

# Meme Pedagogy in General Education: Addressing the Digital Literacy Gap Between Digital Natives and Immigrants

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**Abstract:** *This study investigates the educational potential of memes in the digital era and proposes effective strategies for integrating meme pedagogy into university general education. Using an integrative literature review, the study synthesizes research on memes, digital literacy, and digital native–digital immigrant theory to explore how meme-based learning can contribute to contemporary educational goals. Based on this synthesis, the study develops the Meme-Based Digital Literacy Pedagogy Framework. This framework illustrates the relationships among meme-based learning activities, digital literacy competencies, general education outcomes, and differentiated instructional strategies tailored for diverse learner groups. The findings suggest that meme-based activities—such as analysis, critique, creation, and collaborative projects—can foster critical comprehension, creative production, social collaboration, and digital citizenship. Furthermore, the framework emphasizes the necessity of differentiated instructional approaches for digital natives and digital immigrants to maximize educational effectiveness. The study concludes that memes can function as meaningful pedagogical resources, not merely as cultural artifacts, supporting digital literacy development and learner-centered general education. Implications for ethical implementation and future empirical validation are also discussed.*

**Keywords:** Meme; Digital Literacy; General Education; Digital Natives; Digital Immigrants

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## 1. Introduction

The 21st century has witnessed a rapid transformation in the creation, sharing, and consumption of information, driven by the exponential advancement of digital technologies. Platforms such as smartphones, social media, and YouTube have normalized short-form and visually driven content, shaping a new communication culture particularly dominant among younger generations. Among these cultural phenomena is the digital meme—a term originally coined by biologist [1] to describe the cultural transmission of ideas, now widely understood as humorous, satirical, or symbolic content in the form of text, images, or videos that spread rapidly across the internet. Internet memes function as a type of symbolic language in the digital age, reflecting contemporary emotions, social trends, and cultural values through simplicity, humor, and virality [2, 3].

Digital natives—particularly university students—are highly familiar with memes as a form of expression. Having grown up immersed in internet culture and mobile technologies, they are accustomed to processing brief and visually rich information formats [4]. In contrast, many adult learners are categorized as digital immigrants, whose educational experiences were shaped in pre-digital environments and who may demonstrate lower familiarity or comfort with digital content and forms of expression. These generational differences in digital literacy and media engagement present significant considerations for instructional design in contemporary education.

General education at the university level aims to foster not only academic knowledge but also critical thinking, creativity, civic awareness, and holistic development. However, traditional lecture-centered approaches still dominate many general education courses, often failing to engage students or promote active

learning [5, 6]. For students who are immersed in digital culture, such conventional methods may lack motivational appeal, highlighting the urgent need for innovative, participatory teaching and learning strategies.

In this context, the integration of memes as an instructional strategy represents a compelling avenue for educational innovation. Far beyond mere entertainment, memes function as “cultural texts” that convey social commentary. Engaging students in the interpretation and creation of memes can naturally enhance their critical thinking, creative expression, and digital literacy skills [7]. Memes thus hold pedagogical potential not only as attention-grabbing tools but also as participatory media that foster critical understanding of contemporary culture.

Moreover, meme-based teaching strategies can influence both teaching and learning practices by encouraging autonomy, creativity, and collaboration among students. The process of creating and sharing memes allows learners to reinterpret academic content from their own perspectives, interact with peers, and co-construct knowledge—aligning with principles of constructivist learning theory [8]. By integrating memes with core values of general education—such as communication, empathy, and pluralistic thinking—educators can facilitate meaningful, culturally responsive learning experiences.

This study, therefore, aims to theoretically examine the potential of memes as teaching strategies in general education from a digital literacy perspective. Specifically, it analyzes the educational implications of memes, investigates how meme-based instruction may impact student engagement and learning outcomes, and explores potential differences in how digital natives and digital immigrants respond to such strategies. Ultimately, this research seeks to contribute foundational insights for developing effective instructional methods aligned with the digital transformation of general education.

