Canva as Web-Based Instructional Tool: Use of Learning Technologies in Graphic Design Projects of Students with Speech Disorders

Nouf Alsuwaida\textsuperscript{1}

\textsuperscript{1}The University of Ha’il

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Abstract

This study aimed to evaluate the learning responsiveness of art students with disabilities when using learning technologies such as the web-based Canva platform. This study used mixed methods, with the data collected through questionnaires and observations. The case study on a graphic design course examined the outcomes of using Canva as a technological tool. A total of 15 students with speech disorders from an all-female academic institution in Saudi Arabia participated in the graphic design course in 2022. Data were collected from various sources, including focus groups, observations, and questionnaires. The students’ behaviors during the learning process were observed in terms of their skills in communication, technology, time management, self-direction, and regulation of emotions and behavior. Recommendations for building blended or online classrooms that promote the engagement and interactions of students with disabilities using technology tools were derived accordingly.
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Keywords: Learning Technology, Disability, Art and Design, Graphic Design
INTRODUCTION

Learning technologies require instructors to think creatively and innovatively to attract students. Specifically, learning media help teachers in engaging the attention of students in the classroom (Elsa & Anwar, 2021). Introducing new teaching and learning methods requires an institutional approach to professional development that caters to the different levels and requirements of instructors. The recent increase in e-learning use has prompted many institutions to adopt organizational approaches to the professional development of lecturers (Wilson, 2012). The development of educational learning technologies will open valuable prospects for universities and will allow us to identify and implement emerging trends in educational learning technologies.

Wilson (2007) described professional development for e-learning as a “change process.” Such process is an organization’s approach to implementing e-learning and includes strategies for “diffusion of innovation,” “peer learning,” embedding practice, “project based,” “online professional development,” and “accredited courses.” As e-learning technologies are supposed to be used by students who are diverse in terms of ability/disability, they must be designed to be accessible and learnable to all. Speech disorders can affect university or college students who face difficulties in communicating with regular students or teachers, especially in face-to-face classrooms. Speech is one of the main ways through which students share their thoughts, feelings, and ideas with their peers and teachers. Rogers et al. (2023) discusses that learners can interact with creativity in learning with resources, such as computers, and create experiences that enhance how people learn and communicate. In this case, the interaction occurs but is silent rather than overt.

The article titled “Silent pedagogy and rethinking classroom practice: structuring teaching through silence rather than talk,” Ollin (2008) express how participants identify different types of
silence in the classroom, suggesting that many different types of silence may be used productively in teaching and learning. However, silence is not problematized in the classroom. Ollin (2008) provides examples of questions that might be asked when observing teachers’ use of silence rather than talking. It concludes by proposing that classroom observations should consider the complex skills of “silent pedagogy,” where the teacher makes conscious decisions to abstain from intervention based on continuous sensitive readings of the learning environment. The article identifies different subject areas that can use silence rather than talking in teaching and learning, and they include performing and visual arts.

Visual arts using learning technologies become successful through quality teaching with silence. With these technologies, students can draw, do projects, or write about what they learn. Hence, learning technologies are effective tools for teaching students with diverse needs. They may also be combined with the different approaches to conducting lessons and addressing the various intelligences of students. Advancements in technology have made it easier for teachers in the 21st century to incorporate different learning styles into their lessons. Such lessons facilitate the students’ acquisition of knowledge according to their individual needs. This aspect is particularly important for diverse student populations, which include students with special needs.

In a classroom scenario where teachers have students with and without special needs, they must be sensitive enough to make special arrangements for those with special needs to make their learning process smooth. Learning technologies are excellent tools for students with special needs (Ingavélez-Guerra et al., 2022; Hasselbring & Glaser, 2000). According to Elsa and Anwar (2021), Canva is a virtual learning medium. This technology improves the online teaching process and is easily distributed to students.
The purpose of the current study is to evaluate the experiences of art students with disabilities in using learning technologies and how technology tools such as Canva encourage students with special needs (i.e., those with speech disorders) to respond to learning after teaching a graphic design course in Saudi Arabia. This research applies a qualitative design, starting with the collection of data from questionnaires and observations during the graphic design course. This study proves that the Canva application can be used to create learning media for art and design. The results of this research include three themes: 1) applying Canva in a graphic design course, 2) engaging learners with disabilities with Canva, and 3) evaluating Canva from the perspective of learners with speech disorders. The study also recommends practical ways in which other Art and Design faculty can build online classrooms that promote the engagement and interactions of students with disabilities using technology tools. From this background, this study attempts to answer the following two questions:

