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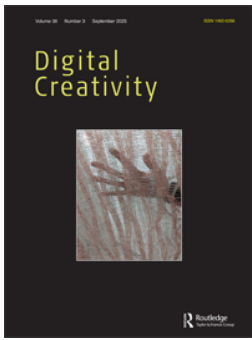
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How to Enrich Digital Creativity? A Scoping Review

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ABSTRACT

Digital creativity represents human creativity generated with the assistance of digital technology. It significantly aids individuals in navigating the complexities of the modern world, particularly in new jobs that require digital proficiency. Therefore, research is imperative to enhance digital creativity by utilizing scoping review and COM-B system to identify and classify its driving factors. This study reviewed 10 research articles sourced from eight databases, which underwent a screening process to ensure adherence to a pre-defined set of inclusion and exclusion criteria. Through this process, this study identified 18 factors capable of fostering digital creativity across individual, group, and organizational levels. These factors were then classified within the COM-B framework, with each factor assigned to the appropriate domain: Capability, Opportunity, and Motivation. These findings provide a foundation for academics and practitioners to design intervention programmes. Furthermore, this study provides resources for guiding future research and continued exploration in this field.

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Scoping review; digital creativity; COM-B model; enriching factors; decent work and economic growth

1. Introduction

Technological advancement has become a widely studied phenomenon (Billing et al. 2021; Hooley and Staunton 2020; Timotheou et al. 2023; World Economic Forum 2023). It has significantly impacted human life (United Nation 2023; World Economic Forum 2023), particularly in relation to jobs (Hooley and Staunton 2020; World Economic Forum 2025). The emergence of technology has led to the automation of various administrative jobs, such as bank tellers and cashiers (World Economic Forum 2025). This trend was further exacerbated by the increased digitalization practices during the COVID-19 pandemic, which contributed to a rise in global unemployment (United Nation 2023). However, technological advancements have also created new career opportunities, including Big Data

Specialists, AI and machine specialists, or sustainability specialists (World Economic Forum 2025) as new career paths to pursue.

As technology evolves, emerging jobs require workers to possess adequate skills to meet the demands of these positions (Fitri et al. 2023; Li 2022; van Laar et al. 2017; World Economic Forum 2025). This demand has increased the need for creative professionals with digital skills (van Laar et al. 2017). Digital skills are defined as the human capacity to master and leverage digital tools for high-level thinking processes (van Laar et al. 2017). Thus, having skilled workers in these areas will enhance organizational resilience amid ongoing digital transformation (Smailhodžić and Berberović 2022; van Laar et al. 2017; Wang and Li 2022).

Moreover, human creativity has also become essential as digital technology advances

(Dilekçi and Karatay 2023; Vincent-Lancrin et al. 2019; Wang and Li 2022), particularly as creativity poses a challenge for technology adoption (Amabile 2020; Vincent-Lancrin et al. 2019). Creativity is the behaviour of generating new ideas that plays a significant role in various aspects of life (Amabile et al. 1996). As digitalization progresses, the concept of creativity has evolved, giving rise to digital creativity (Lee 2015; Lee and Chen 2015). Digital creativity is an action that involves the dynamic interaction of personal knowledge, environmental influences, and identity development, utilizing digital technologies to drive imaginative and innovative behaviours (Swirski 2013). Additionally, it encompasses all kinds of human creativity supported by digital technology (Lee 2015).

Digital creativity has the potential to help mitigate the negative impacts of digital technology, enable individuals to express their creativity from anywhere, and provide opportunities for the underprivileged to pursue their dreams (Lee 2015). In education, digital creativity has influenced academic performance and the development of students' creative thinking skills (Wang and Li 2022). Research indicates that students experience higher academic success and enhanced creative thinking through digital technology-based learning. In business, digital creativity drives digital transformation and helps companies stay competitive in Industry 4.0 by adapting to emerging trends (Smailhodžić and Berberović 2022; Wang and Li 2022).

Given its critical role in navigating technological change, identifying the factors that drive digital creativity is essential. The rise of the internet and digital technology have introduced new influences on creativity (Lee 2015), making it an intriguing research topic. Moreover, the concept of digital creativity is relatively new and continues to evolve, making it a significant and relevant subject for further exploration (Lee and Chen 2015). Over recent years, several studies have explored these

driving factors (Chen et al. 2023; Nguyen et al. 2023; Nisula et al. 2022; Shao, Li, and Wang 2021; van Rensburg, Coetzee, and Schmulian 2021; Wang and Li 2022; Zhang et al. 2022). While previous studies have attempted to summarize the driving factors of digital creativity, none has focused specifically on examining these factors in an elaborative and in-depth manner.

