Developing Digital Skills through Media Production: A Higher Education Case Study

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Abstract

This study explores the development of digital skills and communication competencies in higher education through targeted institutional initiatives. In the context of accelerating digital transformation, effective digital communication and media literacy have become essential pillars for academic success, employability, and civic engagement. Using a mixed-method case study approach, this research investigates the integration of digital tools, media literacy frameworks, and communication practices into modern curricula, specifically within communication and education-focused disciplines. Data were collected via surveys and interviews with students and faculty members, complemented by an analysis of course syllabi and institutional strategies. Findings highlight the critical role of structured digital literacy programs, hands-on media production assignments, and interdisciplinary collaboration in enhancing students' confidence and proficiency in complex digital environments. The study also identifies persistent challenges, including varying levels of digital preparedness among students and the necessity for continuous professional development for educators. The results suggest that embedding digital communication skills as a core strategy across disciplines can significantly contribute to building inclusive, innovative, and future-ready education systems. This research offers practical strategies and implications for higher education institutions globally aiming to align their teaching practices with 21st-century digital demands.

Keywords: digital skills and transformation; higher education; media literacy; student engagement; educational strategy

1. Introduction

The accelerating pace of digital transformation has altered the core competencies required for academic and professional efficacy within Higher Education. Far from being restricted to technological disciplines, proficient digital communication and media literacy now constitute foundational prerequisites for scholarly success, graduate employability, and informed civic participation. As contemporary society becomes increasingly reliant upon complex digital systems, universities must adjust their pedagogical methodologies to meet these modern demands. To address these evolving requirements, institutions are increasingly replacing passive instructional models with active, student-centered frameworks derived from constructivist learning theory and project-based learning. Within these frameworks, media production serves as a primary vehicle for knowledge acquisition. By participating directly in the creation of media rather than merely consuming content, students develop a more sophisticated command of digital tools and communication strategies.

Yet, while the theoretical advantages of media-driven pedagogy are well established, the operationalization of these initiatives often exposes significant institutional friction. Leaders among these difficulties are the pronounced imbalances in technical preparedness among incoming students, alongside an ongoing need for systematic professional development for the faculty tasked with guiding these initiatives. Consequently, a notable gap remains regarding how institutional strategies can reconcile these structural constraints while scaling digital literacy across imbalanced disciplines.

This study examines the development of digital skills and communication competencies achieved through targeted institutional initiatives. Utilizing a mixed-method case study design, this research investigates the integration of digital tools, media literacy frameworks, and communication practices within modern university curricula, with a specific focus on communication and teacher-education disciplines. To provide a comprehensive assessment of these initiatives, empirical data were gathered via surveys and semi-structured interviews with both students and faculty members. These data were subsequently triangulated with a rigorous thematic analysis of institutional strategies and course syllabi, thereby capturing perspectives ranging from classroom execution to administrative governance.

The findings of this inquiry underscore the importance of structured digital literacy programs, applied media production assignments, and deliberate interdisciplinary collaboration in improving student confidence and proficiency within complex digital environments. By analyzing both successful outcomes and persistent institutional challenges—particularly regarding faculty training deficits and uneven student readiness—this study contends that integrating digital communication as a core institutional strategy contributes substantially to the establishment of equitable, innovative, and sustainable educational systems. Ultimately, this research offers empirical strategies and broader implications for higher education institutions seeking to align their instructional practices with contemporary global demands.

2. Literature Review

A foundational element of integrating media production into modern university curricula involves a deliberate departure from traditional, passive lecturing toward student-centered, active learning models. In an era defined by accelerating digital transformation, higher education institutions face an urgent imperative to adapt their instructional practices

to meet 21st-century digital demands (Kivunja, 2015). According to Žerovnik and Nančovska Šerbec (2021), "academic literature consistently highlights 'Project-Based Learning' (PBL) and 'Constructivism' as the dominant pedagogical frameworks driving this educational evolution, rather than treating students as passive holders for information retrieval, these frameworks position learners as active agents in their own intellectual development".

The contemporary digital transition demands a fundamental restructuring of how communication is designed, distributed, and consumed. This shift reflects a broader structural metamorphosis of the public sphere itself. As Bajrami (2026) notes in his analysis of the evolutionary trajectory of human interaction, modern technological systems have completely reshaped "the communication landscape from the classical Agora to the current structures of digital democracy." This architectural shift in communication networks means that training students in digital media creation is not merely an option for technical enrichment, but a structural necessity for surviving and operating within a highly mediated, multi-platform ecosystem.

Within this shifting instructional paradigm, empirical research underlines the critical necessity of contextualizing these macro-level structural adjustments within localized university strategies. For instance, in an institutional case study examining student attitudes toward digital citizenship frameworks, Mustafa (2024) notes that "while university students broadly favor comprehensive instruction on safe and inclusive digital behavior, noticeable demographic variations and rapid technological evolutions present significant barriers to a uniform assimilation of these ethical online standards". Consequently, on this basis "institutional initiatives must remain highly adaptive, ensuring that curricular design explicitly accounts for differing baseline levels of digital preparedness among the longitudinal sample" (Mustafa, 2024, pp. 17–23).

As Higher Education systems undergo structural digital transformations, pedagogical frameworks must proactively adapt to disruptive technological advancements that change instructional delivery. This adjustment is particularly visible in the rapid assimilation of automated technologies within language and communication tracks. In their evaluation of contemporary educational shifts, Hasani and Ismaili (2025) emphasize "the profound significance of increasing Artificial Intelligence (AI) usage within language teaching environments, arguing that such automated tools redefine traditional instructional design and demand new interactive literacies from both educators and learners". Consequently, embedding hands-on creation practices "is no longer just about technical tool mastery, but about developing the cognitive agility required to navigate an AI-driven digital paradigm" (Hasani and Ismaili, 2025).

