills by exposing students to graphs and other visual representations in various classroom activities, particularly in science classes. Students learn to read graphs, identify and extract data, and represent information graphically. Specific writing skills related to graph comprehension are outlined in the curricula for Romanian classes for sixth graders, who are expected to write texts based on graphical data by the end of the school year. Moreover, the English language curricula for eleventh and twelfth graders acknowledge the importance of transferring data between linguistic and non-linguistic codes, such as graphs and images, implying the necessity of verbalizing graphical information effectively in writing (Rotaru, 2018: 71).

According to Riad S. Aisami (2015) teachers should also possess the ability to incorporate visual media into their teaching materials, much like proficient graphic designers, because effective visual communication requires careful planning and application. They should be skilled in handling electronic files, creating graphics, and integrating various visual

components into instructional resources. Proficiency in graphic editing software, such as Adobe Photoshop, allows educators to effectively apply graphic design principles and tools in their teaching practice (Aisami, 2015: 544).

1.2 Visual Literacy for professional purposes

As previously mentioned, visual literacy is a valuable skill in professional settings. Experts in many fields must interpret, evaluate, and create visual content to convey complex information effectively. For example, data analysts use charts and graphs to present findings, while marketers employ visuals to engage audiences.

Additionally, an important component for increased job eligibility are Language certificates, such as the ones offered by IELTS and Cambridge exams. These examinations also include visual components that assess candidates' abilities to interpret images and graphs. As shown by Rotaru's research, Romanian students often struggle with these tasks due to insufficient exposure to visual literacy training in school (2018: 77-79). This lack of preparation highlights the need for integrating visual literacy into language education to ensure students can confidently analyze and describe visual data.

Graph comprehension, a subset of visual literacy known as graphicacy, is also crucial in professional environments. Whether interpreting economic trends, medical data, or engineering schematics, professionals must navigate visual representations effectively. Studies show that students who develop strong visual literacy skills are better equipped to succeed in their careers, emphasizing the need for universities to enhance visual literacy education (see Aldrich & Sheppard 2000, Michelson 2017).

Additionally, visual literacy extends beyond traditional careers. In an era dominated by digital media, professionals in fields such as social media management, user experience (UX) design, and virtual reality development require advanced visual literacy skills. The ability to analyze user engagement metrics, develop visually appealing content, and assess digital interactions is crucial for success in these emerging fields.

Moreover, ethical considerations surrounding visual literacy are becoming increasingly relevant in professional settings. Issues such as digital manipulation, deepfakes, and misleading visual representations

require individuals to critically assess images before accepting them as factual. By equipping students with strong visual literacy skills, universities can help future professionals navigate ethical dilemmas and make informed decisions regarding visual content.

Furthermore, visual literacy plays a role in corporate communication. Businesses rely on visual presentations, branding, and infographics to convey messages to stakeholders. Employees with strong visual literacy skills can effectively design reports, create compelling presentations, and enhance overall business communication strategies.

As it becomes apparent, visual literacy is a fundamental skill that plays a critical role in both academic and professional settings. Although it has been recognized since the 1960s, its formal inclusion in education remains limited. Research demonstrates that visual literacy enhances students' learning experiences and prepares them for careers that require strong visual communication skills. However, disparities in access to visual literacy education persist, particularly between science and humanities disciplines.

The present article aims to emphasize that, given the increasing reliance on digital media and visual communication, universities must prioritize visual literacy training. By integrating structured courses and interdisciplinary approaches, institutions can provide students the skills necessary to critically engage with visual media and apply their knowledge in professional contexts.

Future research should explore effective methods for incorporating visual literacy into different educational settings to ensure all students benefit from its advantages. Expanding visual literacy programs can improve students' ability to decode complex visual messages, critically assess media, and communicate effectively through visuals, thereby fostering a generation of professionals equipped for an increasingly visual world.

Moreover, businesses and organizations should consider implementing visual literacy training for employees, ensuring effective communication across industries. With visual culture continuing to expand, individuals equipped with strong visual literacy skills will have a competitive edge in an increasingly media-driven world.