Therefore, this study aims to identify the driving factors of digital creativity based on existing research to enhance understanding of their influence on digital creativity. Beyond theoretical contributions, this study seeks to provide practical value for professionals, such as teachers and trainers, in developing strategies to enhance individuals' digital creativity. To achieve this, a systematic behavioural framework is necessary for understanding and influencing a behaviour (Michie, van Stralen, and West 2011). Therefore, the COM-B (Capability, Opportunity, and Motivation – Behaviour) system, which conceptualizes behaviour as an interaction resulting from capability, opportunity, and motivation (Michie, Atkins, and West 2014), is employed. This framework enables professionals to consider all influencing factors and adopt a structured approach to targeting the most impactful factors in encouraging desired behaviours. By categorizing driving factors and aligning them with behaviours to be encouraged, the COM-B system enhances the effectiveness of intervention designs (Michie, van Stralen, and West 2011) in promoting digital creativity.

2. Methods

2.1. Data obtaining process

Eight databases were utilized to identify relevant research articles, selected based on their credibility and accessibility. These included: (a) American Psychological Association (APA) PsycNet; (b) ScienceDirect; (c) ResearchGate; (d) PubMed; (e) Taylor and

Francis Online; (f) JSTOR; (g) DOAJ; and (h) Google Scholar. The search was conducted using the keyword ‘*digital creativity*’ in article titles across all databases to ensure that the selected studies were fully aligned with the research objectives and digital creativity is the main variable being studied.

2.2. Inclusion and exclusion criteria

Inclusion and exclusion criteria were established to ensure the selected articles specifically investigate digital creativity, were published in reputable journals, and are publicly accessible. The inclusion criteria were: (a) an accessible journal articles (open access); (b) journal articles published in English; and (c) articles published in a Q1 to Q3 journal. The exclusion

criteria and the number of included and excluded articles are detailed in [Figure 1](#).

2.3. Study selection

The study selection process initiated in August 2023 by the first author (RVG), the second author (PTYSS), and the third author (CA). The articles for this research were collected using Mendeley and Microsoft Excel by RVG and CA across eight designated platforms, yielding a total of 281 articles. After removing duplicates, 182 articles were assessed by RVG and PTYSS. Titles and abstracts were screened in Microsoft Excel, leading to the exclusion of 172 articles based on the established exclusion criteria. Ultimately, 10 articles met the inclusion criteria, with an inter-rater

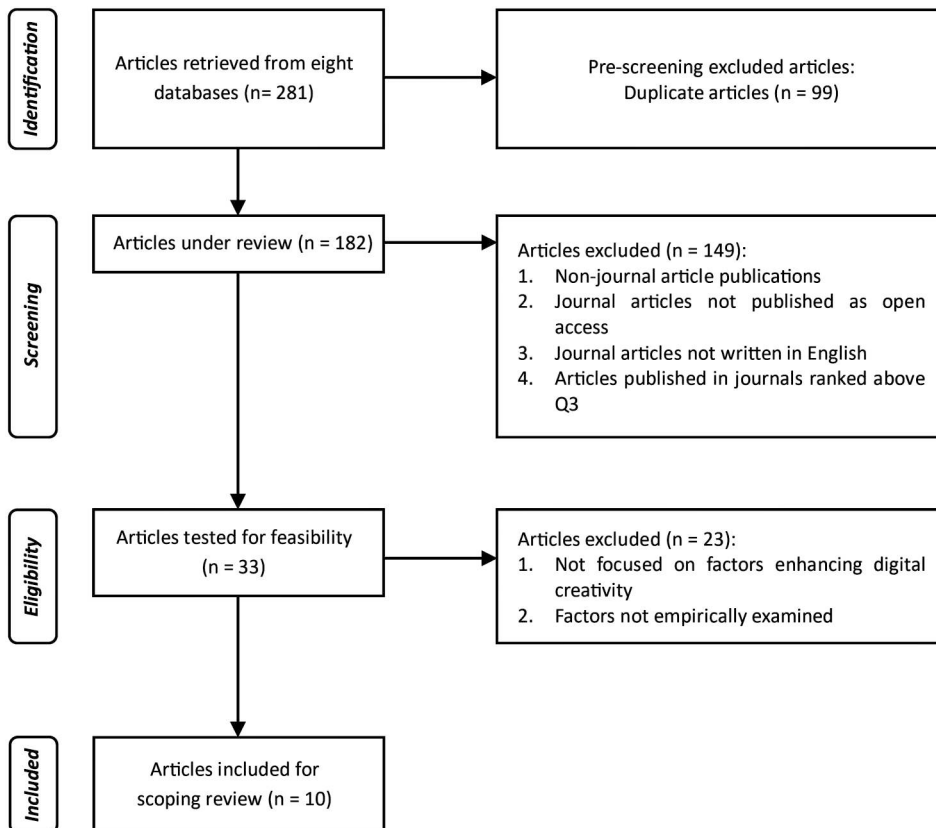


Figure 1. PRISMA flow diagram.

agreement rate of 73.7%. [Figure 1](#) illustrates the number of included and excluded studies.

