Τμήμα Γραφιστικής και Οπτικής Επικοινωνίας 3D Animation, Πανεπιστήμιο Δυτικής Αττικής

Τόμ. 7, Αρ. 1 (2026)

main issue

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doi: 10.12681/afiinmec.43981

Βιβλιογραφική αναφορά:

Trivella, L. (2026). The important factor of research in the field of production organization and creative development of animation in the formal and non formal learning. Challenges and convergences . *Τμήμα Γραφιστικής και Οπτικής Επικοινωνίας 3D Animation, Πανεπιστήμιο Δυτικής Αττικής*, *7*(1). https://doi.org/10.12681/afiinmec.43981

The important factor of research in the field of production organization and creative development of animation in the formal and non formal learning. Challenges and convergences

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Abstract:

This paper examines the role of research in the organization of production and the creative development of animation within formal and non-formal learning contexts. Despite significant differences in organizational structures and pedagogical approaches, research emerges as a common and fundamental factor in both learning environments. It functions as the core of the learning process by supporting each stage of production, fostering skill development, and actively engaging learners through an academic framework upon which creative outcomes are developed. The study adopts a qualitative comparative methodology based on an extensive literature review. The findings indicate that while research operates across different levels and dimensions depending on whether the learning context is formal or non-formal, its foundational principles remain consistent in both settings.

Key-words: creative development, animation project, formal learning, non formal learning

1. Introduction

Animation has increasingly become a powerful educational, cultural, and communicative medium, expanding beyond entertainment into fields such as education, social awareness, science communication, and artistic research. As a multidisciplinary practice combining visual arts, storytelling, technology, and production management, animation requires not only creative skills but also structured research processes that inform decision-making, conceptual development, and production organization. Within educational contexts, animation is taught and practiced in both formal and non-formal learning environments, each characterized by distinct pedagogical frameworks, institutional structures, and learning objectives.

Formal learning contexts—such as universities, art schools, and accredited programs—emphasize structured curricula, academic assessment, and theoretical grounding. In contrast, non-formal learning contexts—including workshops, community projects, independent studios, and informal training programs—are often characterized by flexibility, experiential learning, and learner-driven exploration. Despite these differences, research plays a central role in both settings, functioning as a bridge between theory and practice and supporting the creative development of animation projects.

This article argues that research is a fundamental and unifying element in the organization of production and creative development of animation across both formal and non-formal learning contexts. By examining the challenges and convergences between these educational environments, the paper highlights how research-based approaches enhance learning outcomes, support creative decision-making, and contribute to the professionalization of animation practices.

2. Literature Review

2.1 Research-Based Learning in Creative development of animation projects

Research-based learning has been widely recognized as a core pedagogical approach in higher education, particularly in creative and artistic disciplines (Brew, 2013; Healey & Jenkins, 2009). In this context, research is not limited to scientific inquiry but encompasses exploratory, practice-led, and reflective processes that inform creative production. According to Candy and Edmonds (2018), creative research involves the generation of knowledge through artistic practice, where experimentation, iteration, and critical reflection are central components.

In animation education, research-based learning enables students to explore narrative structures, visual styles, cultural references, technological tools, and audience engagement strategies. It encourages learners to contextualize their creative choices within historical, theoretical, and social frameworks, thereby enhancing both artistic depth and professional relevance.

2.2 Formal Learning and Animation Education

Formal animation education is typically embedded within structured institutional frameworks that emphasize academic rigor, learning outcomes, and assessment criteria. Research in this context often takes the form of literature reviews, theoretical analysis, production documentation, and reflective reports (Furniss, 2016). These research activities support the development of critical thinking skills and provide an academic foundation for creative work.

Several studies highlight the importance of integrating research into animation curricula to bridge the gap between theory and practice (Wells, 2013; Buchan, 2011). Through research, students gain a deeper understanding of animation history, visual language, narrative theory, and production pipelines, which informs their creative and organizational decisions.

2.3 Non-Formal Learning and Creative Practice

Non-formal learning environments play a crucial role in the development of creative skills, particularly in media and animation fields where rapid technological change and industry-driven practices prevail. These environments prioritize experiential learning, collaboration, and real-world problem-solving (Rogers, 2014). Research in non-formal contexts is often implicit, embedded in practice through observation, experimentation, peer feedback, and iterative production processes.

Despite the absence of formal academic requirements, research remains essential in non-formal animation learning. Learners investigate visual references, software

techniques, production workflows, and audience reception to inform their creative decisions. This aligns with Kolb's (1984) experiential learning theory, which emphasizes learning through reflection on experience.

