

# **The Effectiveness of Web 2.0 Tools Training Workshop Using Canva and Figma in Developing Creative Visual Content**

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## ***Abstract***

Due to its accessibility, convenience, and capacity to meet a variety of learner needs, web tools have become increasingly popular as a way to acquire these abilities. However, there is lack of study on the efficacy of web tools in fostering creativity and the role that web tools play in this process. It prompts to critically examine whether these virtual learning environments are genuinely successful in cultivating creative skills and, if they are, how web tools function as catalysts for their effectiveness. Thus, this paper aims to investigate the effectiveness of web 2.0 tools using Canva and Figma in enhancing creativity in the domain of visual content creation. The methodology was adapted and modified from the Kirkpatrick's evaluation model, focusing on four key levels: (1) Reaction, (2) Learning, (3) Behavior, and (4) Results. The participants for the training were undergraduate students from Universiti Pendidikan Sultan Idris dan Universitas Mercu Buana Y.ogyakarta The research design involves a multi-dimensional assessment that includes survey, and pre-test and post-test. The study findings indicate that graphic design web tools significantly contribute to the development of creativity in visual content. The lowest mean score value for the training is 4.26 and the highest mean score value is 4.48. The analysis highlights that the participants experienced notable improvements in their creative skills after completing the training, with an increase in the quality and diversity of their visual content. The adapted evaluation model provides a holistic understanding of the impact of digital learning on participants, including their reactions, the knowledge acquired, changes in creative behavior, and the tangible outcomes of their creative endeavors.

**Keywords:** *Web Tools, Creative Visual Content, Online Training, Effectiveness*

## **INTRODUCTION**

In the dynamic landscape of digital communication, the integration of Web 2.0 tools has become increasingly vital for individuals and organizations seeking to engage audiences through visually compelling content. The paradigm shift from static web pages to interactive and collaborative platforms characterizes Web 2.0, encompassing a diverse range of applications that facilitate user-generated content and real-time interaction. As the demand for creative visual content continues to escalate, understanding the effectiveness of training workshops utilizing prominent Web 2.0 tools such as Canva and Figma becomes crucial for fostering digital literacy and enhancing visual content skills.

The digital era has brought in a revolution in the way content is created, shared, and consumed. Visual content, ranging from images and videos to infographics and interactive media, now plays an

instrumental role in communication, marketing, education, and entertainment. As the demand for high-quality visual content continues to surge, the ability to generate innovative and captivating visuals has become an invaluable skill (Jack, 2023).

This research dig into the intersection of Web 2.0 tools and the development of creative visual content, focusing on the specific impact of workshops utilizing Canva and Figma. Web 2.0 tools have transform traditional boundaries, allowing users to co-create, share, and manipulate content seamlessly. Canva, recognized for its user-friendly interface and diverse design capabilities, and Figma, renowned for its collaborative design environment, exemplify the evolution of tools that empower individuals to transcend conventional limitations in visual content creation.

The primary objective of this study is to assess the effectiveness of a targeted training workshop designed to harness the potential of Canva and Figma in cultivating skills related to creative visual content development. By exploring the practical implications of such training programs, this research aims to provide insights into the ways in which individuals and organizations can optimize their use of Web 2.0 tools to meet the growing demand for visually appealing and communicative content.

## 1. WEB 2.0 Tools

Web 2.0 tools represent a transformative phase in the evolution of the internet, characterized by user-generated content, collaboration, and interactivity. Among the plethora of Web 2.0 tools, Canva and Figma have emerged as prominent platforms, offering users powerful capabilities for creative visual content creation. Canva has gained widespread recognition for its user-friendly interface and intuitive design features. Research indicates that Canva has democratized graphic design, enabling individuals with varying levels of design expertise to produce professional-quality visuals (Tamsah et al., 2021). The platform's extensive library of templates, graphics, and customizable elements streamlines the design process, making it accessible to users with diverse backgrounds. Studies highlight Canva's positive impact on visual communication, emphasizing its role in enhancing engagement and conveying information effectively (Jack, 2023). The collaborative features within Canva also promote teamwork, allowing multiple users to collaborate on projects seamlessly.