2.4. Data extraction

Data extraction was conducted by RVG under the guidance of PTYSS to address the research objectives. Five data points were extracted from the selected 10 articles: (a) author name; (b) publication year; (c) research objectives and questions; (d) sample details (location, sample size, and sample age); and (e) factors driving digital creativity. To ensure relevance, and comprehensive data capture, data were extracted from the abstract, result, and conclusion of each study.

2.5. Quality and reporting checklist

To maintain the quality and rigour of the selected articles, a re-evaluation was conducted through a screening process. The process was conducted in stages, culminating in an eligibility assessment. The assessment was conducted using a checklist adapted from a prior study (Graça et al. 2023), which included the following domains: (a) participants (place, gender, and age); (b) theoretical framework; (c) measurement; and (d) result. An article could achieve a maximum score of 20 points. Each domain was scored on a scale of zero to five, with five points indicating that the article clearly presented all required data and a score of zero indicating its absence. Consequently, a lower score was assigned based on the extent of information provided. The scoring scheme is detailed in [Table 1](#).

2.6. The COM-B system classification

The COM-B system involves three interrelated domains driving behaviour: capability, opportunity, and motivation (Michie, van Stralen, and West 2011, 2014). Together, these domains interact to influence behaviour, with the outcomes can, in turn, influence these domains.

Table 1. Quality and reporting checklist procedure.

Criterion	Score
Participant Location Gender Age	5 – Providing necessary information comprehensively
	0 – Failure to provide the necessary information comprehensively
	5 – Providing necessary information comprehensively
Theoretical Framework	0 – Failure to provide the necessary information comprehensively
	5 – Providing necessary information comprehensively
Measurement	0 – Failure to provide the necessary information comprehensively
	5 – Providing necessary information comprehensively
Result	5 – Providing necessary information comprehensively
	0 – Failure to provide the necessary information comprehensively

To further understand the identified factors driving digital creativity, RVG classified these factors based on the definition and scope of each respective domain. The classification was then validated by CA and PTYSS, and any discrepancies resolved through discussion to reach a consensus.

The first domain, capability, encompasses the skills and abilities an individual possesses to perform a behaviour, including knowledge as well as both physical and psychological conditions (Michie, van Stralen, and West 2011, 2014). Second, opportunity includes external factors that enable or facilitate a behaviour, whether physical (e.g. location, workplace facilities, technology) or social (e.g. relationships, cultural norms, language) (Michie, van Stralen, and West 2011, 2014). Lastly, motivation involves the mental processes that guide a behaviour, which can be reflective (entailing future planning and evaluation) or automatic (involving needs, desires, and habits) (Michie, van Stralen, and West 2011, 2014).

3. Results

3.1. Study characteristics and assessment

Ten research articles met the inclusion criteria following the selection process. Published between 2013 and 2023, these studies

collectively support the notion that digital creativity is a relatively new and evolving construct. The participant demographics predominantly consisted of students and working professionals, with the latter group being the most frequently represented. Utilizing quantitative, qualitative, mixed methods, and experimental approaches, these studies were conducted worldwide, with the majority taking place in China. The study characteristics are detailed in Table 2.

With a maximum score of 20, the quality and reporting assessment of the studies yielded an average score of 17 and highest score of 19. The detailed score of each article is presented in Table 2, while the characteristics for the assessment are detailed in Table 1.

3.2. Digital creativity factors

Analysis on 10 research articles yielded 18 driving factors of digital creativity. The classification of these factors utilizing the COM-B system is presented in Figure 2, with further elaboration of each factor provided in the following subsections.

3.2.1. Capability

To perform a behaviour, one requires knowledge, skills, psychological states, physical conditions, and other necessary abilities. This enables individuals to expand their knowledge and conditions, thereby enhancing the discovery of new ideas (Ling et al. 2023).

3.2.1.1. Digital capability. Digital capability is described as the capacity to explore, manage, integrate, and evaluate digital tools to innovate and make well-informed judgements (Nguyen et al. 2023; Zahra, Sapienza, and Davidsson 2006; Zhang et al. 2022). As an advanced information processor, individuals can generate solutions when encountering problems (Nguyen et al. 2023; Vuong 2022). Therefore, possessing extensive digital knowledge and experience, along with the ability to effectively utilize

them, enhances an individual's capacity to produce a wide range of ideas in a digital context (Nguyen et al. 2023). When existing knowledge is inadequate to solve a problem, the acquisition of new information becomes crucial (Nguyen 2022). By integrating new information with digital expertise and skills, individuals expand their cognitive resources, which leads to the production of more diverse and creative solutions (Nguyen 2022; Nguyen et al. 2023).

