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# The Impact of Micro-Learning on Social Media in Design: Enhancing Creative Skills and Design Techniques through Digital Platforms

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## Abstract

This study examines the transformation of microlearning for creative and design practice skills in design students. This study examines the potential influence of short-form, 'snackable' content via platforms such as TikTok, Instagram, and YouTube. This study relies on the Cognitive Load Theory, as a theoretical framework which introduced by John Sweller, the theory suggests that working memory can only handle a limited amount of information at a time. The research design is qualitative approach, with 90 students surveyed and a corresponding analysis of the content of 15 short educational videos. The survey findings revealed a strong preference for microlearning, as 80 percent of the respondents perceived it to be effective and engaging. There are some broader implications, too: Content analysis also reveals that videos shorter than a minute that feature either voiceover or context-embedded text are the most engaging and educationally effective. The authors imply that microlearning can contribute to knowledge recall and activity engagement, innovation, and creativity, and thus serves as a supplementary or alternative method to traditional design education. Suggestions for educators and creators to take advantage of platform evolving trends in relation to learning gains are presented.

**Keywords:** Microlearning, Digital Education, Social Media Learning, Digital Education.

## Introduction

Microlearning, a new educational method, delivers on-demand, focused information to learners (Dolasinski & Reynolds, 2021), particularly to those with short attention spans. It increases student engagement and retention by enabling them to act in real-life scenarios. This paper discusses the advantages of microlearning and reviews microlearning applications in the design field to offer guidance for educators to design an effective microlearning process. Microlearning on social media platforms has revolutionized the way designers acquire and refine their creative skills and design techniques (Conde-Caballero et al., 2023) (Lee et al., 2021). This approach involves consuming easily digestible content that can be quickly applied to design projects. Platforms such as Instagram, TikTok, and YouTube have become hubs for designers to share short tutorials, design tips, and innovative techniques, allowing learners to access a wealth of knowledge at their fingertips (Skalka & Drlík, 2018). The visual nature of these platforms aligns perfectly with the needs of designers, enabling them to observe and learn from real-time demonstrations of various design processes and tools (Alias & Razak, 2024) (Sirwan Mohammed et al., 2018). The impact of microlearning on social media extends beyond skill acquisition, fostering a vibrant community of designers who can interact, collaborate, and inspire one another (Kossen & Ooi, 2021). This interconnectedness has led to the rapid dissemination of new design trends and techniques, accelerating the evolution of design practices across disciplines.

## Problem Justification

Social media microlearning creates short, digestible lessons that solve the problem of attention-spanning students (Alias, 2025) by breaking down complex topics into

short, focused lessons, thereby enhancing comprehension and engagement. The flexibility of microlearning allows students to consume content at their own pace, and multimedia elements and real-time updates keep the material current and visually appealing. Additionally, social media platforms facilitate collaborative learning and progress tracking, enabling educators to adapt their strategies based on student engagement levels. This cost-effective solution leverages existing technologies to reinforce learning through repetition and spaced practice, making it an efficient and engaging tool for education.

The concept of microlearning on social media provides design education accessible to all, with small, easily digestible content that teaches creative skills and design concepts. In this study, we explore how the use of digital tools allows flexible, dynamic learning experiences and helps designers to modify shifts in the profession and practice innovation.

## Research questions

1. How can microlearning through social media channels improve the creative skills and design techniques of designers?
2. How do various social media platforms (e.g., Instagram, TikTok, YouTube) work diversely as effective microlearning tools for design education?
3. How do designers view and engage with microlearning via social media compared to traditional design pedagogy?
4. 4-Microlearning on social media: A means for continuous professional development for design educators?

## Theoretical Framework

Microlearning is a learning strategy that delivers educational content in small, focused chunks, typically lasting between 2-10 minutes. This approach is particularly well-suited to the fast-paced, attention-fragmented nature of modern digital

environments, including social media platforms (Conde-Caballero et al., 2023). Cognitive Load Theory and Microlearning is utilized in this research as theoretical framework. Cognitive Load Theory, developed by John Sweller, posits that our working memory has a limited capacity for processing information (Sweller, 2020). Microlearning aligns with this theory by reducing cognitive overload in several ways:

1. Chunking: By breaking down complex topics into smaller, manageable units, microlearning reduces the cognitive load on the learner's working memory.
2. Focused Content: Each microlearning unit typically covers a single learning objective, allowing learners to concentrate on one concept at a time.
3. Multimodal Presentation: Microlearning often utilizes various media types (text, images, video), which can distribute cognitive load across different processing channels.