2. Case Study – Visual literacy in higher education

2.1 Methodology

The main goal of this study was to investigate the presence (or absence) of visual literacy classes in universities and to suggest the potential impact VL courses might have for students' academic and professional lives. A qualitative analysis of both primary and secondary data was employed to gain deeper insights by incorporating students' experiences alongside objective data.

First, the study examines the curricula at the Bucharest University of Economic Studies (ASE) to determine the availability of courses focused on visual literacy. This analysis includes curriculum reviews and student descriptions of coursework. Only the curricula for students enrolled from 2021 until 2023 were considered, ensuring that the findings reflect the current academic landscape.

The second part of the study comprises a questionnaire aimed at assessing students' awareness of visual literacy, their experiences with it in university, and its perceived relevance for their careers. The respondents, mostly Romanian students from ASE București, provided data between March and April 2024, totaling 52 responses.

2.2 Analysis of the ASE București curricula

The review of ASE București's curricula sought to determine the extent to which visual literacy is integrated into coursework. ASE București offers 25 bachelor's programs, each consisting of 13 to 20 courses per year, with optional courses available.

Our investigation revealed that no courses at ASE focus explicitly on visual literacy. However, some disciplines incorporate related elements. Marketing and statistics courses provide students with exposure to graphicacy and the communicative role of images. Additionally, two courses – “Design and Aesthetics” and “Graphics, Design and Creative Media Development” – are included in the Faculty of Marketing curricula, with the former also available to Business and Tourism Faculty students. These courses introduce fundamental design concepts, color theory, and aesthetic principles. Similarly, students in Applied Modern Languages

engage with visual literacy through Cultural Studies courses, where they analyze images from sociocultural perspectives.

While ASE curricula incorporate elements of visual literacy, no course systematically covers all aspects of the discipline. The scattered and incidental exposure to visual literacy indicates a need for a more structured approach to developing students' visual communication skills.

2.3 Questionnaire Analysis

This section of the study investigates students' understanding and experiences with visual literacy, as well as its implications for their studies and careers. The questionnaire consists of 33 open and closed questions across six sections:

1. Demographic Information (6 questions): Collects basic respondent data.
2. Awareness of Visual Literacy (4 questions): Measures familiarity with the concept.
3. Visual Literacy in School (6 questions): Explores the presence of visual literacy in Romanian education.
4. Working with Visuals (8 questions): Assesses students' alignment with Visual Literacy Competency Standards.
5. Visual Literacy for Language Certificates (5 questions): Examines the role of visual literacy in standardized exams.
6. Visual Literacy for Professional Life (4 questions): Evaluates its relevance in students' careers.

A qualitative analysis of responses was conducted to extract key insights. The online format ensured accessibility and minimized external influences on participants' opinions.

Regarding the demographic information, of the 52 respondents, 73% were women aged 18 to 23. Most lived in urban areas (84%), and only 36% were employed at the time of the survey. Respondents were enrolled in a range of academic programs, with the highest proportion in economics, followed by humanities, sciences, and social sciences. Three respondents had studied multiple fields, indicating a diverse educational background among participants.

In Section 2: Awareness of Visual Literacy, students were first asked if they had encountered the term "visual literacy" before being given its definition. Initially, only 21.2% reported familiarity with the term, but this

number increased to 84.6% after they were provided with a definition. The primary sources of exposure were the internet, social media, friends, and, to a lesser extent, school (e.g., during Cambridge Advanced English exam preparation).

When asked to define visual literacy in their own words, respondents associated it with communication through visuals, the ability to interpret images contextually, and the capacity to present information visually. One respondent correctly described it as a “set of skills that empowers someone to proficiently discover, analyze, assess, utilize, and generate images and visual content.” Others highlighted its role in distinguishing between real and AI-generated images, a particularly relevant skill in today's digital landscape.

Section 3: Visual Literacy in School tested the extent to which respondents had been exposed to VL during their studies. Students were asked whether they had received formal instruction in interpreting visual media. While 75% had encountered some form of visual support (e.g., graphs, charts, images), a quarter had not been explicitly taught how to analyze them. Subjects most frequently associated with visual support included mathematics, statistics, IT, and economics, while humanities disciplines had significantly less emphasis on visual literacy (see Fig. 1).