In a team setting, a high Team Digital Ability (TDA) allows the team to simultaneously explore and exploit emerging digital technologies while leveraging existing ones, fostering new innovations by stimulating each member's digital creativity (O'Reilly and Tushman 2013; Shao, Li, and Wang 2021; Zhang et al. 2022). Moreover, the group's ability to identify and assimilate existing information allows its members to learn from external sources and utilize that knowledge to trigger creativity, ultimately enhancing individual digital creativity within the group (Zahra, Sapienza, and Davidsson 2006; Zhang et al. 2022).

3.2.1.2. Digital cognition and emotion. Digital cognition and emotion refer to the ability to comprehensively understand an organization's digital development objectives and, consequently, recognize the significance of their contributions to team collaboration (Chen et al. 2023). Individuals with strong digital cognition and emotion tend to actively engage in achieving organizational goals with full awareness of their role (Chen et al. 2023). This engagement requires a deep understanding of assigned tasks and how their outcomes contribute to organizational success (Mathieu, Marks, and Zaccaro 2002). Therefore, when individuals are motivated and able to fully participate in their work by leveraging their digital skills, they are encouraged to work creatively, which, in turn, enhances group's digital creativity (Cai et al. 2020; Chen et al. 2023).

Table 2. Summary of the study characteristics and assessment.

No.	Author	Location	Title	Factor	Methods	Score				Total Score
						P	TF	RM	R	
1.	Hugill and Smith 2013	United Kingdom	Digital creativity and transdisciplinarity at postgraduate level: The design and implementation of a transdisciplinary master's programme and its implications for creative practice	Transdisciplinary learning	Quantitative	3	3	3	5	14
2.	Chung, Lee, and Choi 2015	-	Exploring digital creativity in the workspace: The role of enterprise mobile applications on perceived job performance and creativity	Task-Technology Fit of Enterprise Mobile Applications (EMA) and Habitual use of EMA	Quantitative	4	4	4	5	17
3.	Shao, Feng, and Hu 2017	China	From ambidextrous learning to digital creativity: An integrative theoretical framework	Exploitative and Explorative Learning	Quantitative	5	5	4	5	19
4.	Pérez-Fuentes et al. 2019	-	Relationship between digital creativity, parenting style, and adolescent performance	Parenting style	Quantitative	4	5	4	5	18
5.	van Rensburg, Coetzee, and Schmulian 2021	South Africa	Developing digital creativity through authentic assessment	Authentic assessment learning	Quantitative and Qualitative	3	3	3	5	14
6.	Wang and Li 2022	China	Digital creativity in STEM education: The impact of digital tools and pedagogical learning models on the students' creative thinking skills development	Digital creativity learning practice	Experiment	4	3	3	5	15
7.	Nisula et al. 2022	Finland	A psychological perspective on the sociotechnical enablers of knowledge worker digital creativity	Perceived Organizational Support	Quantitative	5	3	4	5	17
8.	Zhang et al. 2022	China	Exploration of digital creativity: Construction of the multiteam digital creativity influencing factor model in the action phase	Multiteam digital sharing, Team digital ability, and Digital resource matching	Qualitative and DEMATEL method	3	3	3	5	14
9.	Chen et al. 2023	China	New exploration of creativity: Cross-validation analysis of the factors influencing multiteam digital creativity in the transition phase	Organizational digital climate, Individual digital cognition and emotion, Leadership competence, and Team psychological empowerment.	Qualitative and DEMATEL method	5	4	4	5	18
10.	Nguyen et al. 2023	Vietnam	Examining contributors to Vietnamese high school students' digital creativity under the serendipity-mindsponge-3D knowledge management framework	Digital Capability, Digital Openness, Autonomous Learning	Peer-reviewed secondary data (Qualitative Data)	4	5	4	5	18

Note: P = Participant; TF = Theoretical Framework; RM = Research Methodology; R = Result