1. How do instructors use learning technologies in computer graphics application courses for students with disabilities?

2. What are the students’ experiences in using Canva for fashion projects?

3. How do students with disabilities evaluate Canva as a tool in the Computer Graphics Application course?

**LITERATURE REVIEW**

**Online Teaching and Learning with Students’ Disabilities**

The pandemic has distressed academics, creating a significant rift between teaching and learning. According to Kotwal et al. (2022), online classes became vital overnight with no productive or smooth transitions. Educating students with speech disabilities cannot be compared with educating those who can speak and hear. For communication, students depend on sign
language, facial expressions, and lip synchrony. These factors were almost absent when COVID-19 caused sustained lockdowns and thereby forced students and teachers to shift to online learning even without initial training on using technologies for online classes.

Online education continues to develop for student populations, and so should the familiarity with the best activities related to teaching students with various learning needs, including those with disabilities. Crouse and Rice (2018) claimed that despite the substantial amount of literature, there remains room for navigating teachers’ knowledge in such environments. This area of improvement is especially important when teachers consider their function in the call for high-quality instruction for every student regardless of one’s health condition.

Accessibility to online education is complex and multidimensional, and it can be achieved through the engagement of various stakeholders. Jalovcic and Moisey (2015) discussed how online learning environments can provide new opportunities for students with disabilities to obtain higher education if hindrances are reduced and eradicated. The academic success of students with disabilities can be improved through accessibility and provision. Current familiarity with the online learning of students with disabilities depends on the quantitative assessment of visible behaviors.

Mohammed Ali (2021) was a part of the faculty of the Special Education Department of King Saud University. The related study was conducted with mixed apprehensions about e-learning opportunities for students with disabilities during the pandemic era. Pearson regression was used to determine the consistency of the data collection tools. The results indicated that the faculty members had positive attitudes toward the use of e-learning technology for students with
disabilities and supported the introduction of social, cognitive, and learning collaboration during the pandemic.

Online learning is successful when the abstractor uses instructional strategies in class to engage students and supports them in becoming self-directed. Engaged learning occurs when students engage in active learning, social cognition, constructivism, and problem-based learning. Active learning refers to the value of student experience and collaboration in the learning process. The adult learners are self-directed and are stimulated by active learning environments (Conrad & Donaldson, 2011). Social cognition allows students to learn from others by building complex worldviews. Collaborative activities call for creativity, critical analysis, and skillfulness among students. Constructivism describes how students process and then reflect on knowledge within the underlying social environments. Technology has reorganized how we live, how we communicate, and how we learn (Siemens, 2014). Technology also reorganizes the design of the instruction for improving learning and teaching. According to Johann Friedrich Herbart, technology supports a systematic approach to instruction (Manning & Johnson, 2011). In other words, a teacher must use technology tools in the context of instructional design so he or she can match the technology tools to the pedagogy.

**Technology Tools for Use by Students with Disabilities**

Assistive technology helps students with learning disabilities. Regardless of students’ disabilities (e.g., dyslexia, cognitive issues, or physical disabilities), assistive technology aids in fostering effective learning. For instance, students with dyscalculia appreciate the ease of using “talking calculators.” These devices help them access assignments, perform calculations, and read numbers. According to the Masters in Special Education Degree Program Guide (2015), every student with a disability has a unique learning style, and many struggle to understand
auditory lectures. An ideal solution is a “variable speed recorder” that allows students to record discussions in class.

In some cases, students encounter challenges in forming sounds for daily communication. Such challenges make classroom education difficult for students and teachers. A useful solution for educators is to utilize “augmentative and alternative communication” (AAC) devices. Lynch (2018) asserted that using AAC devices, teachers can get their point across and thereby communicate efficiently. AAC devices may take various forms. For example, books may be filled with images from which students can choose while others are digitized. The best AAC devices rely on the fluency and age of the students with disabilities.