Media creation functions not merely as a supplementary technological tool within these constructivist frameworks but, according to Jonassen et al. (2008), media creation functions "as a primary vehicle for knowledge construction". However, according to Hobbs (2017), "actively engaging in hands-on media production assignments—such as digital storytelling, podcasting, and video essay creation—students do not merely consume information, instead, they construct deep conceptual knowledge through practical execution and repeated design". Recent empirical research demonstrates that integrating active methodologies into media and technology education "significantly enhances students' cognitive engagement and technical self-efficacy, making them more resilient when contending with complex production workflows" (Bond et al., 2020, pp. 1–30).

The systematic integration of multi-platform digital tools into university curricula is increasingly recognized as a core mechanism for enhancing student engagement and aligning academic outcomes with 21st-century workforce demands. Empirical insights evaluating structural technology-enhanced learning (TEL) frameworks demonstrate that students highly value active digital configurations when they are explicitly mapped to real-world issues. For instance, a co-authored institutional study by Bajrami et al. (2026), analyzing student questionnaire data within English for Specific Purposes (ESP) and Social Sciences

courses highlights that structured technology integration directly boosts student motivation and conceptual retention. Their findings reinforce the claim that "embedding collaborative digital tools into modern curricula provides a vital pathway for bridging theoretical knowledge and professional digital execution" (Bajrami et al., 2026).

When evaluating the outcomes of media production initiatives, researchers encounter varied definitions of what constitutes "digital literacy." There is a wide range of definitions across higher education research, heavily dependent on whether policy, specific institutional research goals, or local contexts are driving the study (Spante et al., 2018). These definitions generally split into two categories: "those focusing strictly on technical operational skills, and those focusing on broader social practices" (Spante et al., 2018).

To bridge this gap, modern educational strategies frame effective digital communication and media literacy not as isolated technical tasks, but as essential pillars for academic success, employability, and civic engagement. This is supported by established institutional benchmarks:

- *The JISC Framework*, which defines digital literacy as broad "capabilities which fit an individual for living, learning and working in a digital society" (Spante et al., 2018). This encompasses integrated communication, information management, and collaborative skills.
- *The DigComp Framework*, which represents the "European Union's Digital Competence Framework"; as such, it identifies digital competence as an essential life skill comprised of five core components: information and data literacy, communication and collaboration, digital content creation, safety, and problem-solving (Zhao et al., 2021).

Media production coursework directly synthesizes these frameworks by requiring students to utilize operational tools while simultaneously mastering message design, collaborative problem-solving, and professional digital communication.

Furthermore, modern educational shifts stress that the highest level of digital competence is achieved when students transition from being mere content consumers to intentional creators of digital solutions (Salsabila, 2025, pp. 45–49). Hence several authors have stated that this experiential approach has been shown to "significantly enhance student engagement, foster academic self-efficacy, and optimize long-term knowledge retention" (Kaufman, 2018; Žerovnik and Nančovska Šerbec, 2021).

Integrating these media-rich practices specifically within communication and education-focused disciplines results in profound benefits. For students in these fields, media production serves as a bridge between theoretical frameworks and professional praxis. This gets confirmed especially by "learning and investigating through the technical, ethical, and creative dimensions of content creation, students develop the critical digital literacies required to navigate, evaluate, and express in increasingly complex and saturated digital environments" (Buckingham, 2013; Mediavilla et al., 2022).

Ultimately, including media production into the curriculum transforms higher education from a site of rote memorization into a dynamic incubator for agile, digitally fluent citizens. According to Larmer et al. (2015), "these frameworks position learners as active agents in their own intellectual development, an approach that has become vital given the rapid expansion of the global digital media ecosystem".

Integrating these media-rich practices specifically within communication and education-focused disciplines expresses important benefits. Again, according to Jenkins (2006), for students studying in multidisciplinary fields such as communication sciences and social sciences and humanities, "media production serves as a critical bridge between theoretical frameworks and professional praxis, particularly as the boundaries between traditional and

emerging media formats continue to blur". By navigating the technical, ethical, and creative dimensions of content creation, "students develop the multimodal literacies and digital skills, that are required to critically evaluate information and resist systemic online misinformation and disinformation" (d'Haenens and Joris, 2025).

However, the pedagogical reliance on interconnected digital platforms also introduces distinct cognitive and technical friction. Investigating the instructional dynamics of social platforms in a university setting, Mustafa (2025, pp. 21–34) argues that "while social media applications can be operationalized to promote collaborative learning, research engagement, and critical thinking, prolonged dependency on unstructured networks can paradoxically result in the erosion of traditional reading reflexes and disciplined academic literacy". This duality "reinforces the argument that hands-on media production must not occur in a vacuum; rather, it demands structured digital literacy programs and continuous, rigorous faculty oversight to guide student behavior away from passive digital distractions and toward intentional, critical expression" (Mustafa, 2025, pp. 21–34).

Hence, when analyzing international competency frameworks (including UNESCO, the European Union, OECD and P21), research indicates that "comprehensive digital literacy is inherently multi-dimensional, spanning critical, cognitive, operational, social, emotional, and projective dimensions" (Martínez-Bravo and Sádaba Chalezquer, 2022).