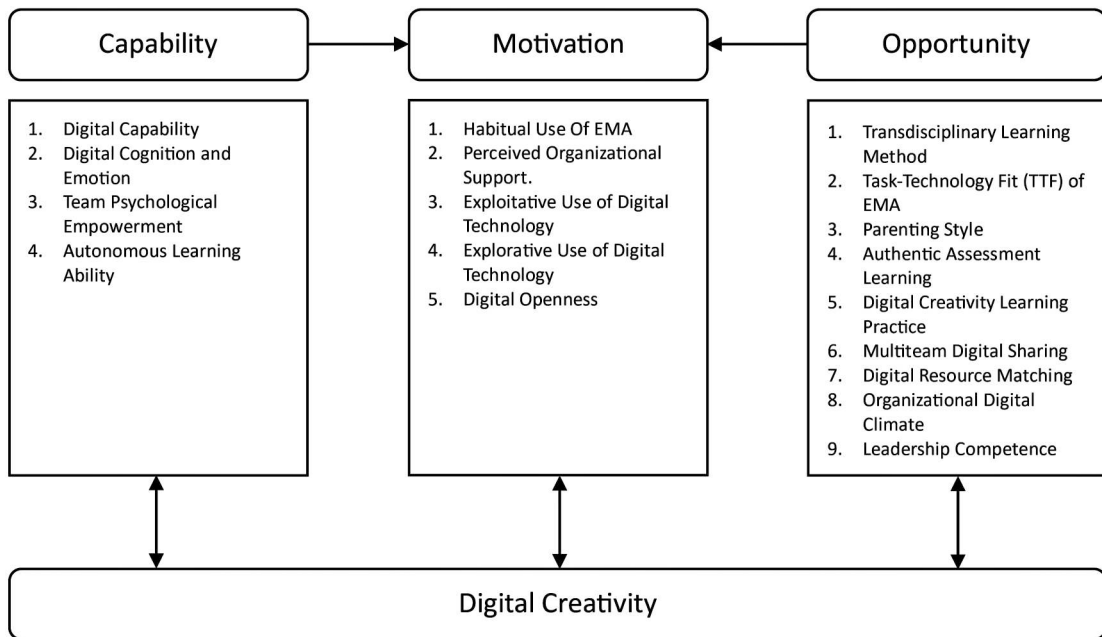


Figure 2. The COM-B Classification System of Digital Creativity Factors.

3.2.1.3. Team psychological empowerment.

Team psychological empowerment refers to a team's collective psychological belief in its authority, which intrinsically and sustainably motivates team performance, thereby enhancing organizational performance (Chen et al. 2022, 2023; Kirkman and Rosen 1999; Maynard et al. 2012). According to multiteam systems theory, shared understanding among teams is a critical factor in enhancing multiteam systems' effectiveness (Mathieu, Marks, and Zaccaro 2002). This understanding facilitates mutual comprehension of each team's respective tasks and how these tasks contribute to achieving a shared goal (Mathieu, Marks, and Zaccaro 2002). In turn, it allows each team to have full autonomy over its designated work and to express its opinions or ideas with other teams as members believe that their input is valuable and relevant (Hahm 2017; Mathieu, Marks, and Zaccaro 2002). When other teams respect shared viewpoints and information, it fosters a more frequent

interchange of ideas and information, leading to novel insights and enhanced team creativity (Hahm 2017). Therefore, the presence of team psychological empowerment, particularly at high levels, plays a crucial role in enhancing digital creativity within teams (Chen et al. 2023).

3.2.1.4. Autonomous learning ability.

Autonomous learning refers to an individual's ability to independently acquire knowledge by using online platforms and the internet (Nguyen et al. 2023). Self-directed learning requires discipline and consistency throughout the learning process. Thus, gaining knowledge of digital technology autonomously necessitates sustained effort and commitment. However, this learning approach should be supported by parents and/or teachers through supervision and the creation of a conducive learning environment with adequate resources, which ultimately fosters creativity and the development of new ideas (Nguyen et al. 2023).

3.2.2. Opportunity

The emergence of a behaviour is contingent upon external factors, in addition to individual attributes. An environment that supports creative behaviour can foster flexibility and openness to experience, thereby promoting greater creativity (Deng, Wang, and Zhao 2016).

3.2.2.1. Transdisciplinary learning method.

Transdisciplinarity refers to its nature of existing between disciplines, integrating multiple disciplines, and transcending disciplinary boundaries (Hugill and Smith 2013; Nicolescu 2002). It encourages active participation in addressing real-world challenges and applying transformative practices through a constructive problem-solving approach (Hugill and Smith 2013; Nicolescu 2002). The utilization of digital technology is a key factor in fostering and enabling transdisciplinary learning, thereby providing opportunities for creative work (Hugill and Smith 2013). These opportunities arise as individuals can explore and acquire new skills across various disciplines without constraints, stimulate creative thinking, and generate novel ideas. Moreover, the belief that digital technology provides a new medium for creative expression further stimulates the production of creative thoughts. Thus, implementing transdisciplinary learning method has the potential to enhance individual creativity and offer greater opportunities for creative exploration.