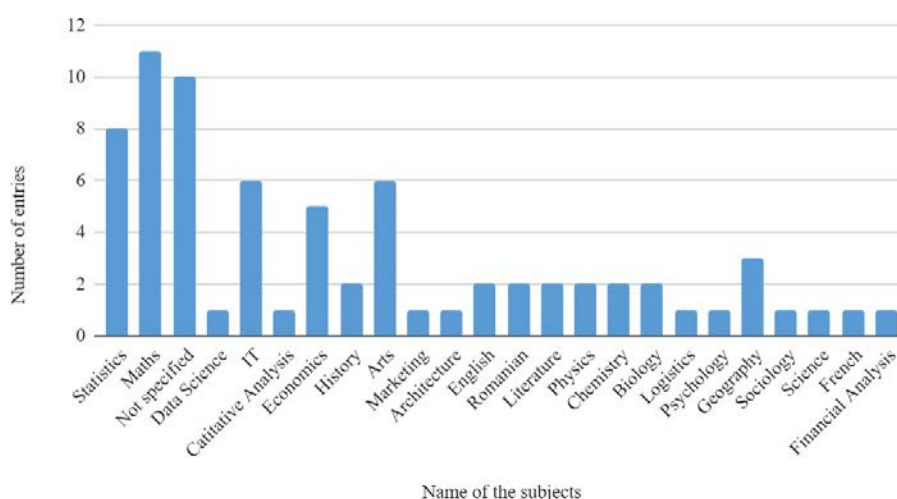


Figure 1. Subjects where students encountered visual support

Respondents found visual literacy useful for organizing and understanding complex information, enhancing presentations, and

improving critical thinking. Many noted that it facilitates learning across disciplines, from analyzing economic trends to interpreting nonverbal communication in psychology. Additionally, 90% of respondents identified as visual learners, yet only 25% felt that the visual support provided in their courses was sufficient.

Regardless of the amount of visual media students receive during courses, as it can be seen in Figure 2, 75% of respondents reported that they frequently use visuals for their projects or homework. For this last question, students could choose from five options - *Always*, *Often*, *Sometimes*, *Rarely* and *Never* - from which *Often* got the most entries, while *Never* got none, and *Rarely* also had a low number of entries. This leads to the conclusion that Romanian students prefer to use visuals in their work because, as stated earlier, these materials help them better understand subjects and organize ideas, but also to analyze trends and different perspectives, but also because they are easier to remember and facilitate the transmission of messages.

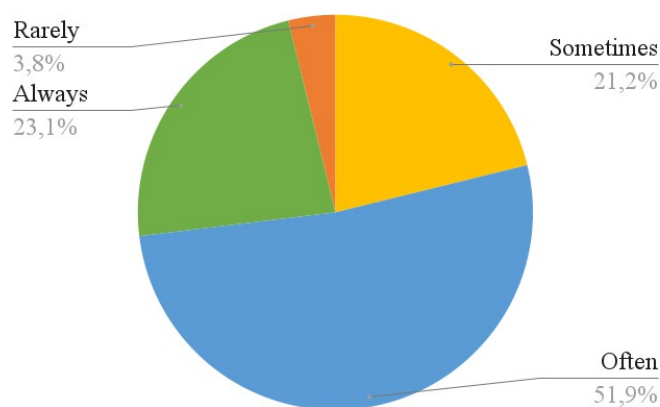


Figure 2. Frequency of usage of visual media in students' work

In Section 4: Working with Visuals, the questions aimed to evaluate students' proficiency in visual literacy. Respondents rated their agreement with statements aligned with the *ACRL Visual Literacy Competency Standards* (Hattwig et al.; para. 3). The findings indicated varying levels of confidence in different aspects of visual literacy:

- (Standard 1) Defining the need for visual support: 60% of students felt confident in determining when and how to use visuals.