Technology is an important communication tool for students and instructors. Instructors can choose the most suitable technological tools for their activities in traditional or online classrooms. In online activities, instructors connect the course content to students’ knowledge through engaging activities involving the use of technology. Thus, the use of technology deepens learners’ understanding. The objective of online activities is to engage and challenge students to expand their personal connections with their existing knowledge. Hence, instructors should design participatory online learning activities with consideration of how the needs of students will be met, which communication tools will be most useful, and whether classroom-based activities can be adapted for online use. Awareness of a learner’s learning style also contributes to the design of effective learning activities for online learning (Conrad & Donaldson, 2004).

Assistive technologies include devices and services that maintain, increase, and improve the capacity of students with disabilities. According to Young and MacCormack (2020), students with disabilities can get the help they need from assistive technologies, which include tablet applications and computer programs offering speech-to-text features (e.g., Dragon Naturally
Speaking), text-to-speech functions, graphic organizers (i.e., Inspiration), and word prediction skills (e.g., wordQ). One of the best examples is Canva, a web-based tool that can be used to help students understand their courses.

**Canva for Web-Based Instruction**

Educators should consider the integration of the World Wide Web into educational courses. Web-based instruction has implications for students’ attitudes, social interactions, and overall learning. Reflecting on the use of web integration tools is another way for instructors to develop effective online courses and tools (Bonk & Dennen, 2003). Technology today has changed not only the way educators teach specific subjects, such as art and design, but also the way tasks in such courses are carried out. In the field of arts, in particular, new and progressive concepts are also being continuously introduced, with artists with disabilities only requiring a medium to express their thoughts and feelings. Technology is changing the way art pieces are created and shared, transforming conventional and orthodox audiences into enlightened and modern ones, and taking art beyond boundaries through the social connections provided by technology (ARTDEX, 2020). Technology has also opened up many prospects for artists and introduced a large number of practices that artists can access through technological platforms. For instance, artists can now use Apple’s iPad devices to paint as they do using the traditional canvas, paint, and paint brush (Boitel, 2019).

Graphic design is a form of art commonly used in academics and professional settings to realize certain interactions, present information, and facilitate communication through visual arts. It is aimed at conveying messages to intended audiences in an appealing way. It involves the skills of artists and experts who create pictorial, visual, or graphic content to communicate or
convey messages. With the employment of visual hierarchy techniques, creators use pictures and typography to meet the particular needs of users while displaying features logically in collaborative design. The main purpose of graphic design along with message communication is to optimize the experience of end-users (The Interaction Design Foundation, 2018). Computer graphics is one of the most common and popular examples of technology being integrated into the arts (The Uni Tutor, 2020). Teaching graphic design is not a simple task as it requires not only building the basics for students but also making them capable of finding creative ways to present information; in essence, it combines educating students about the fundamentals while awakening and exploring their creativity (Hofmann, 2020). Technology has revolutionized the field of graphic design, introducing the latest software and applications that facilitate the design process; however, mastering these tools requires substantial learning and continuous practice. Studies have shown that the teaching methods employed in art and design courses, particularly in graphic design, have a profound effect on the learning process (Alhajri, 2016). An increasing number of educators are leveraging the latest technology to make online teaching and learning interesting, effective, and closer to reality. One such latest technology is Canva.

Canva is a graphic design platform used to create graphics for social media posts, posters, presentations, documents, and other graphic or pictorial contents (www.canva.com). However, no study has evaluated the experiences of learners with disabilities in graphic design courses that utilize Canva. In addition, the specific attributes that Canva brings to design courses to help learners with disabilities meet their educational goals have yet to be fully understood.
METHODOLOGY

Research Design

The research design comprised a combination of qualitative and quantitative methods. The study was conducted in a private all-female campus in Saudi Arabia in the fall semester of 2022 from August 30 to December 30. The case study aimed to evaluate the experiences of 15 art students with disabilities in learning technology and how technology tools such as Canva encourage students with special needs (i.e., speech disorders) to engage in responsive learning in a Computer Graphics Application course.