## 2. Literature Review

### 2.1 The Concept of Memes and Their Educational Potential

The concept of the “meme” was first introduced by biologist Richard Dawkins in his 1976 book *The Selfish Gene*, where he suggested that memes, like genes, function as units that replicate and transmit cultural information. According to Dawkins, cultural elements such as language, fashion, customs, and religion spread socially through the mechanism of “imitation” [1]. With the advancement of internet technologies and the widespread use of digital media, this concept has evolved. Memes are now created in various forms of digital content, such as text, images, and videos, and have become one of the primary communication tools in contemporary society.

Internet memes are digital content that condense cultural codes, social events, and emotional states, often expressed through humor, satire, or parody. They are especially familiar to Generation Z (those born after 1995), also known as digital natives [2, 3]. These learners tend to prefer visual over textual communication, absorb information quickly, and show higher engagement with short and impactful messages [9]. For them, memes function not only as a means of information consumption but also as a cultural tool for expressing identity and emotion.

Research on using memes in educational contexts has only recently begun to emerge, with experimental applications mainly in secondary education and general liberal arts courses at the university level. [3] emphasized that memes can stimulate learners’ creativity and enhance their ability to interpret texts within social contexts, arguing that meme-based teaching strategies can be effective in fostering critical thinking. For instance, instructors might present specific concepts in meme format to make them more relatable to students, or they may encourage students to create their own memes summarizing the course content. Such activities can promote active participation, creative thinking, and emotional engagement with the learning material [10]. Memes, therefore, offer potential to reframe traditional academic content in a more learner-friendly way and to motivate learning through affective engagement.

Some universities in the U.S. have adopted meme creation assignments in courses such as political science, sociology, and cultural studies. These tasks require students to reinterpret and reconstruct course content through digital images and text [11]. Through this process, learners move beyond theoretical understanding to reinterpret knowledge within a social context, gaining experience in shaping collective digital culture.

In South Korea, while direct applications of memes in general education are still rare, there is a growing number of courses utilizing visual content or social media-based materials in similar ways [12]. As universities seek effective teaching strategies for digital-native students, memes are increasingly seen as a promising tool to enhance interest and engagement in learning.

## 2.2 Theoretical Foundations of Digital Literacy

Digital literacy goes beyond the mere ability to use technology; it encompasses a complex and multidimensional set of competencies necessary for active citizenship in the information society. [13] defined digital literacy as the “ability to understand, evaluate, and utilize information in digital environments,” emphasizing that it is not simply a technical skill, but a new way of thinking. Building on this, [14, 15] proposed eight elements of digital literacy, including information search, critical comprehension, creative production, and social collaboration. These elements align closely with the core goals of liberal education, such as critical thinking, problem-solving, and the development of creativity.

Digital literacy is also essential because it involves not only the reception of information but also its creation and reprocessing. In this process, learners analyze digital content actively, express themselves in new ways, and develop the ability to critically interpret and reconstruct social messages. This contributes to the internalization of digital citizenship [16].

Digital literacy is particularly crucial in general education, which aims to cultivate the foundational intellectual attitudes and social sensibilities needed in contemporary society, prior to specialization in any field. In a world overflowing with information, the ability to discern truth from falsehood, critically understand social phenomena, and engage in empathetic communication is essential—and digital literacy is key to achieving this.

Research treating digital literacy as a core competency in general education has steadily increased. Since Gilster's initial definition, digital literacy has come to be seen as a fundamental aspect of modern citizenship, prompting the development of teaching strategies across various disciplines. In university-level general education, courses have been designed around topics such as “citizenship in the digital age,” “media literacy,” and “information ethics,” all of which closely relate to digital literacy [14, 15], [17].

In South Korea, universities have implemented digital literacy by offering new liberal arts courses or by integrating digital media analysis and production activities into existing curricula. For example, Seoul National University and Sungkyunkwan University operate programs that include digital communication and content analysis in their required general education courses, helping students enhance both their information usage skills and their capacity for creative expression [18].

## 2.3 Generational Differences in Digital Literacy and Instructional Research

[4] classified modern learners as either “digital natives” or “digital immigrants,” highlighting generational differences in familiarity and perception of digital environments. Digital natives are those who have grown up in a world where digital technologies are ubiquitous, making them adept at intuitively understanding and using technology. They are more comfortable with visual content and interactive learning. Digital immigrants, in contrast, are those who were raised in an analog environment and later adapted to digital tools. They tend to prefer text-based and linear modes of information processing.