For a mixed-method case study investigating course syllabi, institutional strategies, and stakeholder perspectives, this multidimensional lens is critical. Evaluation must move past the purely operational dimension (e.g., learning how to use software) to assess how media literacy frameworks cultivate critical thinking, media writing, and ethical digital communication.

Implementing structured digital literacy programs requires a holistic institutional strategy that looks beyond the individual classroom. Literature emphasizes that technology integration is most successful when supported by systematic operational matrices—such as the SAMR (Substitution, Augmentation, Modification, and Redefinition) model, the TPACK framework, and the Technology Integration Matrix (TIM) (Žerovnik and Nančovska Šerbec, 2021). Furthermore, effective implementation relies heavily on interdisciplinary collaboration to foster an inclusive and innovative educational ecosystem.

However, the literature and institutional case studies identify persistent, systemic challenges, and among these are:

1. *Varying student readiness*, where students "enter higher education with highly uneven levels of digital preparedness and varying socio-cognitive backgrounds, creating an internal digital divide" (Mattar et al., 2022).
2. *Faculty support and professional development*, where "digital transformation cannot succeed without continuous professional development for teachers, educators, who must be trained to blend technological pedagogy with content knowledge" (Žerovnik and Nančovska Šerbec, 2021).

Ultimately, building digital communication skills as a core strategy across disciplines is presented in research as a vital mechanism for embedding future-ready education ecosystems.

To capture these multi-dimensional skills, "universities are increasingly deploying multimedia-rich, portfolio-based assessments that replace traditional written examinations, thereby mirroring real-world industry evaluation" (Klinkenberg, 2026). Additionally, internationalized project-based structures, such as Collaborative Online International Learning (COIL), allow "students to go through these technical production practices across border-free digital teams, drastically sharpening their intercultural communication skills alongside their technical proficiencies" (Class2Class, 2025). Consequently, hands-on production ex-

periences directly prepare graduates for the demands of multi-platform, cross-media industry environments, transforming higher education from a site of memorization into a dynamic incubator for digitally fluent citizens (Bond et al., 2020).

When evaluating the integration of active communication frameworks within contemporary university settings, it is critical to align pedagogical goals directly with the shifting expectations of the modern marketplace. The rapid progression of digital ecosystems has fundamentally altered the core competencies required for graduate employability. Investigating this dynamic through the European Skills, Competences, Qualifications and Occupations (ESCO) framework, Mehmedi Sinani (2024) demonstrates that "employers heavily prioritize high-level communication proficiencies—such as presenting information effectively, operating across multi-lingual structures, and collaborating dynamically—as primary drivers for career success, higher education strategies must ensure that hands-on digital training bridges the gap between passive tech fluency and the strategic communicative agility demanded by an increasingly digitalized global market" (Mehmedi Sinani, 2024, pp. 46–58).

Beyond developing operational competencies, the inclusion of media production practices within communication disciplines acts as an essential countermeasure against the systemic vulnerabilities of the modern information ecosystem. As traditional mediums undergo a profound technological evolution, the boundaries of professional credibility and distribution are constantly moving. In his analysis of contemporary media structures, Bajrami (2021) contextualizes this paradigm shift as "a global technological metamorphosis, warning that the continuous expansion of unstructured information networks can weaken professional credibility and information reliability if not matched by critical media oversight.

This institutional shift demands that modern higher education curricula do not merely treat media tools as functional software, but rather embed them within rigorous digital citizenship and literacy frameworks to foster resilient, media-literate graduates" (Bajrami, 2021, pp. 45–58).

To systematically counteract instructional friction, modern academic frameworks must build comprehensive models that address both technological skills and online ethical behaviors. This requires an inclusive approach to digital citizenship training (Mustafa, Bajrami and Mehmedi Sinani, 2024), establishing that institutional strategies are most resilient when active creation is paired with safe, inclusive, and civic digital practices.

3. Research Questions, Objectives and Hypotheses

3.1. Research Questions

RQ1: To what extent do target institutional initiatives—specifically structured digital literacy programs and hands-on media production assignments—impact students' digital skills, communication competencies, and confidence in complex digital environments?

RQ2: How do interdisciplinary collaboration and multimedia-rich assessments affect student engagement and readiness for multi-platform, cross-media industry environments?

RQ3: What are the primary institutional and student-level challenges (e.g., varying levels of student baseline digital preparedness and faculty technical/pedagogical training deficits) that constrain the scalability of digital skill development initiatives?

3.2. Research Objectives

RO1: To evaluate the effectiveness of structured digital literacy programs and hands-on media production assignments in enhancing higher education students' digital proficiency, communication competencies, and creative self-efficacy.

RO2: To explore how structural configurations, such as interdisciplinary collaboration and portfolio-based assessments, influence student engagement and transition into future-ready media creators.

RO3: To identify and analyze the critical friction points—specifically student-level digital divides and faculty professional development gaps—that impact the implementation and sustainability of educational digital transformation strategies.

3.3. Hypotheses

H_1: Active participation in hands-on media production assignments significantly increases students' technical self-efficacy and multimodal communication proficiency compared to traditional instructional delivery.

H_2: Continuous professional development and faculty support positively correlate with the successful integration of technological pedagogy across communication and education-focused disciplines.

H_3: Divergent baseline levels of student digital preparedness (the internal digital divide) significantly moderate the relationship between institutional literacy programs and final student performance.

