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The Use of Social Media in Millennials' Teaching and Learning Activities in Design-Related Course

Syazwani Abdul Kadir

Centre of Studies for Interior Architecture
Faculty of Architecture, Planning and Surveying
Universiti Teknologi MARA (UiTM), Puncak Alam, Malaysia

syazwani179@uitm.edu.my
Tel: +603-5544 4385

Abstract

This paper discusses an action research on the use of social media in millennials' teaching and learning activities in a design-related course. The objective is to investigate students' feedback on their experience of utilizing social media as a platform to submit and present an assignment. The method employed is a questionnaire survey on students' experience of utilizing such method in their study. Many respondents also provided additional comments regarding this unconventional approach. The findings of this study show that most respondents favor the use of social networking apps in their learning activities, especially for courses related to design and creativity.

Keywords: Social media; Millennials; Teaching and learning; Action research

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1.0 Introduction

Incorporating digital technology in the university's teaching and learning activities has been widely practiced in 21st-century education. The rise of technology-based education has, in a way, supported the young generation's characteristics and learning styles. Generally, most university students nowadays belong to a generation group called 'the millennials,' also known as 'Gen Y,' who was born between 1981 to 2000. The millennials are considered as the 'digital native' generation because they have been living with the internet and technology since they were little; hence, they are inclined to learning methods that utilize digital technology.

In response to this development of higher institution education, action research that aims to examine the millennial students' preference in having social media as a learning tool was conducted with interior architecture degree students at a Malaysian public university. The objective of this research is to investigate students' feedback on their experience of utilizing social media as a platform to submit and present their assignment for a design-related course. The method employed is a questionnaire survey on the students' experience of incorporating such method after they completed the course. The respondents were also encouraged to provide additional comments regarding their experience of the approach. This action research hopes to discover whether using social media as a learning tool in a design-related course is favorable with the current students of higher academic institution; hence the findings may allow the course educator to reflect on the pros and cons of the method.

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2.0 Literature Review

2.1 The Millennials and Digital Technology

2.1.1 Issues of Inter-Generational Clash in the 21st-Century Education

Teaching and learning nowadays have become challenging in some ways due to the world's rapid change, most significantly, in the aspect of technology. The surrounding scene that the new generation has grown up with is different than the older generation, causing some contradictions on value and approach between these generations. In higher education nowadays, the teaching and learning challenges include the lack of understanding of students' characteristics; and the lack of educators' enthusiasm in adopting technology into their teaching methodologies.

Lindquist (2008) establishes that there is an inter-generational clash in 21st-century education between senior educators and millennial students. For instance, McAlister (2009) states that some educators find it challenging to teach today's students in the learning skills of "retention, recall, maintaining student interest during class, and/or developing skill mastery through repeated exposure." However, another side of the story indicates that some instructors are not keen to adopt the technology-based approach in their teaching methods (Tess, 2013). The mismatch between educators' teaching styles and students' learning styles may cause the students to lose interest in the course and question their self-esteem (Md. Noor, 2016). These challenges in today's education due to the vast generation gap between educators and millennial students is worrisome for the future of higher learning education.

2.1.2 Understanding the Millennial Students

To solve the inter-generational clash in today's education, educators, university management, and education policymakers need to understand the characteristics of the millennial generation. There are some similar definitions of millennials; generally, the millennials can be referred as the "individuals who were born between the period of early 1980s to late 1990s" (Raslie et al., 2016). The millennials pose a new set of challenges in higher learning education, but at the same time, offer exciting opportunities for educators to engage these learners in a more meaningful way.

In understanding their characteristics, Dr. Harrinni Md. Noor (2016), a senior lecturer in a faculty of education, indicates four main characteristics of millennial learners: "Innovation, Investigation, Immediacy, and Authentication and Trust." The following Table 1 explains some millennials' characteristics based on these four main traits, with an additional trait of "Social Consciousness" as adapted from other scholarly studies.

Table 1. Characteristics of the Millennials

MAIN TRAIT	Black (2010)	Md. Noor (2016)	Suh & Hargis (2016)
INNOVATION		- Constantly trying to push technology to its next level	- Value aesthetically appealing educational presentation
INVESTIGATION		- Curiosity, discovery, and exploration are key for this generation	- Curiosity and exploration
IMMEDIACY	- Demanding, impatient and have a short attention span	- View the world as 24-7 and demands Real-time and fast processing	
AUTHENTICATION & TRUST	- Dependent upon technology (digital native)	- Net savvy individuals	
SOCIAL CONCIIOUSNESS	- Assertive and confident - Prefer group and teamwork - Highly tolerant towards various forms of diversity - Have friends beyond their geographic reach - Collaborative - Spiritual - Share values of parents and society		- Value the importance of collaboration - Need help in understanding the limits of multitasks

(Source: Black, 2010; Md. Noor, 2016; Suh & Hargis, 2016)

Significantly, some precedent studies establish that the most prominent characteristic that distinguished the millennials from other groups of generation is their dependency on digital technology (Dolby, 2014); thus, the millennials are considered as "technologically savvy" or "digital natives" (McAlister, 2009).