These generational differences can lead to distinct responses when educational tools such as memes are used. Digital natives are more likely to accept and interpret memes naturally, while digital immigrants may perceive them as unfamiliar or merely trendy. Thus, the effectiveness of meme-based educational strategies can vary depending on learners' level of digital socialization and cultural background, and instructional design should account for these factors [19].

Research into instructional strategies that consider generational differences in digital familiarity has continued to grow. Prensky's framework has influenced many educational scholars and has led to a broader awareness of the need to diversify teaching methods and tools based on learners' digital competencies.

Digital natives prefer multimedia content and interactive learning, and they are accustomed to processing large amounts of information quickly. On the other hand, digital immigrants are more familiar with linear, text-based learning and often face higher entry barriers in digital learning environments [19]. These generational differences can result in divergent levels of engagement, comprehension, and learning outcomes, even when the same content is delivered.

Therefore, meme-based teaching strategies should also reflect these generational distinctions. While digital natives can intuitively grasp the visual language and symbolism of memes, digital immigrants may struggle with the cultural codes and forms of expression. As a result, learning outcomes may differ depending on students' levels of digital literacy and cultural familiarity. This underscores the need for tailored instructional design.

## 2.4 The Intersection of Memes and Digital Literacy

Memes can be seen as a practical mode of digital literacy in themselves. Comprising multimodal content that blends text, images, hashtags, and more, memes require learners to interpret symbolism and context, recombine elements creatively, and convey social meaning. In this sense, memes go beyond humorous entertainment—they become arenas for practicing digital literacy by blurring the line between information consumption and production [3].

In general education, activities involving the analysis and creation of memes can foster critical thinking, creativity, and social awareness. For example, analyzing memes on specific social issues or historical events can help students expand their values and social perspectives beyond surface-level understanding. Moreover, meme creation involves message planning, choosing forms of expression, and responding to feedback—collaborative communication skills essential in the digital era.

Thus, meme-based instructional strategies are more than just tools to increase classroom engagement; they can also serve as practical approaches aligned with the core mission of general education.

Moreover, most existing studies are confined to primary and secondary education, or, at the university level, focus on applications within major courses. This study, however, seeks to examine the educational implications and potential of memes in the context of general education, which is inherently multidisciplinary and integrative in nature. By considering the characteristics of both digital natives and digital immigrants, this research aims to explore instructional strategies that move beyond teacher-centered content delivery toward learner-centered meaning-making and interaction, thereby offering theoretical and practical contributions.

## 3. Research Methods

### 3.1 Research Questions

The primary aim of this study is to explore the theoretical potential of utilizing memes as instructional strategies in general education at the university level, grounded in the concept of memes and digital literacy theory. Specifically, the study seeks to examine how memes can be pedagogically meaningful depending on the learning characteristics of digital natives and digital immigrants, and to propose ways in which meme-based strategies can foster creative and participatory learning in the digital age.

By shedding light on the educational implications of memes as a form of digital cultural expression, this study interprets memes through the lens of digital literacy and aims to identify new pedagogical strategies for general education in higher education.

The research is guided by the following questions:

- RQ 1. What are the conceptual characteristics of memes, and how are they connected to digital literacy?
- RQ 2. How are meme-based teaching strategies related to the learning characteristics of digital natives and digital immigrants?
- RQ 3. Based on the synthesis of meme studies and digital literacy theory, what conceptual framework can be proposed for the effective implementation of meme pedagogy in university general education?

### 3.2 Integrative Literature Review Design

This study adopted an integrative literature review approach to explore the educational potential of meme pedagogy in university general education. Since the purpose of this study was not to empirically verify causal relationships but to synthesize existing theoretical discussions regarding memes, digital literacy, and learner characteristics, a literature-based integrative review was considered appropriate. Drawing on previous studies on memes [2, 3], digital literacy [13-16], and digital native–digital immigrant theory [4], [19], this study sought to identify common themes and develop a conceptual framework for the application of meme pedagogy in general education.

### 3.3 Data Collection

Literature collection was conducted between February 20 and March 10, 2025. Relevant studies were retrieved through major academic databases and scholarly search engines using keywords such as “meme,” “digital literacy,” “general education,” “digital natives,” and “digital immigrants.” Particular attention was given to studies examining the educational functions of memes [3], [11], [20], the conceptual foundations of

digital literacy [13-16], and generational differences in digital learning environments [4], [19]. An initial search identified 58 studies. After removing duplicate records and excluding studies that were not directly related to meme pedagogy, digital literacy, or general education, 24 studies were retained for final analysis.