Participant Demographics

In the fall semester of 2022, 15 female students with disabilities enrolled in a face-to-face course agreed to participate. The questionnaire collected demographic data, including the participants’ gender, age, nationality, language, level of undergraduate education, and email address. All participants were female; 73%, 23.3%, and 6.6% of them were aged 18 to 24, 25 to 34, and 35 to 44 years, respectively. They were all of Saudi nationality, with Arabic as their native language. The participants had different levels of undergraduate education; 33.3% were sophomores, 46.6% were juniors, and 26.6% were seniors.

Table 1

Demographics of art education students

<table>
<thead>
<tr>
<th>Variable</th>
<th>Class</th>
<th>Number</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td>Female</td>
<td>15</td>
<td>100%</td>
</tr>
<tr>
<td>Age</td>
<td>18–24 years old</td>
<td>11</td>
<td>73%</td>
</tr>
<tr>
<td></td>
<td>25–34 years old</td>
<td>3</td>
<td>23.3%</td>
</tr>
<tr>
<td></td>
<td>35–44 years old</td>
<td>1</td>
<td>6.6%</td>
</tr>
<tr>
<td>Level of education</td>
<td>Sophomore</td>
<td>5</td>
<td>33.3%</td>
</tr>
<tr>
<td></td>
<td>Juniors</td>
<td>7</td>
<td>46.6%</td>
</tr>
<tr>
<td></td>
<td>Seniors</td>
<td>4</td>
<td>26.6%</td>
</tr>
<tr>
<td>Nationality</td>
<td>Saudi</td>
<td>15</td>
<td>100%</td>
</tr>
<tr>
<td>Native language</td>
<td>Arabic</td>
<td>15</td>
<td>100%</td>
</tr>
</tbody>
</table>
Data Collection Tools and Process

Data were obtained through questionnaires and observations. The researcher used questionnaires at the beginning of the course to collect the participants’ demographics. Another survey questionnaire was used to evaluate the experiences of the students with disabilities regarding learning technologies. The researcher was unable to conduct interviews because the participants were students with speech disorders. An assistant teacher with sign language skills helped the researcher communicate with the students with disabilities. The researcher gave the students a mix of close-ended and open-ended questions after completing the course to ensure that the technology tools helped them complete the course.

Observation is another research method that is used to collect information from participants. The researcher observed the students’ behaviors during the learning process using five criteria: 1) communication, 2) technology, 3) time management, 4) self-direction, and 5) emotions and behavior. Each criterion had five questions in the questionnaire. The participants chose from five responses (strongly agree, agree, uncertain, strongly disagree, and disagree). All statistical analyses were performed using SPSS software. The questionnaire was first transcribed into Arabic, the students’ native language; thereafter, the transcripts were translated into English, along with the field notes.

RESULTS AND DISCUSSION

Theme 1: Application of Canva In Graphic Design Course

The first research question was “How do instructors use learning technologies in computer graphics application courses for students with disabilities?” The researcher designed a graphic design course using Canva and social media as learning technologies.
**Description of graphic design course.** This course aims to provide students with knowledge on developing creative solutions to implement the concept of a project by producing graphical interaction outcomes. The topics covered included design strategies and elements, infographics, user behavior, user experience, and graphical user interface design.

**Course objectives.** The course objectives included the following: 1) students would be able to familiarize themselves with the fundamentals of visual art and design; 2) students would be able to develop basic skills using technology tools and theory in the design process; and 3) they would develop techniques and methods for creative problem solving.

**Canva training session.** In using Canva to teach graphic design, instructors should first conduct basic training to introduce the platform to students and familiarize them with the different features that can be used for various purposes, including graphic design. As the platform does not require much expertise, the basic training session will not require much time. Once students have been trained on how to access and use Canva, instructors can maximize the use of Canva for graphic design. They can use the platform to assign projects, generate posters, and provide guidance to students with disabilities. Meanwhile, students can utilize the platform to complete their assigned tasks. For the purpose of teaching the graphic design course using Canva, instructors can make their presentations and classroom materials using Canva while encouraging students to use the graphical design tools on the platform to learn and practice various graphic design approaches. With the help of the templates available on Canva, educators can ask students to make their own graphic content after learning each graphic design technique at the end of each session. This practical application will allow students to reinforce their knowledge and skills. As Canva is easy to use and free to access, this classroom-based activity will not take too much time. The main scheme that an instructor can follow to teach graphic design using Canva is
teaching the basics of graphic design using presentations of materials prepared in Canva, which can also be accessed by students through the collaborative access feature of the platform. In addition, instructors should provide students with tips and a step-by-step guide to enhance their expertise in graphic design.