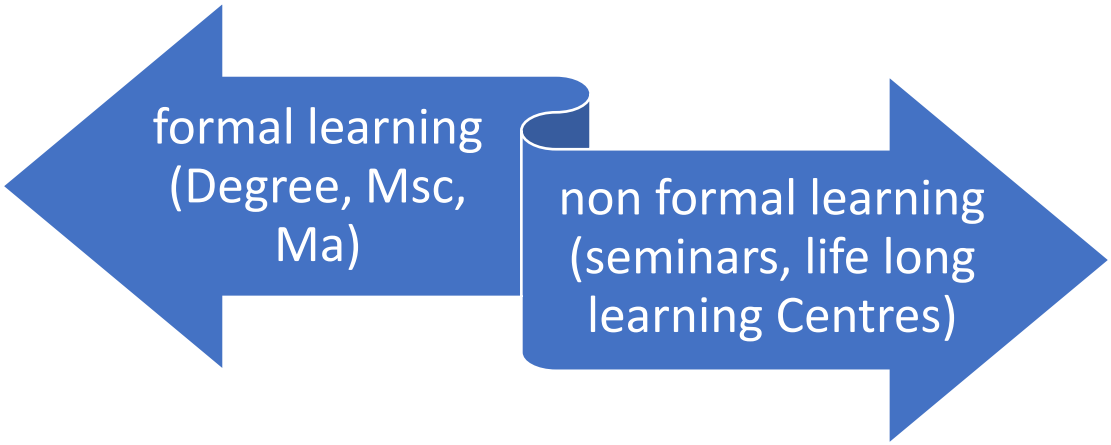

Figure 1: Aa image showing the two types of formal and non formal learning

3. Methodology

This study employs a qualitative comparative research methodology based on an extensive literature review. The comparative approach allows for the identification of similarities and differences in the role of research within formal and non-formal animation learning contexts. Sources include peer-reviewed journal articles, academic books, conference proceedings, and policy documents related to animation education, creative research, and learning theory.

The analysis focuses on three key dimensions:

- Production organization
- Creative development
- Learner engagement and skill development

By examining these dimensions across both learning contexts, the study aims to identify convergences and challenges in the application of research-based practices.

4. Research in the Organization of Animation Production

4.1 Research as a Foundation for Production Planning

Animation production is a complex process involving multiple stages, including concept development, pre-production, production, and post-production. Research plays a crucial role in organizing these stages by informing decisions related to narrative structure, visual design, technical tools, and resource management (Winder & Dowlatabadi, 2011).

In formal learning environments, students are often required to conduct systematic research before initiating production. This may include script analysis, visual research, technological testing, and project management planning. Such structured research supports the development of professional production skills and aligns creative projects with academic learning objectives.

4.2 Research Practices in Non-Formal Production Contexts

In non-formal learning contexts, production organization is often driven by practical constraints and collaborative dynamics. Research takes place through hands-on experimentation, peer learning, and problem-solving during production. Although less formally documented, this type of research is equally valuable, enabling learners to adapt workflows, explore innovative techniques, and respond to real-time challenges.

The convergence between formal and non-formal contexts lies in the shared reliance on research to support efficient and coherent production processes, even if the methods and documentation differ.

5. Research and Creative Development in Animation

5.1 Conceptual and Narrative Research

Creative development in animation is deeply rooted in research related to storytelling, character design, cultural context, and audience perception. Formal learning environments encourage explicit engagement with narrative theory, semiotics, and visual communication research (Bordwell & Thompson, 2019). This theoretical grounding enhances students' ability to create meaningful and coherent animated works.

In non-formal contexts, narrative research often emerges through practice, inspiration, and collaborative brainstorming. Learners draw from personal experiences, popular culture, and visual references, demonstrating an intuitive yet research-informed approach to creativity.

5.2 Visual and Aesthetic Research

Visual research is central to animation, encompassing studies of color theory, movement, composition, and artistic styles. Both formal and non-formal learners engage in visual exploration through reference analysis, mood boards, and style tests. Research supports experimentation and innovation, enabling creators to develop distinctive visual identities while maintaining coherence within the production.

5.3 Research and recruitment of the core creative team

Research plays a critical role in the recruitment and formation of the core team in animation production, as it informs the identification of required skills, roles, and

collaborative dynamics necessary for the successful realization of a project. Through research into the project's conceptual, technical, and organizational needs, producers and educators can define clear profiles for key positions such as director, animator, designer, sound artist, and technical specialist.
In formal learning contexts, this process is often supported by documented research, role analysis, and competency frameworks aligned with curricular objectives. In non-formal learning environments, research tends to be practice-oriented, relying on prior experience, portfolio analysis, peer observation, and informal evaluation of expertise. In both contexts, research-based recruitment contributes to balanced team composition, effective communication, and optimized workflows, ensuring that creative vision and production requirements are coherently aligned from the early stages of the animation project.