### 3.4 Data Analysis and Framework Development

The selected literature was analyzed through a three-stage process.

First, conceptual categorization was conducted to identify the major characteristics and educational functions of memes discussed in previous studies [2, 3], [21, 22]. Through this process, themes such as meaning-making, identity expression, learner engagement, and critical reflection were identified.

Second, thematic synthesis was performed to examine how meme-based learning activities contribute to the development of digital literacy competencies. Particular attention was given to critical comprehension, creative production, social collaboration, and digital citizenship as discussed in digital literacy studies [13-16], [23].

Third, findings from meme studies [3], [20, 21], digital literacy theory [13-16], and digital native–digital immigrant theory [4], [19] were integrated to develop the Meme-Based Digital Literacy Pedagogy Framework (Figure 1). Based on this synthesis, the relationships among meme-based learning activities, digital literacy competencies, general education outcomes, and differentiated instructional strategies were conceptualized.

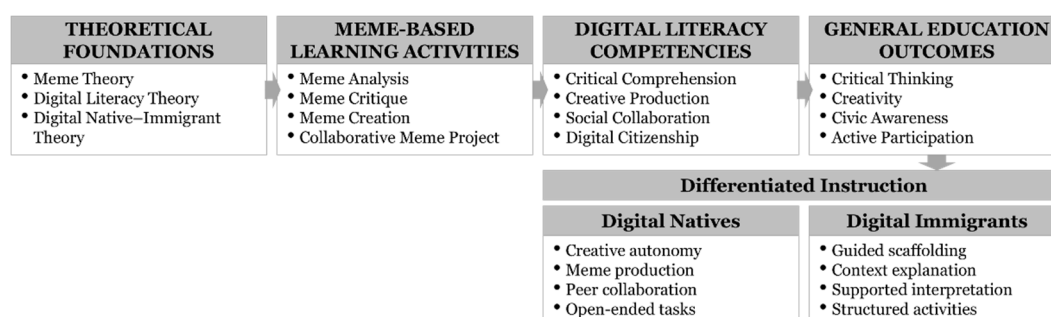


**Figure 1.** Meme-Based Digital Literacy Pedagogy Framework

Figure 1 illustrates the relationships among meme-based learning activities, digital literacy competencies, general education outcomes, and differentiated instructional strategies derived from the literature synthesis.

## 4. Research Findings

### 4.1 Development of the Meme-Based Digital Literacy Pedagogy Framework

Through the integrative analysis of previous studies on memes, digital literacy, and generational learning characteristics, this study developed the Meme-Based Digital Literacy Pedagogy Framework (Figure 1). Rather than treating memes as simple entertainment or communication tools, the proposed framework conceptualizes memes as pedagogical resources that can facilitate the development of digital literacy competencies and support the broader objectives of university general education.

The framework was developed through the synthesis of three theoretical domains. First, meme studies emphasize the role of memes as cultural texts that enable meaning-making, identity expression, and social participation [2, 3], [21, 22]. Second, digital literacy theory highlights the importance of critical comprehension, creative production, social collaboration, and digital citizenship in contemporary learning environments [13-16]. Third, digital native–digital immigrant theory suggests that learners may respond differently to digital content according to their familiarity with digital culture and technology [4], [19].

As illustrated in Figure 1, meme-based learning activities such as meme analysis, critique, creation, and collaborative projects serve as mediating mechanisms through which learners develop digital literacy competencies. These competencies subsequently contribute to key general education outcomes, including critical thinking, creativity, civic awareness, and active participation. The framework further proposes differentiated instructional approaches for digital natives and digital immigrants in order to maximize learning effectiveness across diverse learner groups. Accordingly, Figure 1 represents the principal outcome of this study by integrating the major findings derived from the literature synthesis into a coherent conceptual framework for meme-based general education.