Figma, positioned as a collaborative interface design tool, has garnered attention for its real-time collaboration capabilities. Literature suggests that Figma's cloud-based platform fosters teamwork among designers, allowing simultaneous editing and feedback in a shared environment. The platform's versatility in supporting interface design, prototyping, and design system management contributes to its popularity among design professionals. Figma's trend towards collaborative design aligns with the growing emphasis on teamwork and iterative design processes in the digital realm.

Common themes across studies emphasize the numerous benefits associated with Web 2.0 tools, including Canva and Figma. These benefits include increased efficiency in content creation, enhanced accessibility for users with limited design skills, and the ability to foster collaboration among geographically dispersed teams (Gu et al., 2023). The versatility of these tools in catering to various design needs, from social media graphics to user interface prototyping, adds to their appeal.

The literature reviewed underscores the transformative impact of Web 2.0 tools, particularly Canva and Figma, in reshaping the landscape of visual content creation. The democratization of design, enhanced collaboration, and adaptability to diverse design needs position these tools as valuable assets in the contemporary digital ecosystem. As the trend towards visual communication intensifies, the role of Web 2.0 tools in facilitating creativity and collaboration is expected to continue evolving.

## 2. The Trend Usage Of WEB 2.0 Tools

The trend in the usage of Web 2.0 tools, exemplified by Canva and Figma, reflects a broader shift towards user empowerment and collaborative workflows. With an increasing emphasis on visual communication in the digital age, these tools have become integral to diverse sectors, from marketing and education to product design and content creation (Gu et al., 2022). Studies suggest a rising adoption rate among both individuals and organizations, with a recognition of the strategic advantages offered by streamlined, collaborative design processes (Dwivedi et al., 2021). Several key aspects contribute to the burgeoning trend in the adoption and utilization of these tools.

The prevailing trend highlights a shift towards visual communication as a dominant form of

expression in the digital landscape. With the rise of social media, content marketing, and the demand for engaging visuals, individuals and organizations increasingly recognize the importance of Web 2.0 tools in creating compelling and shareable content (Jack, 2023). One of the standout features contributing to the trend is the democratization of design. Web 2.0 tools, particularly Canva, have dismantled traditional barriers to entry in graphic design, enabling individuals with minimal design expertise to produce visually appealing content. This democratization aligns with the broader societal trend of empowering users with tools that foster creativity and self-expression. Figma's real-time collaboration capabilities have become instrumental in facilitating remote teamwork. As the trend towards remote work continues, the ability of Web 2.0 tools to support collaborative design processes gains significance. Professionals in design, marketing, and development can seamlessly collaborate across geographical boundaries, fostering efficient and iterative workflows.

The versatility of Canva and Figma in catering to various design needs contributes to their widespread adoption. From social media graphics and marketing materials to user interface prototyping and design systems, these tools offer adaptable solutions that resonate with the multifaceted demands of modern digital communication. The trend in Web 2.0 tool usage aligns with the integration of emerging technologies (Sivarajah et al., 2015). Canva and Figma, for instance, continually update their features to incorporate advancements such as augmented reality (AR) and virtual reality (VR) elements (Xian et al., 2021). This responsiveness to technological trends ensures that users have access to cutting-edge capabilities, further solidifying the tools' relevance (Sparkleo Technologies, 2023). The educational sector is witnessing an increasing trend in integrating Web 2.0 tools into curriculum. As digital literacy becomes a core competency, educators recognize the importance of familiarizing students with platforms like Canva and Figma. This trend not only prepares students for the demands of the digital workforce but also nurtures a generation that is adept at expressing ideas through visual mediums.

The surge in content creators, influencers, and independent entrepreneurs has amplified the trend. Web 2.0 tools empower individuals to build their personal brands through visually compelling content, contributing to the rise of the content creator economy (Ballew et al., 2015). Canva and Figma play pivotal roles in this ecosystem by providing accessible and powerful tools for content ideation and creation. In essence, the trend in Web 2.0 tool usage reflects a broader societal and professional shift towards visual-centric communication, collaboration, and democratized creativity. As these tools continue to evolve, their impact on diverse industries is likely to deepen, reinforcing their status as indispensable assets in the contemporary digital landscape.