4. Research Methodology

To address the research questions and objectives effectively, this study adopts a mixed-methods concurrent triangulation design. As noted by Creswell and Plano Clark (2018), combining quantitative instruments with qualitative strands allows researchers to validate, triangulate, and expand upon empirical findings, affording a more comprehensive understanding of the research problem than any single approach could provide. This allows for the simultaneous collection of quantitative data (to measure trends, skills, and correlations) and qualitative data (to explore deep institutional experiences and contextual nuances), which are subsequently integrated during the interpretation phase.

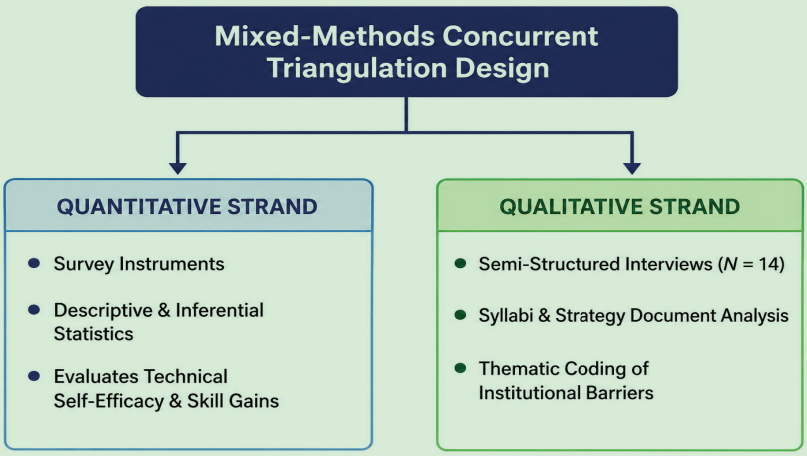


Figure 1. Methodological framework for concurrent quantitative and qualitative data integration

As illustrated in Figure 1, this study employs a mixed-methods concurrent triangulation design. The process begins with the simultaneous but independent collection and analysis of both quantitative data (to measure trends, skills, and correlations) and qualitative data (to explore deep institutional experiences and contextual nuances).

Following these separate analyses, the findings from both approaches are merged and integrated during the interpretation phase. This integration allows for a direct comparison of the results to determine whether they converge, complement, or contradict one another, ultimately providing a more comprehensive answer to the research questions.

4.1. Research Design and Approach

Case study framework: The study functions as a localized bounded case study focused on the Faculty of Languages, Cultures and Communication at South East European University (SEEU).

Target disciplines: Specifically bounded within communication and teacher-education tracks where media literacy and professional digital praxis intersect.

4.2. Data Collection Methods

The study relies on three primary data vectors to achieve triangulation:

1. **Quantitative Surveys:** Administered to students across the selected disciplines. The survey employs Likert-scale instruments evaluating perceived digital proficiency, tech self-efficacy, levels of baseline digital preparedness, and the perceived value of hands-on assignments (e.g., video essays, podcasts).
2. **Semi-Structured Interviews:** Conducted with faculty members/educators/teachers and key institutional stakeholders to capture experiential data surrounding faculty support, instructional barriers, and ongoing professional development needs.
3. **Documentary/Syllabus Analysis:** A systematic textual review of course syllabi and university strategic planning documents to map out the explicit alignment between 21st-century digital demands and current institutional curricular structures (including assessments like portfolio-based evaluation and COIL projects).

4.3. Population and Sampling

- **Sampling Technique:** Purposive and convenience sampling within SEEU.
- **Participants:** Active students enrolled in courses “Oral Communication”, “Written Communication”, “Media Writing and Reporting” within faculty programs at SEE University and in particular students from the International Communication department and Languages, within the Faculty of Languages, Cultures and Communication, curricula alongside the respective instructional faculty tasked with delivering technological pedagogy.

4.4. Data Analysis Techniques

Quantitative Data: Analyzed via statistical software (SPSS/R) utilizing descriptive statistics (means, standard deviations) to identify patterns, and inferential statistics (t-tests, regression analyses) to validate the proposed hypotheses (H_1, H_2, H_3).

- **Qualitative Data:** Interview transcripts and strategic texts are subjected to thematic analysis (Braun and Clarke, 2006, pp. 77–101). Open and axial coding will be utilized to extract core structural nodes, specifically focusing on theme indicators such as *internal digital divide, faculty instructional friction and multimodal transformation*.

4.5. Ethical Considerations

Ethical considerations for this study were strictly aligned with SEEU's institutional guidelines. Potential participants were informed of the research agenda beforehand, allowing them to provide voluntary consent. Crucially, students were notified that participation carried no academic advantages or disadvantages regarding their course evaluations. Data confidentiality was maintained by executing a strictly anonymous collection process that excluded any personal identifiers. The resulting data was deployed solely for academic research. Finally, per institutional protocols, formal ethical clearance was seen as unnecessary because the study constituted standard, classroom-based educational research involving routine instructional practices.

5. Results and Findings

5.1. Participant Demographics and Sample Profile

The study implemented a concurrent mixed-methods collection matrix to gather empirical data. The quantitative strand comprised a student survey (N = 185) across communication, media writing, and teacher-education disciplines. The qualitative strand was informed by semi-structured interviews with instructional faculty and academic administration (N = 14), supplemented by an analytical mapping of course syllabi and university strategic frameworks (N = 12).