In the context of design education on social media platforms, the theory suggests that short, focused tutorials or tips could be more effective than longer, comprehensive lessons. For example, a series of 1-minute videos on different design techniques could lead to better retention and application than a single 30-minute lecture. By aligning with cognitive load theory and leveraging the spacing effect, microlearning on social media platforms has the potential to enhance the effectiveness of design education, making complex concepts more accessible and memorable for learners.

## Literature Review

This study investigates the effect of increasingly common microlearning on social networks, specifically in the digital design field, and how the use of digital platforms provides fresh and creative content for learners and completely transforms learning experiences according to the specific needs of today's learners.

**1. Conceptual Foundations and Benefits of Microlearning**:

Mobile microlearning improves knowledge retention compared to traditional methods. It breaks down cognitive load and mental fatigue and enhances learner engagement through interactive content. Additionally, microlearning enhances knowledge transfer from short-term memory to long term memory while minimizing cognitive overload, optimally adapting to different types of learning styles (Shail, 2019). A study found that creativity and engagement positively affected the implementation of microlearning, thus increasing the underlying learning objectives. Students using microlearning on the social networking platform showed a significant increase in creativity and design skills, as measured along the Design Education Social Networking Platform (DESNEP). Through this platform students can submit any of their works, receive instant feedback, and iterate their designs further, resulting in higher quality work. It encourages peers to collaborate and exchange ideas with one another, which cultivate creativity. The accessibility of DESNEP enables students to engage in learning outside time barriers and accommodate individual learning styles. The versatile content-sharing features and documentation tools it provides help track the progress of a project (Turan & Sahin, 2012). Meanwhile, (Nagai & Taura, 2016) in their study highlight a research gap regarding how social media innovations foster digital abilities in university students. The results revealed that with mindful use, these digital tools facilitated student learning, competency achievement, engagement, and skill development.

**2. Applications of Microlearning in Other Fields**:

In the field of nursing, TikTok was successfully used in the learning process of nursing students, as the students reported a high rate of participation and enjoyment in three modules. This study established that TikTok can be a supplement to traditional classroom teaching methods in the field of health sciences education, where it is meaningful for a student to learn. Nevertheless, there is a gap in

understanding the long-term impact of using TikTok on knowledge retention and application in real-world contexts (Conde-Caballero et al., 2023). In the field of English as a Foreign Language (EFL) education, the method of learning in microunits, such as the short and interactive one with TikTok videos could be used to develop reading and writing skills (Meliana & Seli, 2023).

**3. Microlearning in Design Education and Creativity**:

The role of visual social media in the creative design process revealed that the most popular source of inspiration was Pinterest with 60%, followed by Arch Daily (58%), Instagram (47%), and Behance (30%) (Toledo, 2022). According to research by the University of Bahrain, 65% of students said that social media and multimedia-based tools stimulated their creativity, and 75% said they were faster and more effective in generating ideas (Hashimi, Muwali, Zaki, & Mahdi, 2019). In design-related courses, where there are many projects, students found social media meaningful, fun, and useful. "Students also enjoyed being able to share knowledge and creativity through their own collaborative learning experiences with each other." However, some students expressed concerns about privacy, calling for educators to encourage the creation of public accounts for academic use. The study indicates that smaller, informal learning and networking on social platforms is a rich area for further study among younger generations (Kadir, 2020). This represents a significant advancement in digital education, particularly in the context of design and microlearning on social media platforms. It offers short and digestible knowledge that enables learners to develop their creativity and embrace new techniques.