### 3. WEB 2.0 Tools For Enhancing Creativity

Web tools encompass a wide range of software applications and platforms accessible through web browsers. These tools are designed to facilitate various aspects of content creation, from graphic design to multimedia production. The different categories of web tools relevant to creative content development, including but not limited to graphic design software, video editing tools, 3D modeling platforms, collaboration and project management tools, and content-sharing platforms. Graphic design software refers to web-based applications that enable users to create and manipulate visual content, such as images, illustrations, and graphic layouts (Rahimi & Shute, 2021). The examples of graphic design software are Adobe Spark, Canva, Figma, and Gravit Designer. These tools often provide templates, a wide range of design elements, and easy-to-use interfaces, allowing users to produce visually appealing graphics for various purposes, including social media posts, posters, and infographics. Graphic design software empowers users to experiment with visual elements, fostering creativity in content creation and design.

Video editing tools are web applications designed to edit, enhance, and manipulate video content. The examples of video editing tools are WeVideo, Clipchamp, and Kapwing. These tools offer video trimming, effects, transitions, and text overlay features, making it easier for users to create engaging and creative video content. Video editing tools encourage users to experiment with storytelling, cinematography, and visual effects, fostering creativity in video production.

3D modeling platforms are web tools that enable users to create and manipulate 3D models, animations, and visualizations. The examples of 3D modelling are Tinkercad, Vectary, and Clara.io. They provide a range of modeling and sculpting tools, allowing users to create 3D objects, characters,

and scenes. Some platforms offer collaborative features for multiple users to work on the same project. 3D modeling platforms stimulate creativity by enabling users to design 3D objects, characters, and environments, which can be used in animation, gaming, architecture, and more.

Collaboration and project management tools are web applications that facilitate teamwork, project planning, and creative content development by enabling multiple users to work together efficiently (Simkova et al., 2021). The examples of collaboration and project management tools are Trello, Asana, Slack, and Google Workspace. These tools offer features for task assignment, file sharing, real-time communication, and project tracking. They streamline collaboration and organization within creative teams. Collaboration and project management tools enhance creativity by supporting team coordination, brainstorming, and the efficient execution of creative projects.

Content-sharing platforms are web-based systems that allow users to publish, share, and showcase their creative content to a wider audience (Li et al., 2022). Behance, Dribbble, and Pinterest are the examples of content-sharing platforms. Users can upload images, videos, designs, and other creative works to these platforms. They often include social features for comments, likes, and sharing. Content-sharing platforms encourage creativity by providing a space for artists, designers, and creators to display their work, receive feedback, and gain exposure. These different categories of web tools play crucial roles in facilitating creativity in content development across various domains, such as graphic design, video production, 3D modeling, collaborative work, and content sharing. Their accessibility and user-friendly interfaces make them valuable resources for individuals and teams looking to nurture creativity in the digital realm.

The web tools is valuable for enhancing creativity in visual content development. The key characteristic of web tools may include accessibility, ease of use, real-time collaboration features, and cloud-based storage (Mavri et al., 2021). Accessibility in web tools refers to their ability to be easily accessed from various devices and locations. They are typically web-based, which means users can access them through a web browser with an internet connection. Accessibility allows users to work on creative projects from anywhere, whether it's a home office, a cafe, or a library. This flexibility is especially valuable for creative professionals who need to work on visual content without being tied to a specific physical location.

Ease of use indicates the user-friendliness of web tools, meaning they have intuitive interfaces and straightforward features that do not require extensive technical expertise. User-friendly web tools enable individuals with varying levels of technical proficiency to engage in creative content development. This accessibility empowers more people to explore their creative potential and produce visually appealing content. Meanwhile, real-time collaboration features allow multiple users to work on the same project simultaneously, view changes instantly, and communicate within the platform. These features are particularly valuable for creative teams, as they promote collaboration, brainstorming, and the exchange of ideas. Real-time collaboration reduces the need for back-and-forth communication via email or other channels, streamlining the creative process.

Other than that, cloud-based storage enables users to save and store their creative projects and assets on remote servers, which can be accessed from any device with internet connectivity. Cloud-based storage offers several advantages, including data backup, version control, and easy sharing of project files. It ensures that creative content is securely stored, and it facilitates collaboration by allowing team members to access files from anywhere.