The first component of the proposed framework concerns the educational functions of memes in general education. The literature synthesis revealed that memes possess educational value beyond entertainment by functioning as tools for cultural meaning-making, identity expression, learner engagement, critical reflection, and active participation [2, 3], [21, 22]. These functions explain why memes can serve as effective pedagogical resources in digitally mediated learning environments and provide the theoretical foundation for meme-based instructional practices.

Particularly, memes enable learners to interpret social and cultural issues through symbolic and multimodal communication, while simultaneously encouraging personal expression and participation in digital culture. In addition, their familiarity and accessibility can enhance learner motivation and emotional engagement, creating opportunities for more active and meaningful learning experiences [20, 21]. Based on these findings, five major educational functions were identified and incorporated into the first layer of the proposed framework. These educational functions constitute the foundational dimension of the framework and explain why meme-based activities can support digital literacy development and general education outcomes. The identified functions are summarized in Table 1.

**Table 1.** Educational Functions of Memes in General Education

| <b>Educational Function</b>   | <b>Description</b>                                                                  | <b>Key Sources</b> |
|-------------------------------|-------------------------------------------------------------------------------------|--------------------|
| Cultural Meaning-Making       | Mememes serve as digital vernacular for expressing social critique and emotion.     | [1], [22]          |
| Student Identity Expression   | Mememes allow students to express values, humor, and beliefs in relatable formats.  | [21]               |
| Motivation & Engagement       | Familiarity with meme culture enhances learner motivation and emotional engagement. | [20]               |
| Critical Thinking Development | Mememes as critique tools align with the goals of liberal arts education.           | [3], [22]          |
| Active Learning Facilitation  | Students actively reinterpret course content through meme creation or analysis.     | [3], [20]          |

#### 4.2 The Pedagogical Potential of Memes as Teaching Strategies

The second component of the proposed framework concerns the pedagogical application of memes in general education. While the first component identifies the educational functions of memes, the second component focuses on how these functions can be translated into concrete teaching and learning practices. The literature synthesis suggests that meme-based learning can move beyond passive content consumption by encouraging learners to analyze, critique, create, and collaboratively share digital content.

Within the proposed framework, meme-based activities serve as practical mechanisms through which digital literacy competencies are developed. By engaging learners in interpretation, evaluation, and creative production, these activities support critical comprehension, creative expression, social collaboration, and digital citizenship. Therefore, meme pedagogy can be understood not merely as an engagement strategy but as a structured instructional approach aligned with the goals of digital literacy education and university general education. Mememes support core components of digital literacy, such as media critique, meaning interpretation, and creative digital expression [13-15]. For example, assigning students to create mememes based on course themes can deepen their understanding by encouraging them to reflect critically and creatively on the material. Analyzing popular internet mememes allows students to unpack social commentary and digital rhetoric, cultivating media awareness and critical thinking. Mememes can also function as lighthearted yet effective icebreakers, fostering emotional connection among learners and helping to establish a collaborative learning atmosphere.

To better visualize the practical applications, Table 2 outlines four distinct strategies for integrating mememes into university-level general education classrooms. Each strategy highlights a unique pedagogical objective aligned with contemporary educational needs. Together, these strategies represent the second layer of the proposed framework and illustrate how meme-based learning activities can be implemented to foster digital literacy and general education outcomes.

**Table 2.** Pedagogical Applications of Meme-Based Learning

| Strategy                                    | Description                                                                                                                    | Educational Focus                 | Reference |
|---------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------|-----------------------------------|-----------|
| Meme Creation Assignments                   | Students create memes based on course topics to reinterpret key concepts. Supports visual/verbal learning through dual coding. | Creative Comprehension, Retention | [24]      |
| Meme Critique Discussions                   | Students analyze memes for meaning, bias, and context, enhancing media literacy and critical thinking.                         | Media Literacy, Critical Thinking | [23]      |
| Meme-Based Lecture Introductions            | Lectures begin with related memes to build relevance and engagement, easing students into complex topics.                      | Motivation, Relatability          | [20]      |
| Collaborative Meme Projects with Tech Tools | Teams use digital platforms to co-create memes, building communication skills and digital fluency.                             | Collaboration, Digital Literacy   | [21]      |

The strategies presented in Table 2 operationalize the second component of the proposed framework by translating the educational functions of memes into concrete instructional practices. Through activities such as meme creation, critique, discussion, and collaborative projects, learners are encouraged to engage actively with academic content while simultaneously developing digital literacy competencies. These strategies illustrate how meme-based pedagogy can move beyond engagement-focused activities and become a structured approach to teaching and learning in general education. Far from being a superficial novelty, meme-based instruction aligns with constructivist principles, enabling learners to co-construct meaning and relate abstract content to lived experiences.