**4. Creativity in Design and Microlearning Media:**

Creativity drives design, and social media has reinvented how to learn and grow. Microlearning content serves to boost the creative process, adding new techniques and uncovering sources of inspiration. Creativity in micro-videos produced promising results, resulting in a rich dataset of more than 3,800 annotated videos

with a high inter-annotator agreement of 84%. It was found that a mere 1.9% of videos, randomly sampled, were classified as creative, whereas various computational characteristics, particularly those related to scene content, filmmaking techniques, and emotional and sensory properties, were highly correlated with creativity. With novelty and aesthetic value features, the highest classification accuracy was 80%. This indicates that creative content can be distinguished from purely beautiful surface content, since the features representative of beauty (as typically understood) are only weakly correlated with creative content in the dataset (Redi, O'Hare, Schifanella, Trevisiol, & Jaimes, 2014). Chai and Fan identified the dimensions of social media usability that significantly influenced the creativity of design students. Usability accounted for 43.3% of the variance in creative expression, where lower levels of creativity resulted in greater barriers. However, a negative influence of social media usability on the environment indicates the need for balanced engagement. This research highlights the need to investigate how educational settings use each context to generate digital tools that support learning (Chai & Fan, 2017). Microlearning and social media have transformed the way designers paint the canvas of creativity through continuous learning, collaboration, and innovation. With the development of technology, supporting microlearning on social networking sites is necessary for cultivating creativity and changing the creative environment.

**5. Social Media as a Learning Tool**:

Social media has transformed learning can take place, providing multiple platforms to appeal to different learning styles. Microlearning in design boosts creativity skills and techniques. Digital platforms not only offer personalized experiences but also provide various content and worldwide creative communities to encourage creativity and learning. In (Suci, Muslim, & Chaeruman, 2022), the world is understood to have become more social with the use of Facebook and WhatsApp as necessary tools in

the field of education, especially when it comes to collaborative learning, particularly during the COVID-19 crisis. A proposed model for collaborative learning activities through Facebook and WhatsApp stressed the need for organized learning activities to improve student-teacher interactions. Social media and technology for interactive communication in education help learning by reimagining traditional face-to-face interactions into a student-friendly model. Nevertheless, computerized technologies bring their own set of challenges in the form of hurdles to productivity due to distractions. Therefore, a balanced and wise use of technological devices for educational purposes is crucial. The paper is a clear and comprehensive presentation of the current study area and the changing scenario by introducing new trends while also identifying the dual functions and providing the necessary directions for educators and policymakers (Manu, 2023). While social media is widely used in education, there is little empirical support for its effect on learning outcomes. Other affordances on social media, such as flagging, tagging, sharing, commenting, and remixing content, have been highlighted as tools for collaborative learning. However, the affordances of 4.0 learning environments cannot easily be taken advantage of through traditional instructional design models (Conley & Sabo, 2016). To explore how low-income high school students, learn through social media, this study deployed a mixed-method approach. The Hot Dish Facebook application allowed users aged 16–25 to read and comment on environmental science articles. They found that Hot Dish successfully engaged users, resulting in more pro-environmental behaviors and a willingness to discuss in a supportive community. This study asks what social media can do in the realm of informal youth education and citizen activation. Digital culture and learning are aspects of research that require further ethnographic understanding (Greenhow & Lewin, 2016).

Social media can also have a negative impact on students' feelings of distraction and pressure. As one of the conclusions of their study, they argued that to gain the educational benefits of social media while minimizing the challenges, educators need

to develop effective strategies for teaching with social media, such as laying down the right guidelines, fostering a connection with digital literacy, and fostering quality interaction on social media (Manu, 2023). Additionally, by harnessing technology to augment personalized learning, teachers will be able to design tailored experiences that cater to the needs of heterogeneous student populations, thus ensuring that every learner is set up for success. However, this will be crucial in ensuring that educational policies are oriented towards creativity and training students to solve the problems of tomorrow (Loveless, 2002). Studies reveal a gap in microlearning through social media, as there is no systematic critique addressing ethical implications and social responsibilities. Social aspects are crucial and require sound and relevant practices. Cognitive elements related to flexible thinking and motivation are essential for enhancing creativity in social innovation. These components need strong critique. A consistent framework helps analyze design's impact, connecting design creativity to other aspects (Nagai & Taura, 2016)

## Research Methodologies

This study explores microlearning and its relevance to the design field in greater depth. This study follows qualitative methods to determine if the intended audience finds this subject engaging enough to explore further, through an anonymous, informal pilot study (Van Teijlingen & Hundley, 2001). This pilot study aimed to identify how people perceive and experience microlearning in social media for design education purposes. The results of this preliminary study revealed a generally positive reception of the research topic. The pilot study was instrumental in refining the survey instrument, ensuring clarity and relevance, and confirming the suitability of the target population. The resulting data underscore the potential of microlearning to transform instructional design education, making it more accessible, relevant, and engaging for emerging designers (Khanal & Chhetri, 2024).