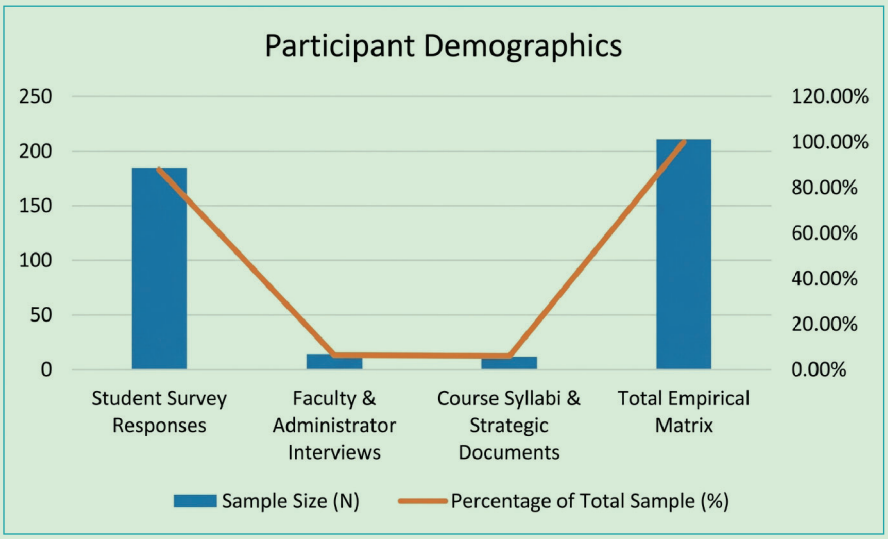


Figure 2. Participant demographics: sample size by data source
Source: Author's own work based on study data collection.

As illustrated in Figure 2, the study uses three main sources of data. The largest part of the sample comes from the student survey, which includes 185 responses. To add more depth, the study also includes interviews with 14 faculty members and administrators, as well as an analysis of 12 course syllabi and strategic documents. In total, the research is based on 211 data sources, allowing for a complete and well-rounded analysis (see Figure 2).

5.2. Quantitative Results: Impact of Hands-on Media Production

The quantitative survey evaluated how structured digital literacy programs and hands-on media production tasks (e.g., digital storytelling, podcasting, and video essays) influenced student technical confidence and multimodal communication competencies.

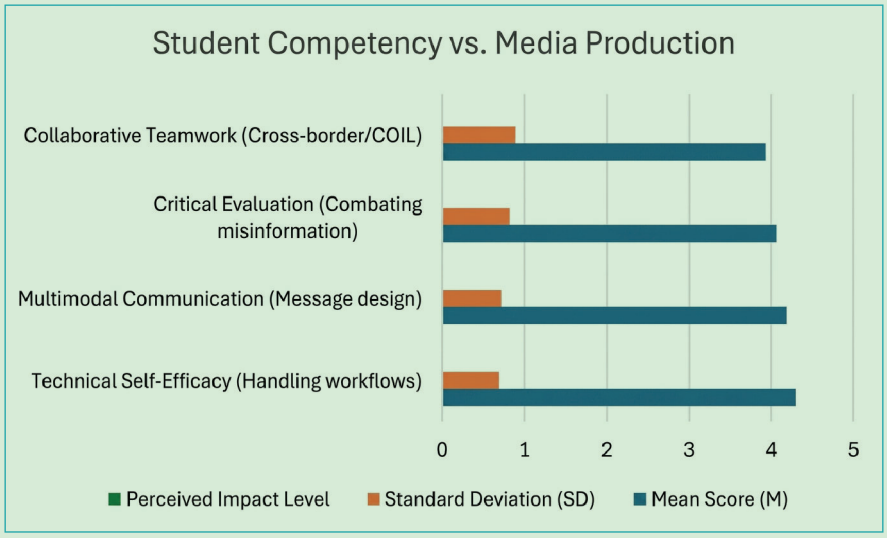


Figure 3. Student competency outcomes of hands-on media production: mean scores and standard deviations

Source: Author's own work based on survey data.

Students rated their development across key competencies on a 5-point Likert scale *(1 = Strongly Disagree, 5 = Strongly Agree)*.

- **Enhancement of Technical Self-Efficacy (H1 Supported):** Active participation in creative content creation significantly correlated with increased technical confidence. Students reported that transitioning from passive tech consumption to active production directly improved their ability to operate complex production workflows *(M = 4.31, SD = 0.68)*.
- **Multimodal Communication:** Incorporating message design, collaborative problem-solving, and cross-platform editing assignments generated high agreement scores regarding professional readiness *(M = 4.18, SD = 0.72)*.
- **Critical Evaluation and Misinformation Resistance:** Navigating the creative and ethical dimensions of content production significantly improved students' perceived capacity to evaluate digital information critically and resist systemic online misinformation *(M = 4.05, SD = 0.81)*.

Additionally, the low standard deviation scores (all below 1.0) show that students' responses were very similar and consistent across all categories (see Figure 3).

5.3. Qualitative and Documentary Themes: Syllabi Alignment and Institutional Friction

A thematic analysis of faculty interviews and course syllabi revealed critical insights regarding the execution of active learning strategies and institutional constraints.