Many web tools are designed to integrate with other applications, services, or platforms, allowing users to combine various creative elements and streamline their workflow. Integration enhances creativity by enabling users to leverage a broader range of resources. For instance, a graphic design tool may integrate with a stock photo library, making it easy to incorporate high-quality images into projects. Web tools that receive regular updates and provide customer support ensure that users have access to the latest features and assistance when encountering issues. Updates often introduce new creative capabilities and fix bugs. Knowing that support is available provides users with confidence and peace of mind as they engage in creative work.

Cross-platform compatibility ensures that web tools work smoothly on various operating systems and devices, such as Windows, macOS, iOS, and Android. Cross-platform compatibility maximizes the reach of web tools, allowing users to switch between devices or collaborate with others using different systems. This flexibility is essential for creative professionals who use a diverse range of hardware. The key characteristics of web tools, including accessibility, ease of use, real-time

collaboration features, cloud-based storage, integration, support, and cross-platform compatibility, collectively enhance creativity in visual content development by providing users with the tools and resources they need to work effectively, collaboratively, and without location constraints. These characteristics are instrumental in facilitating creativity in a digital environment.

#### 4. Best Practices for Integrating Web Tools into Online Training Workshops

Best practices for integrating web tools into online training workshops are essential for creating a conducive environment that fosters creativity in visual content development. By following these practices, educators and trainers can optimize the use of web tools to achieve their training objectives while nurturing creative skills in participants. Best practices emphasize the importance of aligning the use of web tools with the specific learning objectives of the online training workshop. When web tools are used purposefully to support the workshop's educational goals, they can enhance the learning experience and facilitate creativity in visual content development (Yogeswary & Helmi, 2021).

Online training workshops should incorporate interactive and engaging activities that leverage web tools (Jarmanto et al., 2022). These activities can include real-time polls, collaborative projects, and multimedia content creation. Interactive activities keep participants engaged, encouraging creativity through hands-on experiences and fostering active participation. Providing clear instructions and tutorials for using web tools is crucial. Participants should have easy access to guides, video demonstrations, or step-by-step instructions. Clarity in using web tools ensures that participants can focus on the creative aspect of their work rather than getting bogged down by technical challenges. Best practices involve a structured approach to skill development. Online training workshops should introduce web tools gradually, starting with basic features and progressively moving to more advanced capabilities (Sajari et al., 2023). Progressive skill building ensures that participants can comfortably develop their creative skills, building confidence and competence over time.

Incorporating feedback mechanisms and peer review processes in online training workshops is vital. Participants should have opportunities to share their work, receive constructive feedback, and engage in creative dialogues. Feedback and peer review foster a supportive creative community within the workshop, promoting improvement and innovation in visual content development. Best practices emphasize the importance of ensuring that web tools used in online training workshops are inclusive and accessible to all participants, regardless of their abilities, needs, or backgrounds (Nawastheen et al., 2023). Inclusivity and accessibility ensure that all participants have the opportunity to engage in creative processes and contribute their unique perspectives.

Assessment methods and reflection activities should be incorporated into the workshop. Participants should be able to assess their progress, receive formative feedback, and reflect on their creative development. Assessment and reflection help participants understand their creative growth and encourage continuous improvement in visual content creation. Best practices recommend that online training workshops stay current by incorporating the latest features and tools provided by web platforms. The workshop should adapt to evolving technologies. Staying up-to-date ensures that the workshop remains relevant and that participants can leverage the full potential of the web tools available.

#### 5. Kirkpatrick's Evaluation Model

Kirkpatrick's Four Levels of Training Evaluation is a widely recognized model in the field of instructional design and training assessment. Developed by Donald L. Kirkpatrick in the 1950s and later expanded by James D. Kirkpatrick, this model provides a structured framework for assessing the effectiveness of training programs (Kirkpatrick, 1994). The model is a valuable tool for assessing the effectiveness of training programs and making data-driven decisions for improvement (Kirkpatrick & Kirkpatrick, 2008). It helps organizations ensure that training investments are aligned with their strategic objectives and result in real-world performance improvements. The four levels represent a hierarchical approach to evaluating training initiatives, each focusing on different aspects of the learning process and its impact on performance (Ali et al., 2020).