- (Standard 2) Finding and accessing visuals: 67.3% reported ease in sourcing relevant visual materials, though some found it challenging to locate specific historical images or identify AI-generated content.
- (Standard 3) Interpreting visual messages: Over 70% felt capable of analyzing images critically.
- (Standard 4) Evaluating image sources: Confidence dropped, with many students unsure how to verify the credibility of visual materials.
- (Standard 5) Using visuals effectively: Nearly 85% found they could integrate visuals into presentations and projects successfully.
- (Standard 6) Creating meaningful visuals: Responses varied, with 67.3% expressing confidence, often citing social media experience as an influence.
- (Standard 7) Understanding ethical considerations: Uncertainty persisted regarding copyright laws and ethical use of images, with one respondent stating that they understood personal-use policies but not commercial regulations.

The findings from this section of the questionnaire indicate that Romanian students generally take into consideration the principles of visual literacy when engaging with visual media, despite these not being systematically addressed in formal educational settings. The development of the Internet plays a significant role in shaping students' engagement with visual content, serving as a primary source of both information and media. Moreover, the widespread use of social media platforms fosters a culture of image sharing, which in turn heightens users' awareness of ethical considerations and stimulates creative practices in visual production. Nonetheless, a minority of respondents—ranging from one to six students—reported that they seldom or never adhere to visual literacy standards in their academic work. Standards 4 and 7 appear to pose the greatest challenges. As previously suggested, this may be attributed to a broader lack of institutional support for the integration of visual materials into academic projects, as well as insufficient guidance on how to critically assess and properly cite visual sources.

Section 5: Visual Literacy for Language Certificates sought to examine the relevance of visual literacy in the context of language certification. To this end, students were presented with five closed-ended questions designed to determine whether they had previously taken a language examination, whether they had encountered visual-based tasks during such

assessments, and, finally, to evaluate the clarity and adequacy of the instructions related to visual tasks provided during their exam preparation

Among respondents, 36 had taken at least one language certification exam. As shown in Figure 3, English emerges as the language for which students hold the highest number of certificates, followed by French, Spanish, Chinese, and Romanian. These results are consistent with expectations, given that English is the primary foreign language taught in Romanian schools, typically followed by French and German.

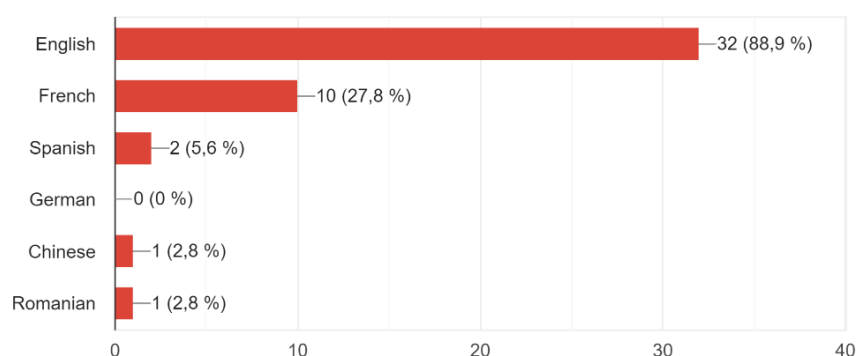


Figure 3. Languages for which the respondents have taken a language certification exam

Cambridge and IELTS exams commonly feature visual-based tasks, such as image descriptions and graph analysis. While over 60% were satisfied with their preparation for such tasks, around 20% felt they had received inadequate training. This suggests a need for better integration of visual literacy instruction in language education.

The final section of the questionnaire, Section 6: Visual Literacy for Professional Life, aimed to explore the professional contexts in which students perceive visual literacy to be relevant, as well as its applicability in the workplace for those who are currently employed. Respondents were presented with two open-ended questions designed to elicit their perspectives on the significance of visual literacy in their professional lives, along with two closed-ended questions intended to assess the frequency with which they employ visual literacy skills in their work environments.

Students were asked about visual literacy's relevance to their careers. Only six respondents dismissed its importance, primarily in text-heavy

fields such as translation. Others highlighted its significance in data interpretation, content creation, design, public relations, psychology, and journalism. Many emphasized that visual literacy is essential for synthesizing complex information and making informed decisions.