**Templates in Canva.** Canva is a free graphic design platform that includes numerous templates for users to create different content, such as book covers, magazine covers, logos, business cards, posters, flyers, and presentations. Not only is this platform free to use, but it also offers a wide range of easily accessible features, making it user-friendly, advantageous, and enjoyable for users. With a vast collection of professional templates, the availability of Canva Pro for business management and scaling up graphical content, and the option to work individually or in a team to ensure collaboration, Canva is an invaluable tool in today’s technology-driven world. One of the most important aspects of this platform is that it does not require much practice or background knowledge and is easy to use with its drag and drop features.

**Final project.** After completing a basic training session on Canva, the instructor must continue teaching the specific course (i.e., graphic design in this case). In the first step, students are taught to create a basic design from scratch by using the basic graphic design techniques in Canva. In the current study, the instructor assigned the students a “Fashion Design Magazine” project. Specifically, the instructor required the students to create a magazine cover from the Canva templates to make fashion design content. The design could contain basic quotes about fashion designed with distinct backgrounds, fonts, colors, and pictures. The activity would enhance their knowledge and skills related to the fundamentals of Canva and deepen their understanding of fashion design.
The small group project in this study included 15 students with disabilities (i.e., speech disorders) who were then divided equally into three groups. Each group was tasked to create a project at the end of the graphic design course. The project was to make a fashion design magazine.

*Learning objectives.* Each student read a chapter from the required textbooks (Fashion Design Magazine & Book cover). At the end of the chapter, the students should be able to

- Understand the features of fashion design
- Explore the toolbar, menu bar, and templates of Canva
- Make a group project by practicing design thinking
- Compare Canva tools to create, manage, and share branded content
- Draw the sketch of the final project as a group
- Apply tools to create the cover design for the fashion magazine in Canva.

*Outcomes.* At the end of the activity, students should be able to use the technology tool (Canva) to understand graphic design by creating cover designs for a fashion design magazine.

- *Assessment material.* Before the activity, the students were required to read a chapter (Fashion Design Magazine & Book cover) in the required class textbook, take notes from the instructor’s lectures, watch YouTube videos, and use Pinterest to discover ideas.

Once the students had finished creating simple designs on Canva, they were asked to polish their designs. In this step, the instructor carefully assessed the students’ designs and gave feedback to improve the designs and ensure that they followed graphic design standards. Additionally, the instructor taught some advanced features of graphic design during this process. At the end of the course, the instructor can use Canva to assign a course project to every student.
that meets specific design requirements and should be performed and designed using the Canva platform. Such a project should help the instructor assess how much the students have learned in terms of creativity, graphic design, and the use of Canva for making graphic design content. In sum, Canva can be used by educators not only to improve the teaching process and make effective course materials in an online educational setup but also to educate students about graphic design techniques and allow them to put their knowledge into practice using the graphic design features of Canva.

**Theme 2: Engaging Learners with Disabilities with Canva**

The second research question is “What are the students’ experiences in using Canva for a fashion project?” Observations were carried out to answer this research question. The teacher helped the students engage in learning by implementing various external strategies. These strategies supported the students with disabilities in becoming self-motivated, reflective, and actively involved. For the final project in the study, five students with disabilities made up each of the three groups. They established their own learning goals by choosing a project subject. They then explored the resources to answer meaningful activity questions. Each group’s output was shared with an audience on social media so that the students could add value outside the learning environment.