3.2.2.2. Task-Technology Fit (TTF) of EMA.

Digital technologies, such as Enterprise Mobile Applications (EMA), serve as Creativity Support Systems (CSS) in enhancing individual creativity (Chung, Lee, and Choi 2015). As digital technology, EMA facilitates collaboration and communication anywhere and anytime, enabling the emergence of creative ideas through knowledge exchange with diverse individuals (Chung, Lee, and Choi 2015). However, the effectiveness of EMA in enhancing creativity depends on its TTF (Goodhue 1998). TTF

refers to the degree to which a particular technology can assist and facilitate individual tasks (Goodhue and Thompson 1995). With strong TTF, individuals are more likely to utilize EMAs in their work, thereby fostering digital creativity (Chung, Lee, and Choi 2015).

3.2.2.3. Parenting style. Parenting style refers to how parents and children interact and behave in their everyday lives (Pérez-Fuentes et al. 2019). Pérez-Fuentes et al. (2019) discovered that parents who exhibit an authoritative parenting style (distinguished by their emphasis on communication and affect, encouragement of autonomy, self-disclosure, and humour) appear to foster their children's digital creativity. Parents who practice this style guide and listen to their children's opinions as they engage in various activities and also value their perspectives in establishing rules (Baumrind 1966). Therefore, parental concern and assistance for their children's needs can foster an atmosphere that promotes independence, curiosity, and open-mindedness, which in turn enhances creativity (Lim and Smith 2008), particularly digital creativity in the school setting (Pérez-Fuentes et al. 2019).

3.2.2.4. Authentic assessment learning. Authentic assessment is an approach that connects learning experiences to real-world contexts, helping students develop career-relevant knowledge and skills that prepare them for the workplace (van Rensburg, Coetzee, and Schmulian 2021). Authentic assessment can foster digital creativity through digital collaboration among students (van Rensburg, Coetzee, and Schmulian 2021). These findings align with Vygotsky's social constructivist perspective, emphasizing that the formation of individual understanding and knowledge are shaped through social interaction (Santrock 2018). Within this framework, students are given opportunities to collaborate with teachers and peers to deepen their comprehension of various concepts (Gauvain 2016). Such interactions

facilitate the development of new thought processes, ultimately enhancing individual creativity in digital domain (Gauvain 2016; van Rensburg, Coetzee, and Schmulian 2021).

3.2.2.5. Digital creativity learning practice.

Digital creativity learning practice is a teaching method implemented by educational institutions that use digital technology and pedagogical learning models to foster creative thinking (Wang and Li 2022). The application of STEM methods and digital creativity learning creates an environment conducive to the development of digital creativity, supporting an interactive approach, such as collaborative learning and game-based teaching (Wang and Li 2022). Additionally, it encourages interaction with peers and digital technology, thereby enhancing creative thinking and innovation (Fielding and Murcia 2022; Wang and Li 2022) and resulting in improved focus and understanding of learning materials (Gauvain 2016; Wang and Li 2022). This approach aligns with Vygotsky's social constructivist perspective, which emphasizes the significant influence of the learning environment and social interaction on students' cognitive growth and acquisition of knowledge (Santrock 2018). Thus, a proper and supportive learning environment provides an opportunity to enhance knowledge and abilities (Santrock 2018), particularly in the realm of digital creativity (Wang and Li 2022).

3.2.2.6. Multiteam digital sharing. Multiteam digital sharing refers to the degree of collaboration and support among teams in exchanging digital information and knowledge, as well as in leveraging existing digital resources (Zhang et al. 2022). According to multiteam systems theory, the implementation of a multiteam system involves direct interaction among members from different teams, creating interdependence in achieving shared objectives (Mathieu, Marks, and Zaccaro 2002). Thus, multiteam digital sharing facilitates mutual support by exchanging information, expertise, and ideas,

which, in turn, stimulates the emergence of new ideas (Paulus, Baruah, and Kenworthy 2018; Zhang et al. 2022). As a result, employees' digital creativity is enhanced through these collaborative interactions (Zhang et al. 2022).

3.2.2.7. Digital resource matching. Digital resource matching is the adaptability of digital resources (infrastructure, platforms, and ecosystems) to multiteam digital creativity at the organizational level, which, when combined with human roles, it becomes the essence of digital creativity (Zhang et al. 2022). Digital resource matching drives digital creativity through the availability of digital resources that individuals can leverage to generate, form, and develop ideas or concepts (Oldham and Da Silva 2015; van Rensburg, Coetzee, and Schmulian 2021; Zhang et al. 2022). Furthermore, the availability of digital resources as communication tools supports inter-team collaboration (Mathieu, Marks, and Zaccaro 2002), subsequently enhancing digital creativity through multiteam digital sharing activities (Zhang et al. 2022).