Based on an online survey, the participants included students, designers, and social media users interested in microlearning in the design field. The questionnaire aimed to explore how microlearning via social media is perceived and utilized by the target group to enhance design capabilities. The survey was conducted anonymously. The introduction explained the identity of the researchers and the nature of the project. Participants were informed that their participation was voluntary, that there were no known risks associated with their involvement, and that their anonymity would be preserved in the study. A total of 102 individuals completed the questionnaire, with no missing responses, and all the responses were deemed valid. The following section presents the survey results based on three themes: Demographics, Social media use and platform preference, Learning attitudes and perceived outcomes. For the demographic data and survey responses, descriptive statistics was utilized. This includes measures of central tendency (mean, median, mode) and dispersion (standard deviation, range) for quantitative data, and frequency distributions for categorical data.

The participants were primarily young adults (70.6% aged 18-24, 27.5% aged 25-34), predominantly female (69.6%), and mostly college students (51%) or bachelor's degree holders (26.5%). The pilot study helped refine survey items, identify biases, and ensure instrument clarity for the qualitative research on microlearning strategies in instructional design education, as illustrated in Table 1. It is evident that the sample primarily consisted of young female participants in or recently out of formal education, aligning with the study's focus on emerging designers.

Table 1: Participant Demographics and Education Background (N = 102)

| Variable | Category | Frequency | Percentage (%) |
|---|---|---|---|
| Age | 18–24 | 72 | 70.6% |
| | 25–34 | 28 | 27.5% |
| Gender | Female | 71 | 69.6% |
| | Male | 31 | 30.4% |
| Education | In college | 52 | 51.0% |
| | Bachelor’s degree | 27 | 26.5% |
| | High school | 22 | 21.6% |

Table 2 shows that TikTok, YouTube, and Instagram are the dominant learning platforms. Instagram and TikTok were most often named as the most effective platforms for microlearning, highlighting their value in design-focused educational content.

Table 2: Social Media Platforms Used and Preferences for Microlearning

| Platform | Used for Learning (%) | Most Preferred |
|---|---|---|
| TikTok | 53.9% | ✓ |
| YouTube | 52.9% | |
| Instagram | 52.0% | ✓ |
| Twitter | 9.8% | |
| LinkedIn | 4.9% | |
| Facebook | 2.9% | |

Table 3 shows that across various indicators, microlearning on social media was perceived as effective, engaging, and accessible. Over half of the participants rated each item with the highest level of agreement, reinforcing its relevance to design education.

Table 3: Perceived Effectiveness and Accessibility of Microlearning

| Statement | Rating | Frequency | Percentage (%) |
|---|---|---|---|
| Microlearning enhances design skills | 5 | 54 | 52.9% |
| | 4 | 27 | 26.5% |
| Social media use for learning is frequent | 5 | 57 | 55.9% |
| | 4 | 26 | 25.5% |
| Microlearning is a convenient way to learn design | 5 | 58 | 56.9% |
| | 4 | 18 | 17.6% |
| Microlearning encourages more engagement than traditional learning | 5 | 59 | 57.8% |
| | 4 | 19 | 18.6% |
| Microlearning improves information retention | 5 | 56 | 54.9% |
| | 4 | 19 | 18.6% |
| Microlearning content is easily accessible | 5 | 63 | 61.8% |
| Prefer microlearning over traditional classes | 5 | 58 | 56.9% |
| | 4 | 14 | 13.7% |

The findings indicate a strong alignment between learner demographics, platform preference, and the perceived effectiveness of microlearning. There was a clear

positive correlation between the participants' demographic profile and their favorable perceptions of microlearning. Younger learners, particularly female college students, demonstrated a higher frequency of social media use for educational purposes and reported a stronger agreement with the efficacy and convenience of microlearning. Similarly, the preference for platforms like TikTok and Instagram corresponds with higher ratings of engagement, accessibility, and learning convenience, reinforcing the idea that platform characteristics are tightly coupled with positive learner outcomes.