To support these strategies, case studies from science and healthcare education further underscore the practical benefits of meme integration. In one forensic science course, meme assignments helped students reflect on complex ideas in a creative, memorable way. Similarly, in pharmacy education, meme creation enhanced both concept retention and peer bonding, showing promise for disciplines requiring deep content comprehension.

Consistent with the proposed framework, the implementation of these strategies is expected to contribute to both digital literacy development and broader general education outcomes. The anticipated outcomes include the following:

**Increased Engagement:** Students are more likely to participate when course content resonates with their digital culture.

**Enhanced Comprehension:** Visual and textual combination in memes aids cognitive processing [23].

**Improved Critical Thinking:** Critiquing memes nurtures evaluative reasoning about media and meaning.

**Digital Literacy Advancement:** Students gain experience navigating and contributing to the digital media landscape.

Taken together, these findings support the use of memes as versatile, culturally responsive tools that empower students to interact meaningfully with course content. With thoughtful design and reflective scaffolding, meme-based pedagogy can enrich general education curricula and bridge the gap between academic learning and digital life.

#### 4.3 Differentiated Responses Between Digital Natives and Digital Immigrants

The third component of the proposed framework concerns differentiated instructional strategies for digital natives and digital immigrants. While the first component identifies the educational functions of memes and the second component focuses on pedagogical applications, the third component recognizes that learners may respond differently to meme-based instruction according to their levels of digital familiarity and cultural experience. Therefore, effective meme pedagogy requires adaptive instructional approaches that address the distinct needs and strengths of diverse learner groups.

In general education, where classrooms increasingly include both digital natives and immigrants, it becomes critical to account for these contrasting orientations. For digital immigrants, the symbolic meaning and contextual nuances of memes may not be immediately apparent. Thus, instructors should integrate guided explanation and collaborative decoding of memes to foster inclusive participation. On the other hand, digital

natives are typically more adept at interpreting, remixing, and generating memes, making them ideal candidates for open-ended meme creation or analysis assignments that promote deeper engagement and creative learning.

Based on the synthesis of digital literacy theory and digital native–digital immigrant theory [4], [13-16], [19], differentiated instructional strategies and expected learning outcomes were identified for each learner group. These relationships constitute the third component of the proposed framework and are summarized in Table 3.

**Table 3.** Differentiated Instructional Strategies and Expected Learning Outcomes for Digital Natives and Digital Immigrants

| Dimension                      | Digital Natives<br>(e.g., University Students)                            | Digital Immigrants<br>(e.g., Adult Learners)                               | Reference          |
|--------------------------------|---------------------------------------------------------------------------|----------------------------------------------------------------------------|--------------------|
| Familiarity with Memes         | High—Memes are part of everyday digital communication and self-expression | Low to moderate—Often seen as informal or humorous rather than educational | [4], [19]          |
| Preferred Instructional Design | Creative autonomy—Student-generated memes, peer discussions               | Guided scaffolding—Explanation of meme context and meaning                 | [4], [13-15]       |
| Preferred Activities           | Meme creation, remixing, collaborative projects                           | Meme interpretation, guided analysis, structured discussion                | [20, 21]           |
| Digital Literacy Focus         | Creative production, critique, and cultural fluency                       | Critical interpretation, relevance, and technological adaptation           | [13-16]            |
| Expected Learning Outcomes     | Creativity, self-directed learning, cultural fluency                      | Digital confidence, media understanding, participation                     | [4], [13-16], [19] |
| Pedagogical Implication        | Open-ended projects and collaborative production                          | Structured support and contextual guidance                                 | [21, 22]           |

The differentiated strategies presented in Table 3 represent the third component of the proposed framework. The findings suggest that the effectiveness of meme-based pedagogy is influenced not only by the characteristics of the instructional activities themselves but also by learners' levels of digital familiarity and cultural experience. Therefore, instructional approaches should be adapted to accommodate the distinct strengths, needs, and learning preferences of digital natives and digital immigrants.