Professions requiring visual literacy were diverse, including marketing, IT, medicine, law enforcement, tourism, and education. Approximately 65% of employed respondents reported having to interpret or create visual materials at work. The frequency of using visual literacy skills varied, with an equal distribution between "Never," "Often," and "Sometimes."

These findings underscore the relevance of visual literacy in students' professional lives and support the argument that such competencies should be systematically cultivated during their academic training. Visual literacy not only aids in the execution of professional tasks, the interpretation of information, and effective communication, but is also essential in fields where the ability to comprehend images and graphical data is a prerequisite for success.

The findings of this case study reveal a fragmented and largely implicit approach to visual literacy within Romanian higher education. Although students regularly interact with visual materials, they receive minimal formal instruction in the interpretation, critical evaluation, and production of visual content. At the Bucharest University of Economic Studies (ASE București), elements of visual literacy are present in the curriculum, yet no dedicated course addresses the topic in a comprehensive manner.

Students themselves acknowledge visual literacy as a valuable competence, with relevance extending from academic performance to professional advancement. Nonetheless, significant gaps persist in their formal education – particularly concerning source evaluation and ethical use of visual media. In light of the growing role of visual communication across professional domains, a more systematic integration of visual literacy into university curricula is strongly recommended. By strengthening visual literacy education, institutions can better prepare students for the challenges of a digital and visually driven world, ensuring that they possess the necessary skills to navigate both academic and professional environments effectively.

Conclusions

This paper has sought to demonstrate the significance of visual literacy as a crucial skill for students throughout their educational and professional development – from secondary school to university and ultimately into the workforce. Despite its growing relevance, visual literacy remains insufficiently represented in academic curricula.

The study began with a review of scholarly literature to examine the educational applications of visual literacy. Since its conceptual emergence in the 1960s through the work of Debes (1974) (as cited in Michelson, 2017: 59), visual literacy has proven valuable across a range of disciplines – including political science, cultural studies, and science education. As the contemporary world becomes increasingly image-saturated and reliant on visual modes of communication, integrating visual literacy into educational programs is essential to equip students with the competencies necessary for future success.

Furthermore, visual literacy plays a role in students' professional trajectories, as evidenced by its presence in language certification exams, which often include visual components to assess communicative competence in a foreign language.

An analysis of the curricula at the Bucharest University of Economic Studies revealed the absence of dedicated courses on visual literacy. Nevertheless, certain programs – such as Marketing and Business and Tourism – include design-related instruction during the early years of study. The findings from the questionnaire, completed by 52 university students, further indicate that while most students have not encountered the term “visual literacy” in their formal studies, they nonetheless demonstrate an implicit awareness of its principles, often aligning with the *Visual Literacy Standards for Higher Education* (Hattwig et al., para. 3).

This study has also shown that students tend to acquire knowledge of visual literacy primarily through informal sources, particularly the Internet, rather than through formal education. This is particularly noteworthy given that nearly all respondents identified as visual learners and reported frequent engagement with images, tables, and graphs in their academic projects. The most reported challenges include difficulties in locating relevant visual materials, interpreting ambiguous images, understanding copyright regulations, and distinguishing authentic visuals from those generated by artificial intelligence.

Despite these challenges, students recognize that visual literacy skills offer substantial advantages in both academic and professional contexts.

These include the ability to comprehend, synthesize, and visually represent complex data, interpret and produce images to convey specific messages, recognize patterns in non-Latin scripts such as Asian characters, and decode non-verbal cues such as gestures. The importance of visual literacy is further amplified by its applicability in professional environments where visual communication is prevalent ranging from the arts and marketing to medicine and politics.

It is important to acknowledge the limitations of the present study, particularly its focus on the undergraduate curricula of the Bucharest University of Economic Studies, restricted to the cohorts of 2021–2024 (and 2025 in the case of the Law Faculty). To provide a more thorough and representative analysis, future research should incorporate a broader sample of curricula from universities across Romania. Additionally, the inclusion of practical assessments would be beneficial in evaluating the extent to which students' competencies align with the seven standards of visual literacy.