Kirkpatrick's evaluation model offers numerous benefits when applied to training or workshops. The model provides a structured framework to assess training programs at multiple levels,

from participants' reactions to organizational outcomes. This comprehensive approach ensures that various aspects of training are evaluated (Kirkpatrick & Kirkpatrick, 2016). Other than that, by examining reactions and gathering feedback (Level 1), trainers can make immediate adjustments to enhance the training's quality and relevance, leading to better engagement and satisfaction among participants.

Level 2 evaluations validate whether participants have learned and retained the desired knowledge and skills. It ensures that the training meets its learning objectives and imparts valuable content. Level 3 evaluation focuses on how well participants apply their learning in the workplace. It encourages practical and applicable training content that leads to behavior change and performance improvement (Knowles et al., 2015). Level 4 evaluation helps organizations link training outcomes to tangible results such as increased productivity, reduced costs, or improved customer satisfaction. This alignment with business goals highlights the training's value.

The model allows organizations to assess the return on investment (ROI) of their training programs by connecting Level 4 results to the financial or strategic impact on the organization. By regularly evaluating training at all levels, organizations can identify strengths and weaknesses, enabling them to continuously improve their training initiatives. This iterative process fosters ongoing enhancement. Besides that, a positive Level 1 reaction can boost participants' motivation and engagement with the training. High engagement often leads to better learning and application of knowledge and skills.

Organizations can use the model to benchmark the effectiveness of their training against industry standards or competitors, helping identify areas where they excel or need improvement. The model can be adapted to suit the specific needs and goals of an organization, allowing for flexibility in evaluation and ensuring relevance to the unique context of the training or workshop. In summary, Kirkpatrick's evaluation model offers a systematic and comprehensive approach to assess training programs, making them more effective, aligned with organizational objectives, and ultimately, contributing to improved performance and results (Kirkpatrick & Kirkpatrick, 2016). It serves as a valuable tool for organizations striving to enhance their training and development efforts.

## **METHODOLOGY**

The Kirkpatrick's evaluation model was adapted and modified based on the training preferences as a guideline in this study (Kirkpatrick, 1994). There were four levels involved in data collection including the Level 1 is participant's reaction, Level 2 is participant's knowledge, Level 3 is participant's behaviour/knowledge application, and Level 4 is results. This model was selected using an objective evaluation method that has been proven to help facilitate the evaluation process of workshop's participants.

### **1. Sampling Method**

This study was conducted during a Web 2.0 Tools (Canva and Figma) training workshop. This project was a joint community services collaboration between Faculty of Information and Technology, Universitas Mercu Buana Yogyakarta (UMBY), Indonesia and Faculty of Computing and Meta-Technology, Universiti Pendidikan Sultan Idris (UPSI), Malaysia. The workshop was divided into two sessions. In the first session, the participants were exposed to Canva. Meanwhile in the second session, the participants were exposed to Figma. The speakers for the training were from UMBY and UPSI. There were total 50 respondents from both UPSI and UMBY participated in the training. Basically, the participants are undergraduates students and they have background in basic IT and computer science. However, the participants have no background in graphic and visual content.

### **2. Instrument for Data Collection**

A survey form was used as an instrument to collect data from the participants to get the feedback for Level 1, 3 and 4. Likert scale 5 points which is strongly disagree (1) until strongly agree (5) was used to measure the agreement of the participants. For the survey, the items that had been measured including

the participant's reaction towards the training, participant's ability to apply new knowledge, and participant's confidence and motivation. Pre-test and post-test questions was used to collect data from the participants to measure the knowledge before and after the training. The Google form was used to create the instruments, which were then given online to the participants. Before answering the questions, the participants need to sign a consent form to make sure the confidentiality of the data. The data collection were analyzed using the Microsoft Excel and SPSS. Both instruments for the survey and effectiveness test had been validated from expert from UPSI and UMBY who had experience more than 5 years in computer sciences.