3.2.2.8. Organizational digital climate. Organizational digital climate refers to group members' perceptions of the working conditions, culture, and support provided by the organization for creative activity (Chen et al. 2023). Within organizations, multiteam systems are implemented to enhance adaptability and responsiveness to dynamic and challenging work environments (Mathieu, Marks, and Zaccaro 2002). Thus, an open, supportive, and adaptive culture toward digital developments can enrich multiteam digital creativity as it encourages organizations to proactively offer digital guidance and training to stimulate digital innovation (Chen et al. 2023), helping teams adapt to environmental changes and seize opportunities (Mathieu, Marks, and Zaccaro 2002). Thus, such an organizational culture facilitates strategy development within teams to achieve shared goals, enhances inter-team

collaboration, and ultimately drives digital innovation (Chen et al. 2023).

3.2.2.9. Leadership competence. Leadership competence refers to the style, abilities, and resources of an individual in their role as a leader to foster members' creativity (Chen et al. 2023). To ensure that multiteam systems within an organization operate effectively, each team must possess a strong capacity to manage and coordinate its work, which makes the leader's competence play a crucial role (Mathieu, Marks, and Zaccaro 2002). Leaders within a multiteam system are responsible for coordinating inter-team interactions, serving as a bridge between teams, setting objectives, and managing team members (Chen et al. 2023; Mathieu, Marks, and Zaccaro 2002). With these skills, a leader can guide the team toward achieving organizational goals by facilitating effective communication among teams, enabling the exchange of perspectives and ideas that can stimulate creative thoughts and behaviours (Chen et al. 2023; Paulus, Baruah, and Kenworthy 2018).

3.2.3. Motivation

Behaviour is driven and directed by an individual's brain activities, which encompasses future planning, beliefs, habits, affective responses, and calculated judgments (Michie, van Stralen, and West 2011, 2014). It encourages individuals to explore new possibilities and take risks without fear of failure (Zhang et al. 2021).

3.2.3.1. Perceived organizational support. Perceived organizational support is a shared belief among organizational members regarding the extent to which the organization is willing and able to appreciate their contributions and attend to their well-being (Eisenberger et al. 1986). When individuals possess a strong belief in the support provided by the organization, they exhibit a greater inclination towards creative engagement with digital technology, greater dedication to achieving organizational

goals, and greater psychological safety (Eisenberger, Rhoades Shanock, and Wen 2020; Lie, Saraswati, and Lie 2023; Nisula et al. 2022). Psychological safety and support from the organization and superiors can lead to members' courage and willingness to take risks by trying new approaches, subsequently fostering creativity (Eisenberger, Rhoades Shanock, and Wen 2020; Saks 2006).

3.2.3.2. Habitual use of EMA. Habitual use of EMA is defined as the extent to which individuals automatically employ EMA in their work (Chung, Lee, and Choi 2015). Although EMA fosters digital creativity through shared ideas or information between individuals, enriching individual's digital creativity requires frequent EMA usage (Chung, Lee, and Choi 2015). As EMA use becomes habitual, it evolves into an activity performed almost reflexively, minimizing cognitive processing (Chung, Lee, and Choi 2015; Limayem, Hirt, and Cheung 2007). Thus, increased EMA use promotes more frequent ideas and knowledge exchange via digital technology, ultimately enhancing digital creativity (Chung, Lee, and Choi 2015).

3.2.3.3. Exploitative use of digital technology. Exploitative approach to digital technology refers to the continuous operation and adaptive modification of its functionalities (Shao, Li, and Wang 2021). This approach enables individuals to gain comprehensive insight into the functionalities and features of technology, broadening their expertise in understanding tool integration and system operation (Shao, Li, and Wang 2021). This knowledge, in turn, fosters an innovative combination of features, thereby promoting idea generation.

3.2.3.4. Explorative use of digital technology. Explorative approach to digital technology refers to experimental user engagement and identification of new ways to utilize the technology (Shao, Li, and Wang 2021). Exploring digital technologies often leads to discovering

previously unknown operations, thereby broadening technological knowledge. The expanded knowledge enhances users' ability to discern issues innovatively, thereby fostering digital creativity.

3.2.3.5. Digital openness. Digital openness refers to an individual's willingness to engage openly by interacting and utilizing information available on digital platforms (Nguyen et al. 2023). Broad knowledge, experiences, and capacities enable broad-scale creative thinking that helps individuals process complex information and generate unprecedented ideas (Nguyen et al. 2023). Additionally, frequent interactions with various information sources, whether human or digital platforms, expose individuals to new knowledge and insights, which stimulates the emergence of novel ideas (Nguyen et al. 2023; Paulus, Baruah, and Kenworthy 2018). Therefore, higher levels of digital openness enhance the absorption of digital information, ultimately fostering greater digital creativity (Nguyen et al. 2023).