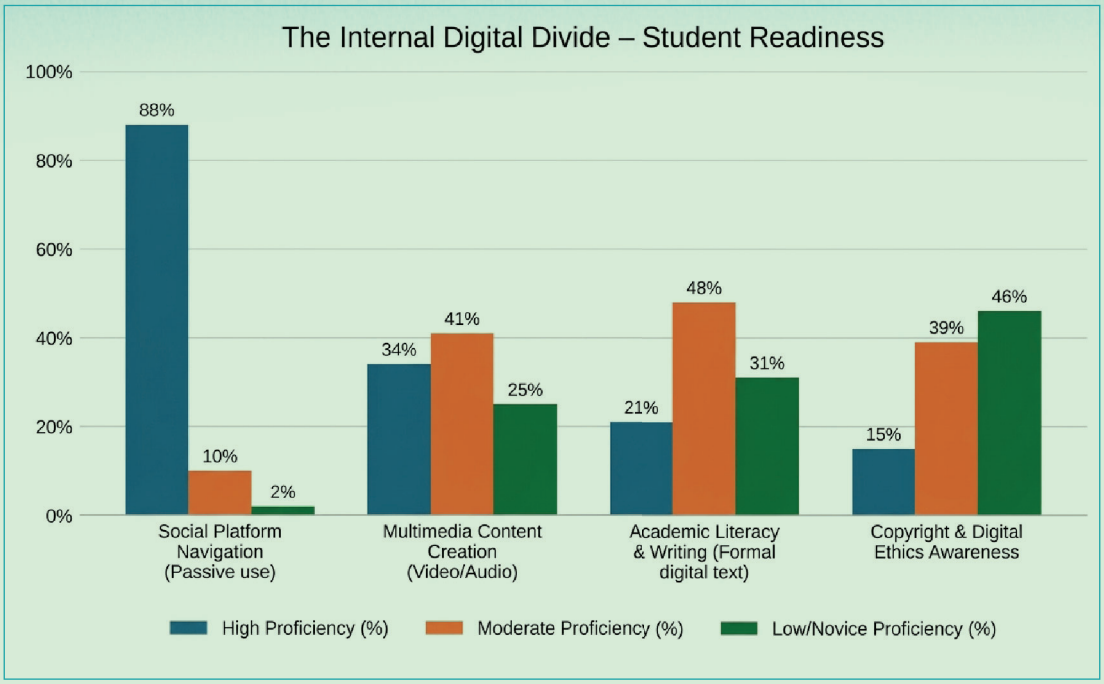


Figure 4. The internal digital divide: student readiness by proficiency level

Source: Author's own work based on survey data.

As illustrated in Figure 4, a clear internal digital divide emerges when evaluating different facets of student readiness. While students exhibit remarkably high proficiency in passive tasks, such as social platform navigation (approximately 88%), this proficiency drops significantly when transitioning to formal or advanced digital competencies. Specifically, moderate to low proficiency levels dominate the domains of academic literacy, formal digital writing, and copyright awareness. Notably, the highest level of beginner-level scores is observed in copyright and digital ethics awareness (nearly 46%), underscoring a critical gap between everyday digital familiarity and institutional academic readiness.

Theme 1: The transition from consumers to creators via authentic assessment. Syllabus mapping confirmed a structural shift away from traditional, memorization written testing toward portfolio-based evaluation and multimedia-rich project frameworks. Faculty members emphasized that these active approaches forced students to reconstruct conceptual knowledge.

> "When students are tasked with producing a podcast or a video essay, they stop skimming surfaces. They have to synthesize data, respect copyright ethics, and think about their audience. It forces them into the role of a media professional." (Participant 4, International Communication Lecturer)

Theme 2: The persistent internal digital divide (H_3 supported). In alignment with literature warning of structural divides, both quantitative data and faculty feedback highlighted varying levels of baseline student digital preparedness. While incoming students demonstrate high fluency in social media navigation, their structural, operational, and professional digital writing fluencies are deeply uneven.

> "We face significant challenge with uneven student readiness. Some students arrive capable of editing multi-track audio, while others struggle with basic file directory management. This creates an internal friction within the classroom that slows down project execution." (Participant 9, Teacher, Faculty of Languages, Cultures and Communication)

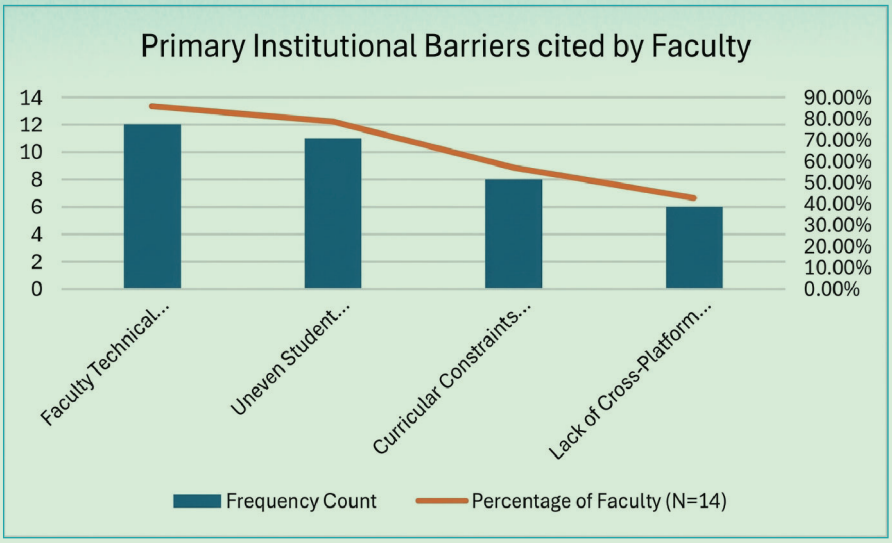


Figure 5. Primary institutional barriers cited by faculty (N = 14)
Source: Author's own work based on faculty interview data.

As illustrated in Figure 5, the data highlights the main institutional barriers reported by the 14 interviewed faculty members. The most common obstacle is 'Faculty Technical Support and Training,' which was mentioned by 12 out of 14 faculty members (nearly 86%).