The following Table 4 illustrate the central tendency measures describe the average value of a dataset, while measures of dispersion describe the spread of the data points around that central value (Malakar, 2023).

Table 4: Central Tendency & Dispersion

| Statement | Mean | Median | Mode | SD (≈) |
|---|---|---|---|---|
| Microlearning enhances design skills | 4.32 | 5 | 5 | 0.79 |
| Social media use for learning is frequent | 4.34 | 5 | 5 | 0.78 |
| Microlearning is a convenient way to learn design | 4.30 | 5 | 5 | 0.77 |
| Microlearning encourages more engagement than traditional | 4.34 | 5 | 5 | 0.77 |
| Microlearning improves information retention | 4.32 | 5 | 5 | 0.78 |
| Microlearning content is easily accessible | 4.45 | 5 | 5 | 0.70 |
| Prefer microlearning over traditional classes | 4.39 | 5 | 5 | 0.73 |

The statistical analysis reveals consistently high mean scores (4.30–4.45) across all microlearning perception items, suggesting strong positive attitudes toward its relevance, convenience, and effectiveness among participants. The mode and median are consistently at the highest level (5), underscoring consensus. Low standard deviations (~0.7–0.8) and narrow ranges confirm low variability in responses participants broadly share similar views. Demographic correlations show that young female learners, currently or recently in college, are both high users and supporters of social media-based microlearning. Their platform choices (Instagram, TikTok) align with high ratings for accessibility and engagement, reinforcing a strong correlation between user preference and perceived learning benefit.

Content analysis is a research method used to study and interpret various forms of communication. It involves systematically examining and categorizing written, visual, or spoken materials to identify patterns, themes, and meanings. Key aspects of content analysis include: 1. Selecting relevant content 2. Defining categories for analysis 3. The content was coded according to these categories 4. Analyzing the results. Researchers use content analysis in various fields, such as media studies, sociology, psychology, and marketing, to gain insights into trends, attitudes, and cultural phenomena reflected in the analyzed content (Van Esch & Van Esch, 2013)

The second method was content analysis. This was conducted by analyzing 15 short educational videos related to graphic design that were posted on TikTok and Instagram. These videos were selected based on their relevance to the research topic, variation in style, and the language used (Arabic and English). This method was chosen because it allows for a systematic examination of existing content to identify common patterns, styles, and techniques used by creators to educate audiences visually. It was done ethically as all videos were publicly available, and no private or sensitive data was used (O'Donnell et al., 2023).

The content analysis process starts by developing a coding scheme (Poche et al., 2017) that captures key elements of the educational videos. This should include: I) Video characteristics (duration, platform), ii) Content type (tutorial, tips, theory explanation), iii) Audio elements (voiceover, background music, sound effects), iv) Visual elements (text overlay, graphics, examples shown), v) Language used (Arabic, English, bilingual). for the anylsis, the Quantitative Content Analysis was applied for the coding scheme to all 15 videos in the sample. Record the frequency and duration of each coded element. This will allow for quantitative analysis of trends in content delivery. the contextual interpretation of the findings in the context of microlearning and design education theories, discussing how the most effective content aligns with or challenges existing pedagogical approaches (Ali, Bhaskar, & Sudheesh, 2019).

This structured approach to content analysis will provide a more rigorous and comprehensive understanding of how educational content is delivered and received on social media platforms in the context of design education.