4. Discussion

The arrows in Figure 2 illustrate the potential interactions among the components within the COM-B framework (Michie, van Stralen, and West 2011). These interactions suggest that an individual's capability can influence their motivation to engage in a certain behaviour, as can the opportunities available to them (Michie, van Stralen, and West 2011). Conversely, behaviour itself may also impact an individual's capability, motivation, and access to opportunities (Michie, van Stralen, and West 2011). For example, when an individual possesses digital capabilities (capability) or operates within a supportive Organizational Digital Climate (opportunity), these variables may foster openness and interest in digital technology (motivation). Such interactions can encourage the development of one's digital creativity.

By identifying 18 driving factors of digital creativity and classifying them using the COM-B system, this study offers a structured framework for understanding the multifaceted influences on digital creativity. This classification can provide guidance for professionals in designing relevant, effective, and impactful intervention strategies in both educational and organizational settings based on specific needs. As a result, organizations and schools can develop more strategic, evidence-based approaches to enriching digital creativity, ensuring that initiatives effectively address the barriers and enablers most relevant to their target audiences.

In terms of capability, for example, professionals in the education sector can enhance students' capacity through the development of autonomous learning. This approach allows students to take responsibility for their own learning by using various digital tools to expand their knowledge. As a result, students can improve their digital creativity. In a work environment, professionals can strengthen their capacity by improving their digital capability. Digital capability allows individuals to use the information exploitatively and exploratively, enabling the generation of a wide array of valuable ideas through the application of digital knowledge and skills. As a result, those with digital capabilities can expand their cognitive resources, which contributes to the creation of more varied and innovative solutions.

In terms of opportunity, professionals in education can create learning opportunities by implementing transdisciplinary learning methods. This approach allows students from different fields of study to collaborate and understand ideas across disciplines. By providing such opportunities, students are encouraged to use digital technology in completing cross-disciplinary tasks, which in turn has the potential to enhance their digital creativity. In a work environment, professionals can also create opportunities by implementing multi-team digital sharing. This approach allows

team members to interact with other teams digitally, facilitating the exchange of information, ideas, and perspectives. This interaction creates space for new ideas to emerge, thereby promoting digital creativity.

In terms of motivation, professionals in the education sector can enrich student motivation through digital openness. A positive attitude toward digital advancements provides students with the opportunity to grow their interest and express themselves digitally. Moreover, frequent interaction with digital sources of information exposes students to new ideas and skills, further supporting the development of digital creativity. In a work environment, professionals can leverage perceived organizational support to encourage employees' digital creativity. Employees who strongly believe in the support provided by their organization tend to experience greater psychological safety. This sense of safety enables them to take risks and try new digital approaches, ultimately fostering creativity in digital contexts.

However, there are four limitations that future research can address. First, the inclusion criteria applied during the literature search. Specifically, only journal articles identified through title-only keyword searches, published in English, open access, and indexed in Q1 to Q3 journals were included. While these criteria were applied to ensure relevancy, quality, and accessibility, this study may have unintentionally excluded potentially relevant studies and limit the diversity of perspectives, such as those published in other languages, in a non-journal article publication, and in subscription-based publications. Therefore, future studies could explore broader inclusion criteria to provide more comprehensive understanding of the topic.

Second, we observed that some research lacks information about participants or a clear theoretical framework explaining how specific factors influence digital creativity. Thus, future studies could also consider incorporating these elements into their inclusion

and exclusion criteria. Third, while the selection of eight databases was based on their credibility and accessibility, supplementary methods such as expert consultation or citation tracking were not applied in this review. Including these approaches in future studies may further enrich the identification process and help capture additional relevant literature that may not be indexed in the selected databases.

5. Conclusion

Digital creativity, an emerging and continuously evolving concept (Lee 2015), was examined through a scoping review of 10 research articles that met specific inclusion and exclusion criteria, leading to the identification of 18 driving factors. These factors were classified using the COM-B system into three distinct domains to facilitate a structured approach for professionals to consider all influencing elements and target the most impactful factors in encouraging desired behaviours.

These factors hold practical value for professionals in both educational and workplace settings. In the education settings, professionals can leverage factors such as: (a) autonomous learning ability; (b) transdisciplinary learning methods; and (c) digital openness. Similarly, in the workplace context, influential factors include: (a) digital capability; (b) multiteam digital sharing; and (c) perceived organizational support.

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Data availability statement

The data that support the findings of this scoping review consist of information extracted from 10 previously published studies, all of which are listed in the reference section. Restrictions apply to the availability of these data, which were used under license for this study. Access to the original sources may be subject to copyright or publisher restrictions.

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