This is followed closely by 'Uneven Student Digital Preparedness,' noted by 11 respondents (almost 79%). 'Curricular Constraints' represent the third most frequent barrier with 8 mentions (around 57%), while the 'Lack of Cross-Platform Infrastructure' was cited the least, appearing 6 times (approximately 43%). Overall, the data shows that technical support and student readiness are the most pressing challenges faced by the faculty (see Figure 5).

Theme 3: Unstructured platforms vs. disciplined academic literacy. Interviews heavily triangulated findings regarding behavioral challenges on digital platforms. Faculty noted that prolonged reliance on unstructured social networks paradoxically undermined students' traditional reading reflexes and long-form academic writing endurance. To counteract this, strategic documents emphasize the implementation of highly structured digital literacy structures and rigorous faculty supervision.

Theme 4: Faculty training deficits and curricular support (H_2 supported). The data explicitly identified continuous professional development for educators and teachers as a core prerequisite for sustainable digital transformation. While frameworks like "TPACK" or the "SAMR" model are recognized conceptually, educators and teachers expressed that the rapid pace of technological change creates technical anxiety.

> "We cannot expect teachers to guide cutting-edge media creation if they aren't supported with systematic training themselves. Blending technology with content pedagogy requires ongoing institutional investment, not just occasional workshops." (Participant 11, Faculty Administrator)

5.4. Summary of Hypothesis Testing Results

Based on the triangulation of statistical trends and thematic clustering, the study validates the following outcomes:

- **H^1: Active media production → higher technical self-efficacy.** *Supported.* Quantitative parameters confirm statistically significant gains in student confidence and multimodal communication outcomes following applied media production coursework.

- **H_2: Continuous professional development → successful curricular integration.** *Supported.* Qualitative evidence underscores that effective instructional delivery is directly dependent on systematic institutional support mechanisms for faculty.
- **H3: Divergent student readiness → moderation of learning outcomes.** *Supported.* Empirical data validates that a student's baseline digital background serves as a key moderating factor, creating an internal digital divide that requires highly adaptive pedagogical strategies.

6. Study Limitations and Directions for Future Research

6.1. Study Limitations

While this research provides significant insights into the development of digital skills through active media production, several limitations must be acknowledged:

1. **Geographic and Institutional Scope:** As a localized case study bounded within South East European University (SEEU), the empirical findings reflect a specific institutional culture, technical infrastructure, and regional demographic student profile. Thus, the results may not be entirely generalizable to higher education institutions with drastically different funding structures, regional digital access, or cultural approaches to technological pedagogy.
2. **Sample Specificity:** The quantitative and qualitative data were intentionally drawn from communication, media writing, and teacher-education disciplines. While this purposive sampling was necessary given the study's focus on multimodal communication, the experiences of students and faculty in these humanities-focused tracks may differ significantly from those in STEM (Science, Technology, Engineering, and Mathematics) fields, where digital tool usage follows different structural conventions.
3. **Self-Report Bias:** The quantitative evaluation of student competence and technical self-efficacy relied primarily on self-reported Likert scales. Self-reported data can introduce social desirability bias or overestimation/underestimation of actual operational proficiency, which was only partially mitigated by the triangulation of course syllabi and qualitative faculty interviews.

6.2. Directions for Future Research

To expand upon the findings of this study, future research should explore the following possibilities:

1. **Cross-Institutional and Longitudinal Designs:** Future studies should implement longitudinal research designs to track the long-term retention of digital skills as students transition from higher education into professional cross-media environments. Additionally, cross-institutional comparative studies involving multiple universities across different developing digital economies would validate the adaptability of these models.
2. **Objective Competency Testing:** To complement self-reported technical self-efficacy data, future frameworks should integrate direct, performance-based digital competency assessments (e.g., standardized technical tasks based strictly on the European Union's DigComp framework) to map actual vs. perceived proficiency levels.

3. **AI Integration in Media Production:** Given the accelerating evolution of generative Artificial Intelligence (AI), future inquiries must investigate how the integration of automated creation tools affects student critical thinking, media ethics, and traditional academic literacy, building upon the baseline behavioral challenges identified in current social platform research.

7. Conclusion

This study investigated the development of digital skills and communication competencies in higher education through targeted institutional initiatives, focusing on the pedagogical shift from passive technological consumption to active, hands-on media production. Framed within constructivist learning theory and project-based learning, the empirical findings demonstrate that embedding active content creation—such as podcasting, digital storytelling, and video essays—significantly enhances students' technical self-efficacy, critical thinking, and multimodal communication proficiency. By treating learners as active agents in their own intellectual development, contemporary universities can successfully bridge the gap between abstract academic theory and professional cross-media praxis.

However, the structural transition toward dynamic educational ecosystems exposes deep-seated institutional and behavioral resistance points. The triangulation of student surveys, faculty interviews, and curricular pedagogical materials and educational tools, highlights a persistent internal digital divide driven by uneven baseline student preparedness. Furthermore, while interactive digital spaces promote collaborative engagement, unguided dependency on unstructured social networks can paradoxically result in the erosion of disciplined academic literacy and long-form reading reflexes. This duality reinforces the critical reality that technology integration cannot succeed in a pedagogical vacuum; it requires structured digital literacy frameworks, multimedia-rich portfolio assessments, and develop institutional investments in continuous professional development for teachers, educators and administrators.