The observation results showed how the instructor supported the learners in becoming self-directed toward learning. Learners with disabilities must understand why they should learn something and how it benefits them. In the study, the instructor first taught them graphic design to allow them to understand the goals and gain fundamental knowledge. After the students practiced the Canva activity during the course, they shared their previous experiences and
knowledge to enhance their learning in the final project. The students’ behaviors during the learning process were observed using the following five criteria.

**Self-Direction**

The instructor catered to the individual needs of the students by practicing diverse teaching methods that incorporated audio/visual aids and activities that focused on the students’ multiple intelligences. The students participated in problem-solving activities and set high but realistic expectations. The instructor provided effective feedback to the students in oral and written form to encourage their efforts and correct them where required. Doing so kept the students motivated toward learning, helped them develop a sense of achievement, and made them confident. Social cognition allowed the students to learn from one another in the group project and build a complex worldview when they collaborated to create Canva activity.

**Communication Skills**

Graphic design is a form of art commonly used in academic settings to realize certain interactions, present information, and facilitate communication through visual arts. It is aimed at conveying messages to intended audiences in an appealing way. It is a skill where students make pictorial, visual, or graphic content to carry out communications or convey messages. In this study, the students showed excellent communication skills, used appropriate levels of eye contact and body posture, and actively listened during the face-to-face course.

The students communicated using body language, such as sign language, facial expressions, and lip sync, to foster communication. They demonstrated a clear understanding of empathy, rapport-building, and acknowledgement of emotional responses. As a group, they interacted well when the instructor assigned the final group project. Active learning was reflected in the students’ experience and collaboration in the learning process through Canva. Assistive
technology in the form of web interaction tools (e.g., Canva) helped the students with disabilities through features such as speech-to-text and graphic organizers. Canva, in particular, helped the students understand the course by enabling them to design what they understood. The grouping of the students facilitated the sharing of designs and folders online. They also engaged in peer review by liking, commenting on, and editing one another’s designs. Their projects could be shared outside the class using social media tools.

**Technology Skills**

The instructor provided an atmosphere where the students were able to explore the Canva tools. Hands-on activities using Canva allowed the students to obtain knowledge through trial and error. Meanwhile, classroom activities sharpened the students’ skills and aptitudes. They interacted efficiently using computers, iPads, and smartphones and enhanced their learning in the classroom by designing logos, advertisements, infographics, presentations, and magazines. Canva has many features, including curved text, photo effects, image enhancers, frames added to photos, and text added to photos. The students considered Canva a digital tool and explored the toolbar, menu bar, and templates. After completing the final group project through design thinking, they applied their designs to coffee shop advertising.

**Emotions and Behavior**

Some students enjoyed the interaction in the group project and learned better in groups. The researcher addressed the needs of students with disabilities by considering the use of Canva as a collaborative tool in face-to-face and online settings. The students responded positively when the instructor conducted the group project. They cooperated well and completed the project on time. They also demonstrated satisfaction by smiling at the instructor or their classmates and used sign language to say thank you.
Furthermore, they had the skills and knowledge to understand what needs to be accomplished in the classroom. They felt confident and interested as they drew their sketches before using the Canva tools. Thereafter, they engaged in learning using Canva’s images and tools. The students demonstrated intelligence, high motivation, and strong knowledge base in art and design, with their life experience supporting their knowledge. All learners benefited from contextual descriptions that allowed them to understand the need to know fashion design content. They also responded positively to being treated with respect, which was evident in the tone of the instructor. As previously mentioned, the students experienced a positive effect on their satisfaction, motivation, and ability to persist and learn. Using technological tools such as Canva motivated the students with disabilities to learn better.

**Theme 3: Evaluating Canva from the Perspective of Learners with Speech Disorders**

The third research question is “How do students with disabilities evaluate Canva as a tool in the graphic design course?” Data were gathered using a data collection tool (i.e., Google Forms), which was designed with two main sections. The first section was about the participants’ demographic information while the second section contained four main criteria. At the end of the questionnaire was one open-ended question about whether the participants wanted to add important information about Canva.