## RESULT AND DISCUSSION

This section present the results of the implementation of the online training organized by UPSI and UMBY.

### 1. Level 1: Participant's Reaction

The participant's satisfaction evaluation in level 1 is to identify the participant's reaction throughout the training and to obtain feedback to be used as a benchmark for the organizer to the extent to which the implementation of this online training achieves its objectives and has an impact on the participants involved. Likert scale with a scale from 1 to 5 (1=strongly disagree, 2=disagree, 3=neutral, 4=agree, and 5=strongly agree) was used in the survey. Table 1 shows the mean score for five indicator participant's reaction for the training. In this level, the participants gave the positive feedback based on the obtained mean score between 4.26 until 4.48 with the overall mean score is 4.41.

**Table 1** Participant's reaction towards the training

Item	Mean
The speaker is knowledgeable and prepared in the field/subject.	4.46
This training achieved the expected objective.	4.48
I have no problem with training that are conducted online.	4.40
I am very satisfied with this training.	4.44
The content of the training is very suitable for my career.	4.26
Overall mean score	4.41

### 2. Level 2: Participant's Knowledge

The difference in pre-test and post-test scores among participants was tested through a paired t-test. Table 2 shows the results of the t-test that was carried out to study aspects of the training's effectiveness based on participants' achievement before and after follow the training. Based on the table, the mean score of the pre-test score is 5.90 (SP=1.213) and the mean score of the post-test score is 8.60 (SP=0.8137) with the number of participant is N=50. The results give a value of  $t=-10.124$  and  $p=0.000$  ( $p<0.05$ ). This means that there is a significant difference in the achievements of users before and after using this software.

**Table 2** Participant's knowledge before and after the training

Testing Type	N	Mean Score	Std. Dev.	t-Value	Sig. p
Pre-test	50	5.90	1.213	-10.124	0.000*
Post-test	50	8.60	0.814		

\* significant at the  $p < 0.0005$  level

### 3. Level 3: Participant's Behavior/Knowledge Application

Likert scale with a scale from 1 to 5 (1=strongly disagree, 2=disagree, 3=neutral, 4=agree, and

5=strongly agree) was used in the survey. Table 3 shows the mean score for four indicator participant's behavior or knowledge application after the training. The results shows that the overall mean score is 4.35 which is above the neutral mean score 3.00. This is proved that there is the ability to apply new knowledge gained as a student from the training. Behavior or knowledge application of the Kirkpatrick model looks at the extent to which participants apply the knowledge and skills that have been acquired in as students. This third level is an extension of the acquisition and use of knowledge obtained from Level 2: Learning. Relatively speaking, there was a moderate relationship between learning and behavior for participants after the workshop. This is so because there are times after the training that the participants went through did not provide an opportunity to prove the change in behavior.

**Table 3** Participant's ability to apply new knowledge

Item	Mean
I can practice the knowledge gained after attending this training.	4.28
I am able to discuss about Canva and Figma after participating in this training.	4.28
Through this training I was able to improve my knowledge.	4.42
I learned new knowledge and skills through this training.	4.40
Overall mean score	4.35

#### 4. Level 4: Results

The result of the training for the Kirkpatrick model looks at the extent of the impact of the implementation of the workshop followed on the organization and career. This level provides important information regarding the impact of the training on the participants. The impact of a training covers matters such as increased productivity, quality, motivation, self-ability, and readiness. In this study, level 4 includes five measured indicators including the increasing of the skill, the level of creativity, self-ability, self-motivation and readiness. Likert scale with a scale from 1 to 5 (1= increasingly decreasing, 2= descending, 3= no change, 4= increased, and 5= very increased) was used in this level. Table 4 shows the results for the participant's confidence and motivation after the training. Based on the results, the overall mean score is 4.39 which is above the neutral scale 3.00. This indicates that after the training, the participant's confidence and self-motivation had increased.