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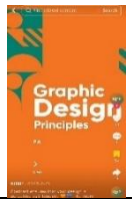
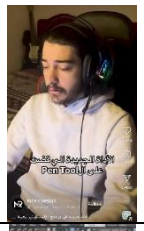
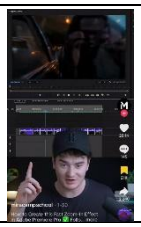
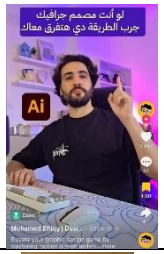
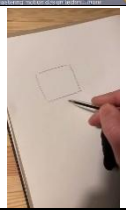
| # | Platform | Topic | Duration | Language | Style video | Profile Picture |
|---|---|---|---|---|---|---|
| 1 | TikTok | Illustrator tutorial | 52s | English | A short educational video on how to use Illustrator by recording the laptop screen without showing the face, only with sound and showing the written description on video |  |
| 2 | TikTok | Curve outline text in Adobe illustrator | 53s | English | Explain how to write curved lines through screen recording and voiceover with the addition of low-volume music |  |
| 3 | TikTok | the impact of writing in Premiere | 34s | Arabic | A short educational video in Premiere by recording the platform screen and zooming in on each step to clarify the explanation, without sound, just music (theoretical video) |  |
| 4 | TikTok | floor plan stair symbol | 46s | English | Photographic explanation of the types of stairs with their symbols, explained by speaking and video |  |
| 5 | TikTok | Graphic design principles | 1 min | English | Speaker-led presentation with text and effects for explanation |  |
| 6 | TikTok | How to make mockups | 26s | English | A short video explaining the simple process via screen recording. Text instructions with music were used, without using audio explanation. |  |

| | | | | | | |
|---|---|---|---|---|---|---|
| 7 | TikTok | New tool in illustrator | 42s | Arabic | A short educational video about a new tool in Illustrator, in a funny and expressive way, by showing the reaction on his face and recording a screen of the platform without sound or text, only music. |  |
| 8 | Instagram | 3D MAX comparison | 32s | English | A short clip, a screen recording on 3ds Max to explain the steps of working on a model, without sound or instructional texts, just music. |  |
| 9 | Instagram | Editing tutorial for fonts | 29s | English | A short video of a clear-eyed girl explaining in her own voice the steps for downloading fonts in various ways on the VN platform, with sound effects. There is also written text explaining how these fonts work, with a screen recording added to the main screen of the clip. |  |
| 10 | Instagram | Quick Canva Hack | 18s | English | A short video clip showing a man explaining a specific method of working on Canva program, without audio explanation, just music, with a recording of the computer screen while working to illustrate the steps. |  |
| 11 | TikTok | How to create realistic lipstick in photoshop | 1m :11s | English | A screen recording video of the platform showing the steps, showing errors in the work and correcting them through explanatory symbols without text or audio explanation, only music. |  |

| | | | | | | |
|---|---|---|---|---|---|---|
| 12 | TikTok | How to create a fast zoom-in effect in adobe premiere | 35s | English | A short video of a boy with a clear appearance explaining the steps in his voice on the Premiere platform, with a screen recording of him explaining the steps and showing his face on the recording. |  |
| 13 | TikTok | Learning graphic design | 2m:5s | Arabic | A video of a person talking in front of the camera about how to learn graphic design in a simple and easy way, with text for reading, effects to eliminate boredom, and pictures of the given examples. |  |
| 14 | TikTok | Graphic design tips | 20s | Arabic | A short video of a graphic designer showing himself working with an audio recording of him explaining steps that will shorten your work on Illustrator, with a screen recording for clarification. |  |
| 15 | TikTok | How to use shapes to draw caricatures | 29s | English | A short tutorial video filmed by the designer himself, explaining how to draw characters using geometric shapes on paper, with his voiceover. |  |

The content analysis results revealed different trends in the visual delivery of educational content. For example, some videos relied solely on-screen recordings with voiceovers (Videos 1, 2, and 12), whereas others used music and on-screen text without voice (Videos 6 and 10). A few used no explanation at all, only music and visuals (Videos 7, 8, 11). The analysis also showed that Arabic content tended to be more expressive and personalized (Videos 3, 7, 13, 14), while English content focused more on clear instructions and structured steps.

The findings of this content analysis were that most successful videos are under one minute, use either voice or text (but not both heavily), and often include music to enhance engagement. Therefore, the outcome of this study should include short, clear, and engaging visual content tailored to platform trends and audience expectations.