The students were asked close-ended questions after completing the course to ensure that the technology tools helped them complete their studies. The questionnaire had four main criteria for answering the research questions: access, usability and time management, privacy and intellectual property, and enjoyment. Each criterion had five questions. The participants chose from five responses: *strongly agree, agree, uncertain, strongly disagree, and disagree.* All statistical analyses were performed using SPSS software.
Table 2

*Cronbach’s Alpha Values of the Variables*

<table>
<thead>
<tr>
<th>Variable</th>
<th>Cronbach’s alpha</th>
<th>Items</th>
</tr>
</thead>
<tbody>
<tr>
<td>Access</td>
<td>0.876</td>
<td>5</td>
</tr>
<tr>
<td>Usability and Time Management</td>
<td>0.871</td>
<td>5</td>
</tr>
<tr>
<td>Privacy and Intellectual Property</td>
<td>0.955</td>
<td>5</td>
</tr>
<tr>
<td>Enjoyment</td>
<td>0.928</td>
<td>5</td>
</tr>
</tbody>
</table>

Access

In measuring the ability of the technology tools to help students in their studies, the criterion of access was scored accordingly, and the results are shown in Table 3.

Table 3

*Scores for the Access Criterion*

<table>
<thead>
<tr>
<th>Statements</th>
<th>SA F</th>
<th>SA %</th>
<th>A F</th>
<th>A %</th>
<th>NS F</th>
<th>NS %</th>
<th>D F</th>
<th>D %</th>
<th>SD F</th>
<th>SD %</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. The tool was accessible for Windows and Mac users.</td>
<td>15</td>
<td>100</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1.92</td>
<td>.731</td>
</tr>
<tr>
<td>2. The tool/product of the tool was viewable in a variety of web browsers.</td>
<td>10</td>
<td>75</td>
<td>5</td>
<td>25</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1.91</td>
<td>.544</td>
</tr>
<tr>
<td>3. The tool provides options that support users with Frequently Asked Questions (FAQ).</td>
<td>11</td>
<td>79</td>
<td>4</td>
<td>21</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1.72</td>
<td>.502</td>
</tr>
<tr>
<td>4. The tool is free.</td>
<td>15</td>
<td>100</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1.51</td>
<td>.703</td>
</tr>
<tr>
<td>5. The tool has been around for a while.</td>
<td>15</td>
<td>100</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1.21</td>
<td>.503</td>
</tr>
</tbody>
</table>

Usability and Time Management

Usability and time management was also scored as a criterion, and the results are shown in Table 4.
### Table 4

*Scores for the Usability and Time Management Criterion*

<table>
<thead>
<tr>
<th>Statements</th>
<th>SA</th>
<th>A</th>
<th>NS</th>
<th>D</th>
<th>SD</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Have to create an account to use the tool</td>
<td>10</td>
<td>100</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>2. The tool easy to use.</td>
<td>11</td>
<td>75</td>
<td>2</td>
<td>25</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>3. The tool allows working anytime and anywhere.</td>
<td>10</td>
<td>79</td>
<td>0</td>
<td>21</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>4. The tool has a robust and easy-to-use Help section.</td>
<td>10</td>
<td>100</td>
<td>3</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>5. Anything has to be downloaded and installed on the computer to use the tool.</td>
<td>15</td>
<td>100</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

Key: 1 = Strongly agree, 2 = agree, 3 = uncertain, 4 = disagree, 5 = strongly disagree. M = Mean, SD = standard deviation. Mean: 1–1.80 = strongly agree, 1.81–2.60 = agree, 2.61–3.40 = uncertain, 3.41–4.20 = disagree, 4.21–5.00 = strongly disagree. N = 15.

### Privacy and Intellectual Property

Privacy and intellectual property as a criterion was scored, and the results are shown in Table 5.

### Table 5

*Scores for the Privacy and Intellectual Property Criterion*

<table>
<thead>
<tr>
<th>Statements</th>
<th>SA</th>
<th>A</th>
<th>NS</th>
<th>D</th>
<th>SD</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. The tool allows you to restrict access to your work.</td>
<td>15</td>
<td>100</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>2. The tool protects your data (e.g., the email address given when the account was created).</td>
<td>13</td>
<td>75</td>
<td>3</td>
<td>25</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>3. The tool allows you to retain sole intellectual property rights to the content you create.</td>
<td>15</td>
<td>79</td>
<td>5</td>
<td>21</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>
4. The tool allows you to determine the [copyright (Links to an external site)] status of the content you created.
5. You can save a copy of the product to your desktop for archival purposes.