Ultimately, this research contends that aligning university teaching practices with 21st-century digital demands an overall strategy that looks beyond the isolated classroom. By systematically embedding digital communication competencies across the curriculum, higher education institutions can overcome faculty anxieties and student differences, transforming traditional structures into inclusive, innovative, and future-ready educational systems capable of fostering digitally fluent global citizens.

References

1. Bajrami, D. (2021) 'Media transformation and technological benefits in the realm of information', *SEEU Review*, 16(1), pp. 45–58.
2. Bajrami, D. (2026) *Arkitektura e bindjes: Komunikimi politik nga Agora te demokracia digjitale* [The architecture of persuasion: Political communication from the Agora to digital democracy]. 1st edn. Tetovo: South East European University.
3. Bajrami, L. et al. (2026) *Integrating global challenges and technology-enhanced learning in ESP for Social Sciences courses: Insights from student questionnaire data*. Durrës: Faculty of Education, "Aleksandër Moisiu" University.
4. Bond, M. et al. (2020) 'Mapping research in student engagement and educational technology in higher education: A systematic evidence map', *International Journal of Educational Technology in Higher Education*, 17(1), pp. 1–30.
5. Braun, V. and Clarke, V. (2006) 'Using thematic analysis in psychology', *Qualitative Research in Psychology*, 3(2), pp. 77–101. Available at: https://doi.org/10.1191/1478088706qp063oa
6. Buckingham, D. (2013) *Media education: Literacy, learning and contemporary culture*. Cambridge: Polity Press.
7. Class2Class (2025) *How project-based learning and global collaboration work together*. Available at: https://class2class.org/project-based-learning-international-collaboration/ (Accessed: 29 June 2026).
8. Creswell, J.W. and Plano Clark, V.L. (2018) *Designing and conducting mixed methods research*. 3rd edn. Thousand Oaks, CA: SAGE Publications.
9. d'Haenens, L. and Joris, W. (2025) 'Media literacy in a digital age: Taking stock and empowering action', *Media and Communication*, 13.
10. Hasani, S. and Ismaili, M. (2025) 'The impact of emotional intelligence on the speaking abilities of students enrolled in the Oral Communication course', in *Languages, Literatures, Cultures Conference Proceedings*. Tetovo: South East European University.
11. Hobbs, R. (2017) *Create to learn: Introduction to digital literacy*. Hoboken, NJ: Wiley-Blackwell.
12. Jenkins, H. (2006) *Convergence culture: Where old and new media collide*. New York: New York University Press.
13. Jonassen, D., Howland, J., Marra, R. and Crismond, D. (2008) *Meaningful learning with technology*. 3rd edn. Upper Saddle River, NJ: Pearson.
14. Kaufman, P. (2018) 'Critical pedagogy in the classroom: Media production as an act of resistance and learning', *Journal of Media Literacy Education*, 10(2), pp. 94–112.
15. Kivunja, C. (2015) 'Exploring the pedagogical meaning and implications of the 21st century framework for 21st century skills development', *International Journal of Higher Education*, 4(1), pp. 224–239.
16. Klinkenberg, S. (2026) 'Multimodal learning: Where technology meets pedagogy', keynote presentation at the *Media & Learning Conference*, Leuven, Belgium, 17–18 June. Available at: https://media-and-learning.eu/
17. Larmer, J. et al. (2015) *Setting the standard for project based learning: A proven approach to rigorous classroom instruction*. Alexandria, VA: ASCD.
18. Martínez-Bravo, M.C. and Sádaba Chalezquer, C. (2022) 'Dimensions of digital literacy in the 21st century competency frameworks', *Sustainability*, 14.

19. Mattar, J., Santos, C.C. and Cuque, L.M. (2022) 'Analysis and comparison of international digital competence frameworks for education', *Education Sciences*, 12.

20. Mediavilla, M.E. et al. (2022) 'Digital literacy and active methodologies in higher education: A systematic review', *Computers & Education*, 182.

21. Mehmedi Sinani, L. (2024) 'Communication skills in the digital age: Implications for future employment', *Media and Communications Review*, 3(2), pp. 46–58.

22. Mustafa, H. (2024) 'Exploring students' perceptions of digital citizenship: A case study of South East European University', *KAIROS: Media and Communication Review*, 3(2), pp. 17–23.

23. Mustafa, H. (2025) 'The role of social media in enhancing academic literacy and critical thinking among university students (Case study at South East European University)', *KAIROS: Media and Communication Review*, 4(2), pp. 21–34.

24. Mustafa, H., Bajrami, D. and Mehmedi Sinani, L. (2024) 'Rishikim gjithëpërfshirës i edukimit të qytetarisë digjitale dhe qasjet pedagogjike' [A comprehensive review of digital citizenship education and pedagogical approaches], conference paper. Tetovo: Faculty of Languages, Cultures and Communication, South East European University.

25. Salsabila, U.H. (2025) 'The transition from tech consumers to tech creators in the 2025 curriculum frameworks', *International Journal of Educational Research and Innovation*, 11(2), pp. 45–59.

26. Spante, M., Hashemi, S.S., Lundin, M. and Algers, A. (2018) 'Digital competence and digital literacy in higher education research: Systematic review of concept use', *Cogent Education*, 5(1).

27. Žerovnik, A. and Nančovska Šerbec, M. (2021) 'Project-based learning in higher education'. Springer, pp. 31–57.

28. Zhao, Y., Llorente, A.M.P. and Gómez, M.C.S. (2021) 'Digital competence in higher education research: A systematic literature review', *Computers & Education*, 168.

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