The results of this content analysis showed that videos with clear screen recordings and either voiceovers or clean text instructions gained higher engagement (e.g., Videos 1, 2, 5, 12). Videos that were too fast-paced or lacked clarity (such as those with only music and no explanation) had fewer meaningful comments or shares (e.g., videos 7 and 8). In the Arabic content, personal appearance or direct speaking (as in Videos 13 and 14) seemed to increase relatability, especially when combined with practical tips.

The findings of this content analysis indicate that clarity, pacing, and method of explanation directly affect viewer engagement and comprehension. Therefore, the outcome of this research should reflect these preferences by using a simplified yet effective visual format that mirrors the most engaging examples on both platforms.

TikTok and Instagram engage viewers and respond to short educational videos related to graphic design. Engagement indicators included likes, comments, shares, and viewing duration (when applicable). These videos were selected to represent different approaches, including the use of voiceovers, on-screen text, music, face presence, and video length. These examples were analyzed to understand audience preferences and behavioral patterns. This method was chosen because audience engagement is a strong indicator of the effectiveness of visual communication, particularly in educational content.

## Discussion

Through consideration of the methods used in this study, employing short videos to educate the new generation using popular social media platforms such as TikTok and Instagram, has a crucial effect on the learning style of the new generation. The findings showed that because of these platforms' simplicity, speed, and dependency on eye-catching images and videos, they could potentially increase the knowledge and promote enthusiasm of students and young learners for informative videos.

The research also revealed that young adults enjoy and prefer them to traditional methods, as they see them as more relevant to their daily lives. However, they noted some difficulties, such as distraction and a lack of depth of information, which may be due to the speed of the presentation. It was also clear that the principles of teaching through the face-to-face education could utilize the online content and make it more precisely to target the traditional learning experience to become truly educational.

The findings of this study on microlearning in design education via social media platforms can be effectively interpreted through the lens of Cognitive Load Theory (CLT). This framework for understanding how the human cognitive architecture processes information, which is particularly relevant in the context of microlearning and design education. The preference for under one-minute short, focused videos aligns with CLT's principle of reducing unrelated cognitive load. By presenting information in chunks, these videos minimize the mental effort required to process unneeded information, allowing learners to focus on the core design technique. Utilizing of clear visual demonstrations, supports the optimization of related cognitive load. This approach facilitates the creation of mental schemas related to design techniques, enhancing learning efficiency. The study's finding that successful videos use either voice or text, but not both heavily, suggests an effective management of essential cognitive load. The positive reception of videos with voiceovers aligns with CLT's modality effect, which posits that presenting

information in both visual and auditory channels can expand effective working memory capacity. Lastly, the preference for microlearning content on social media platforms demonstrates the effectiveness of the segmenting principle in CLT. By breaking down complex design concepts into smaller, manageable units, learners can process information more effectively, reducing overall cognitive load.

## Conclusion

In the process, we managed to bring to the public's attention the increasing role of short educational videos in social media applications like TikTok and Instagram, and how effective they can be in transferring knowledge and encouraging learning, especially among the youth. By employing two different research approaches (survey, and content analysis methods), The findings prove the necessity of blending educational aspects and visual and entertaining elements in developing educational content. This study demonstrates that microlearning through social media platforms can be an effective approach for design education when aligned with the principles of Cognitive Load Theory. The preference for short, focused content delivered through clear visual demonstrations with either voice or text suggests that these microlearning strategies effectively manage cognitive load, potentially leading to improved learning outcomes in design education. The findings indicate that social media platforms, particularly TikTok and Instagram, can serve as valuable tools for delivering design education content in a manner that optimizes cognitive processing. By leveraging these platforms' inherent features that align with CLT principles, educators can create more effective and engaging learning experiences for design students. However, it is important to note that while microlearning on social media shows promise, it should be considered as a complementary approach rather than a replacement for traditional design education methods. Future research should focus on long-term retention of knowledge gained through these microlearning experiences and how they can be integrated into a comprehensive design curriculum.

In this sense, it is suggested that future research on different age populations and educational backgrounds should be conducted, so that we can have a better understanding of ways to make the content quality and learning effect of digital media age more scientifically. Future research should explore the longitudinal impacts on knowledge retention and skill application, as well as the integration of microlearning strategies into formal curricula. Given the evident preference and positive response, instructional designers should consider leveraging social media-integrated microlearning as a core strategy for teaching design-related competencies

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