5.4 Research for the software

Research is essential in the selection and effective use of software for animation production, as technological choices directly influence both creative possibilities and production workflows. Through systematic research, learners and production teams evaluate software based on criteria such as functionality, compatibility, learning curve, cost, accessibility, and alignment with the artistic and technical goals of the project.
In formal learning environments, software research is often guided by curricular requirements, institutional resources, and pedagogical objectives, encouraging comparative analysis and critical evaluation of industry-standard and open-source tools. In non-formal learning contexts, research is more exploratory and practice-driven, relying on experimentation, tutorials, online communities, and peer recommendations. Across both settings, research-based software selection supports efficiency, innovation, and adaptability, enabling creators to make informed technological decisions that enhance creative development and ensure the feasibility and sustainability of animation production.

5.5 Research for the funding of the project

Research plays a vital role in securing funding for animation projects, as it enables creators to identify appropriate funding sources and develop compelling, well-structured proposals.
Through targeted research, project teams analyze potential funding opportunities such as public grants, educational programs, cultural institutions, private sponsors, crowdfunding platforms, and industry partnerships, aligning project objectives with funding criteria and priorities. In formal learning contexts, funding research is often integrated into project planning and academic exercises, helping learners understand budgeting, proposal writing, and institutional funding mechanisms.
In non-formal learning environments, research is typically practice-oriented, focusing on market analysis, audience targeting, and networking within creative industries.
In both contexts, research-based funding strategies enhance the feasibility and sustainability of animation projects, supporting informed financial planning and reinforcing the connection between creative vision, production organization, and economic realities.

5.6 Research for the distribution of the project

Research is a crucial component in planning the distribution of an animation project, as it allows creators to identify suitable platforms, audiences, and dissemination strategies.

Through research, production teams examine animation festivals, online platforms, broadcast channels, educational networks, and alternative distribution outlets to determine the most effective pathways for visibility and impact.

In particular, research into animation and film festivals—including their thematic focus, submission criteria, formats, and target audiences—enables informed decisions about festival strategies and premiere opportunities.

Additionally, research into digital distribution channels such as streaming services, video-on-demand platforms, social media, and institutional or educational networks supports broader accessibility and audience engagement.

In both formal and non-formal learning contexts, research-based distribution planning enhances the professionalization of animation projects, ensuring that creative outputs reach appropriate audiences and contribute meaningfully to cultural, educational, and industry ecosystems.

6. Challenges and Convergences of research in Formal and Non-Formal Learning

6.1 Challenges

One of the primary challenges in formal learning is balancing academic research requirements with creative freedom.

Excessive emphasis on documentation and theoretical analysis may limit experimentation and spontaneity.

Conversely, non-formal learning environments may lack structured reflection and critical analysis, potentially leading to superficial or uncontextualized creative outcomes.

Another challenge lies in assessment. Formal contexts require measurable outcomes, while non-formal contexts prioritize process and experience.

Integrating research effectively across both contexts requires flexible pedagogical models that value both academic rigor and creative exploration.

6.2 Convergences

Despite these challenges, significant convergences exist. In both contexts, research:

- Supports informed creative decision-making
- Enhances learner engagement
- Develops transferable skills such as critical thinking, collaboration, and problem-solving

These convergences suggest that research functions as a shared foundation for animation education, regardless of institutional structure.

7. Discussion

The findings of this study highlight the central role of research in bridging the gap between formal and non-formal animation learning. Research serves as a unifying element that supports production organization, creative development, and learner

empowerment. While the forms and levels of research differ, its core function remains consistent: to provide an informed and reflective basis for creative practice.

Integrating research-based approaches across learning contexts can enhance the quality and relevance of animation education. Educators and practitioners are encouraged to adopt hybrid models that combine the structure of formal research with the flexibility of non-formal learning.

8. Conclusion

This paper has explored the role of research in the organization of production and creative development of animation within formal and non-formal learning environments. Through a qualitative comparative analysis, it has demonstrated that research is a fundamental and shared component of both contexts, despite differences in pedagogical structure and implementation.

Research supports every stage of the animation process, from conceptualization to production, fostering skill development and active learner engagement. Recognizing and strengthening the role of research across learning environments can contribute to more effective, inclusive, and innovative animation education practices.

Future research may include empirical studies, case analyses, and practice-based investigations to further explore how research-based learning can be optimized in animation education.

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