This approach aligns with inclusive teaching principles, emphasizing adaptability and learner-centered design. Meme-based learning, therefore, holds potential not simply as a trendy or humorous tactic, but as a bridge between academic content and digital communication practices, supporting both personal relevance and academic rigor. These distinctions reinforce the need for culturally adaptive and learner-centered instructional design when implementing meme-based pedagogy. Within the proposed framework, differentiated instruction serves as a critical mechanism for maximizing the educational benefits of memes across diverse learner populations.

## 5. Conclusions

This study developed and proposed the Meme-Based Digital Literacy Pedagogy Framework to explain how memes can function as meaningful educational resources in university general education. By integrating meme studies, digital literacy theory, and digital native–digital immigrant theory, the framework demonstrates how meme-based learning activities can contribute to digital literacy development and broader educational outcomes. In today's digital environment, memes are more than mere entertainment—they serve as tools for intergenerational communication, the dissemination of information, and the delivery of sociocultural messages. For digital natives such as Generation Z, memes are a natural medium of communication and, when creatively integrated into educational contexts, can enhance engagement and conceptual understanding.

Memes allow learners to reinterpret course content and express it in their own visual and linguistic styles, thereby promoting active information processing and critical thinking. This aligns well with constructivist learning models that prioritize learner participation and creativity. Moreover, the core components of digital literacy—information filtering, media interpretation, and digital communication—are effectively nurtured through meme-based activities, enabling students to shift from passive consumers to active creators of knowledge.

Meme-based instructional strategies offer an innovative alternative to traditional lecture-centered approaches and have several pedagogical implications. First, memes simplify complex ideas and deliver them in a visually compelling format, which enhances retention and understanding. Second, creating memes requires higher-order thinking skills such as critical analysis and metacognitive reflection, fostering deeper cognitive engagement. Third, because memes often embed cultural symbols and multiple layers of meaning, they can serve as tools for critical discussions on social, political, and ethical topics. This makes them especially relevant in humanities and social sciences, where they can be linked to class debates, critical reviews, and cultural analysis.

However, ethical considerations must accompany the use of memes in education. Memes can unintentionally include discriminatory, sexist, or politically biased content, potentially leading to misinterpretation or discomfort. Instructors should establish explicit guidelines regarding respectful communication, avoidance of discriminatory or offensive content, source attribution, and responsible digital participation. In addition, meme-based activities should be accompanied by discussions of digital citizenship, media ethics, and the social consequences of online communication. Such measures can help ensure that meme pedagogy promotes critical and responsible engagement rather than the uncritical reproduction of problematic digital content.

Although the proposed framework offers a theoretical explanation of meme-based learning in general education, its effectiveness has not yet been empirically validated. This study focused on theoretical exploration and did not include empirical validation of meme-based strategies in actual classroom settings, which is a major limitation. The proposed framework contributes to the existing literature by providing a structured conceptual model that links meme-based learning activities, digital literacy competencies, general education outcomes, and differentiated instructional strategies within a single pedagogical framework. Future research should include robust quantitative and qualitative methodologies to assess the educational impact of meme usage.

First, controlled experiments comparing experimental and control groups could measure how meme-based classes affect student engagement, performance, and digital literacy. Such studies could also compare digital natives and immigrants to develop differentiated instructional strategies.

Second, qualitative case studies could analyze students' cognitive and emotional shifts during meme creation and critique. Data from interviews, portfolios, and reflective journals would offer in-depth insight into learners' perceptions and growth.

Third, a mixed-methods approach could combine both data types to offer a comprehensive evaluation of the pedagogical effectiveness and ethical acceptability of meme-based instruction.

Fourth, future studies should examine how meme-based strategies function across different disciplines—humanities, social sciences, natural sciences, and the arts—as the suitability and impact of meme usage may vary significantly depending on course content and learning goals. The proposed framework may be adapted across diverse general education domains, including humanities, social sciences, digital media studies, and civic education, although implementation strategies should be adjusted according to disciplinary characteristics and learner needs.

Finally, since memes are culturally and contextually sensitive, cross-cultural research is essential to explore how different demographics interpret and react to meme-based learning. Such studies would help balance the global potential of memes in education with local ethical and cultural considerations.

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