Key: 1 = Strongly agree, 2 = agree, 3 = uncertain, 4 = disagree, 5 = strongly disagree. M = Mean, SD = standard deviation. Mean: 1–1.80 = strongly agree, 1.81–2.60 = agree, 2.61–3.40 = uncertain, 3.41–4.20 = disagree, 4.21–5.00 = strongly disagree. N = 15.

**Enjoyment**

Enjoyment as a criterion was scored, and the results are shown in Table 6.

**Table 6**

Scores for the Enjoyment Criterion

<table>
<thead>
<tr>
<th>Statements</th>
<th>SA</th>
<th>A</th>
<th>NS</th>
<th>D</th>
<th>SD</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. The tool allows you to be creative during the learning process.</td>
<td>15</td>
<td>100</td>
<td>5</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>2. The tool allows you to demonstrate creativity in the learning product.</td>
<td>9</td>
<td>75</td>
<td>3</td>
<td>25</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>3. The tool provides opportunities for different types of interaction (visual, verbal, written).</td>
<td>4</td>
<td>79</td>
<td>3</td>
<td>21</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>4. The tool increases the perception of connectedness.</td>
<td>1</td>
<td>100</td>
<td>4</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>5. The tool encourages collaboration.</td>
<td>15</td>
<td>100</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

Key: 1 = Strongly agree, 2 = agree, 3 = uncertain, 4 = disagree, 5 = strongly disagree. M = Mean, SD = standard deviation. Mean: 1–1.80 = strongly agree, 1.81–2.60 = agree, 2.61–3.40 = uncertain, 3.41–4.20 = disagree, 4.21–5.00 = strongly disagree. N = 15.
At the end of the questionnaire was one open-ended question: “Do you want to add other information not mentioned previously about using Canva in the course?” The results of the students’ questionnaires showed the following:

- Canva is a tool that is easy to access and convenient to use.
- It is an impressive tool that can change the learning process and transform how education is imparted online and in the classroom.
- Learners with disabilities who joined the course had optimistic feedback and demonstrated satisfaction, indicating that the tool improved their overall learning experience.

**CONCLUSION**

This study aimed to evaluate the experiences of art students with disabilities regarding learning responsiveness. This study highlighted how learning technologies encourage students with special needs to respond to learning after being taught a graphic design course. In this study, Canva was applied as a tool in a graphic design course in a private institution in Saudi Arabia in the fall semester of 2022. Canva is a web-based instruction tool that helps students interact to stimulate an active learning environment. The study revealed three main themes: 1) applying Canva in the graphic design course, 2) engaging learners with disabilities with Canva, and 3) evaluating Canva from the perspective of learners with speech disorders. Canva was valuable for the students’ understanding of the course requirements and for improving their graphic design skills. The findings highlight how students with disabilities behave during the learning process based on five criteria: 1) communication skills, 2) technology skills, 3) time management skills, 4) self-directed skills, and 5) emotional and behavioral skills.
This study has some limitations. First, the methodological approach involves the use of a new teaching method. As the study was the first to use Canva in a blended art and design course, the students needed to understand it. Second, the researcher realized that choosing individual interviews was better than choosing questionnaires during data collection because it provided more information about the subject. However, the researcher chose questionnaires instead of the individual interviews because the participants were students with speech disorders. From the research findings, the following recommendations are made for higher education institutions that provide art and design curricula and degree programs:

- Technology tools should be applied to blended, online, and face-to-face courses in Saudi Arabia and internationally.
- Art and design teaching and learning should be transformed through technological tools that allow students with disabilities to explore their design capabilities in the art field.
- New technological tools should be integrated into the art and design curricula for students with special needs.

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Hofmann, A. (n.d.). *The imagery connected with Basel pedagogy was more rigid and abstract than was customarily found in American programs*. 13.


https://www.ldatschool.ca/assistivetechnology/#:~:text=Assistive%20technology%20that%20helps%20students.