References

1. AISAMI, Riad S. (2015). "Learning Styles and Visual Literacy for Learning and Performance", *Procedia - Social and Behavioral Sciences*, Vol. 176, pp. 538-545. ISSN 1877-0428.
2. ALDRICH, Frances K., SHEPPARD, Linda. (2000). "Graphicacy: The fourth 'R'?", *Primary Science Review*, Vol. 64, No. 1, 2000, pp. 8-11, <https://edunum.unige.ch/articles/aldrich2000.pdf>. Accessed 8 March 2024.
3. DEBES, John. L. (1974). "Chapter 8. Visual Literacy," in *American Education in the Electric Age: New Perspectives on Media and Learning*, ed. Peter L. Klinge, Englewood Cliffs, N.J.: Educational Technology Publications, 1974, pp. 113-119.
4. DOMÍNGUEZ ROMERO, Elena, BOBKINA, Jelena. (2021). "Exploring Critical and Visual Literacy Needs in Digital Learning Environments: The Use of Memes in the EFL/ESL University Classroom". *Thinking Skills and Creativity*, vol. 40, June 2021, p. 100783.
5. HATTWIG, Denise, et al. (2011). "ACRL Visual Literacy Competency Standards for Higher Education". *Association of College & Research Libraries (ACRL)*, 27 October 2011, <https://www.ala.org/acrl/standards/visualliteracy>. Accessed on 7 March 2024.
6. KALANTZIS, Mary, COPE, Bill. (2011). "The Work of Writing in the Age of Its Digital Reproducibility." In *Rethinking Identity and Literacy*

- Education in the 21st Century*, Vol. 110, no.1, edited by S. S. Abrams and J. Rowsell, Teachers College Press, New York.
7. LUKE, Allan, FREEBODY, Peter. (1999). "Further notes on the four resources model". *Reading Online*, <https://www.readingonline.org>. Accessed on 9 March 2024.
8. LUNDY, April D., and STEPHENS, Alice E. (2015). "Beyond the Literal: Teaching Visual Literacy in the 21st Century Classroom". *Procedia - Social and Behavioral Sciences*, vol. 174, February 2015, pp. 1057-60, <https://doi.org/10.1016/j.sbspro.2015.01.794> . Accessed 9 March 2024.
9. MICHELSON, Alan. (2017). "A Short History of Visual Literacy: The First Five Decades". In *Art Libraries Journal*, Vol. 42, no. 2, pp. 95-98.
10. ROTARU, Marina C. (2018). "The Importance of Visual Literacy: An Analysis of Potential Obstacles for Romanian Students in the Completion of IELTS Academic Writing Task 1." In *Foreign Language Teaching in Romanian Higher Education: Teaching Methods, Learning Outcomes*, edited by L. M. Grosu-Rădulescu, Multilingual Education Series, Vol. 27, pp. 61-82. Springer International Publishing.
11. SARAPUU, Tago , ZINAKOV, Maksim. S. (2012). "Visual Literacy and Sufficient Contextualization Elements as Prerequisites for Effectiveness of Web-Based Learning Objects As Cognitive Tool". *Conference proceedings of eLearning and Software for Education (eLSE) 2012*, pp. 50-55, <https://www.cceol.com/search/article-detail?id=41733>. Accessed 9 March 2024.
12. SERAFINI, F. (2010). "Reading multimodal texts: Perceptual, structural and ideological perspectives". *Children's Literature in Education*, 41, pp. 85-104, <https://doi.org/10.1007/s10583-010-9100-5>. Accessed 9 March 2024.
13. *** (2023). "Literacy, N., Sense1. " *Oxford English Dictionary*, Oxford University Press, September 2023, <https://doi.org/10.1093/OED/7908592836>. Accessed on 6 March 2024.
14. *** (2002). "EnGauge 21 Century Skills: Literacy in the Digital Age.", *ResearchGate*, January 2002, North Central Regional Educational Laboratory and the Metiri Group.
15. https://www.researchgate.net/publication/234731444_enGauge_21st_Century_Skills_Digital_Literacies_for_a_Digital_Age. Accessed on 6 March 2024.