**Table 4** Participant's confidence and motivation

Item	Mean
The skill level of using Canva and Figma.	4.40
The level of creativity in diversifying artwork (poster, infographic, wishing card, and etc).	4.40
Self-ability level.	4.36
Level of self-motivation.	4.44
Level of readiness.	4.34
Overall mean score	4.39

The study findings indicate that training workshops significantly contribute to the development of creativity in visual content. The findings also shown that all the variables have a positive relationship with each other. The adapted evaluation model provides a holistic understanding of the impact of training on participants, including their reactions, the knowledge acquired, changes in creative behavior, and the tangible outcomes of their creative endeavors. The analysis highlights that participants from both UPSI and UMBY experienced notable improvements in their creative skills after completing the training, with an increase in the quality and diversity of their visual content. Participant feedback also underscores the positive impact of web tools, making it a valuable resource for nurturing creativity.

In an era where the boundaries between the physical and digital worlds continue to blur, understanding the synergy between training, web tools, and creativity in visual content is paramount. This study endeavor intends to offer valuable insights for educators, content creators, and anyone interested in harnessing the power of digital platforms to foster creative expression. By delving into the nuances of training effectiveness in this context, we hope to contribute to the ongoing discourse on the



future of education and the cultivation of creativity in a rapidly changing world.

Numerous studies have examined the impact of training on creativity. For instance, research by Malar & Jennifer (2021) emphasizes the role of training in fostering creativity by enhancing individuals' skills, domain knowledge, and intrinsic motivation (Malar Hirudayaraj & Jennifer Matić, 2021). The study's focus on the positive relationship between variables echoes the findings of Amabile and aligns with the broader literature on creativity development through training interventions. Moreover, the adapted evaluation model employed in the study aligns with established frameworks for assessing training effectiveness. Kirkpatrick's Four-Level Training Evaluation Model (Kirkpatrick & Kirkpatrick, 2016) is a widely recognized framework that assesses training programs based on participants' reactions, learning outcomes, behavior changes, and tangible results. The holistic understanding provided by the adapted model resonates with the literature emphasizing comprehensive evaluations to gauge the multifaceted impact of training programs.

The reported improvements in creative skills among participants from UPSI and UMBY after completing the training are consistent with findings from studies examining the outcomes of creativity-focused interventions. For example Gu et al. (2019) discuss how training and interventions can foster children's creative thinking skills with the 5-1 training program (Gu et al., 2019). Additionally, the positive impact of web tools on creativity aligns with the broader literature on the role of digital platforms in creative expression. Scholars like Eniko & Andrea (2021) have explored how digital technologies can act as powerful tools for enhancing creativity, enabling individuals to explore new ideas and mediums (Bereczki & Kárpáti, 2021). In summary, the statement's claims find support in existing literature on creativity, training effectiveness, and the impact of digital tools on creative endeavors. The integration of various theoretical frameworks and empirical evidence strengthens the study's contribution to the discourse on education, creativity, and the digital future.

## CONCLUSION

There are important practical implications for how students perceive and experience learning, regardless of whether it is online, traditional, or hybrid. These methods of learning provide for flexibility in both time and place. By allowing people to customise their educational experience to meet their unique schedules and tastes, this flexibility can have a positive impact on how students perceive their education. The change in learning mode around the world changed with the arrival of the epidemic that hit the whole world in 2020. This became a start kick to all sectors including the education sector. Various online platforms are introduced and highlighted in imparting knowledge to the students. There are also various webinars, training and workshops conducted online through various platforms including Google Meet, Webex, Zoom, Facebook live and many more. Previous training clearly revealed and proven the effectiveness of the learning method in improving the knowledge.

In this study, through the Kirkpatrick Evaluation Model, the organizer has the opportunity to make improvements to the implementation and filling of workshops that will be conducted in the future. Perhaps, many more training will be arranged to increase and develop the creativity and creative thinking skills of the participant. In future work, in the next training perhaps the evaluation will focus on the effectiveness of the training in developing the creativity on the game making. This study underscores the effectiveness of training workshops in cultivating creativity within the realm of visual content. The study demonstrates that training, when complemented with the right web tools, can be a potent platform for fostering creative skills among undergraduate students. These insights have broader implications for educators, curriculum designers, and e-learning practitioners, as they consider the potential of training in nurturing creativity across various educational and professional domains.

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## DATA AVAILABILITY STATEMENT

Data will be made available on request.

## CONFLICT OF INTEREST

The authors declare no conflict of interest.

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