2.1.3 Digital Technology Integration in the Millennials' Teaching and Learning

Because of their distinctiveness as the 'digital natives,' incorporating digital technology may assist in the millennials' teaching and learning. Reilly (2012) establishes that instructors may acquire higher participation engagement, longer students' attention span, and be able to connect to the students' sense of belonging by using technology-based presentations such as online videos and PowerPoint slides. Other studies found that students will be more interested in the class task when something related to digital technology is required (Au Yong-Oliveira et al., 2017). Utilizing technology may also support the millennials' expectations for immediate feedback (Raslie et al., 2016; Reilly, 2012). This can be accomplished by communicating via digital technology using today's life-essential – smartphones. By being able to connect and communicate regardless of place and time, teaching and learning can become more efficient, enhanced in rational development, and more accessible for the students (Dolby, 2014).

The accessibility of teaching and learning, regardless of place and time, creates affinity spaces, which refers to the place where learning happens (Machin-Mastromatteo, 2012). Gee (2018) explains that “throughout the course of human evolution and history, most teaching and learning has happened not within formal institutions but inside what I like to call ‘affinity spaces,’ loosely organized social and cultural settings in which the work of teaching tends to be shared by many people who are connected by a shared interest or passion” (p.8). Within these affinity spaces, the members of shared interest are committed to helping everyone with the knowledge and strategies to achieve their objectives regardless of their background and level of expertise (Gee, 2018). Machin-Mastromatteo (2012) also claims that affinity spaces offer new insight into teaching and learning methodologies facilitated by different technologies, such as social media.

2.2 Social Media Usage in Millennials Education

2.2.1 Increasing Use of Social Media in Education

Dabbagh and Reo (2011) define social media as “a 21st-century term used to broadly define a variety of networked tools or technologies that emphasize the social aspects of the internet as a channel for communication, collaboration, and creative expression, and is often interchangeable with the term Web 2.0 and social software” (as cited in Dabbagh & Kitsantas, 2012, p.3). Some examples of social media, or social networking tools, include Whatsapp, Telegram, Twitter, Facebook, and Instagram.

Parallel to Duggan and Brenner's (2013) research finding that young adults are the avid user of social media; there is increasing social media integration in today's education. Some precedent studies found that millennial students favor and have a high expectation of learning environment and approach that utilize digital technologies such as social media for their academic as well as future career endeavors (Blaschke, 2014; Hoffman et al., 2014; Nicolletti & Merriman, 2007). Tess (2013) claims that social media has also been used in some educators' teaching and learning activities, although most are in trial mode. Furthermore, a study found that some educators request more frequent use of internet social networking time during office hours; for them to utilize the digital platform for course announcements, additional information sharing, and out-of-class communication (Falahah & Rosmala, 2012).

Students nowadays use social media for information sharing, social networking beyond their geographic reach, seeking new knowledge, exchanging academic activities, and things they learned from their school or university (Dabbagh & Kitsantas, 2012; Hussain, 2012). They are “active co-producers of content” (Dabbagh & Kitsantas, 2012) and, at the same time, engaging in local and international collaboration within their worldwide virtual community (Hussain, 2012). However, because of the openness and unlimited content that digital technology can offer, there is also a need to direct the students to use social media for a more educational purpose. Digital-based tools help in delivering messages to students outside of class period and, therefore, should be used to encourage academic discussion (Manuel et al., 2017).

2.2.2 Benefits of Social Media Usage in Teaching and Learning

The use of social media may facilitate the creation of the Personal Learning Environment (PLE) (Blaschke, 2014; Dabbagh & Kitsantas, 2012). Generally, PLE can be referred to “the systems that help learners take control of and manage their own learning” (IMAILE Project, n.d.). Table 2 describes the ways that social media may facilitate PLE creation.

Table 2. Ways of Social Media Facilitate PLE Creation

AUTHORS	WAYS OF PLE CREATION
Blaschke (2014)	1) Opening up the potential for them to develop the skills they need for creating a PLE. 2) Bring them a step closer towards becoming more self-directed learners. 3) Unique learning activity that influence specific cognition and meta-cognitive skills: a) Constructing new knowledge b) Reflecting on course content c) Understanding individual learning process
Dabbagh and Kitsantas (2012)	1) Help learners aggregate and share the results of learning environments. 2) Participates in collective knowledge generation. 3) Manage their own meaning making.

(Source: Blaschke, 2014; Dabbagh & Kitsantas, 2012)

Other than facilitating ones' learning environment outside the classroom, utilizing social media in education offers various advantages for millennials' learning. Table 3 lists the social media benefits to millennials' learning according to some precedent studies.

Table 3. Social Media Benefits to Millennials' Learning

AUTHORS	BENEFITS OF SOCIAL MEDIA IN LEARNING
Blaschke (2014)	1) Students not only use social media to complete their learning activities, but also to support the learning process itself.
Coleman (2013); Minocha (2009)	1) Freedom for learners to connect and collaborate outside of institutional boundaries, as well as to gain practical experience for the workforce.
Dabbagh & Kitsantas (2012)	1) Seek information and also share information/ knowledge. 2) Allow students to participate in collective knowledge and manage their own meaning-making.
Hussain (2012)	1) Exchanging academic activities and developing social networks throughout the world. 2) Sharing their learning experience with their colleagues and international community.

	3) Social media promotes collaboration and linkage to develop virtual community across the world.
Greenhow (2011)	1) Learners tend to do better and persist in educational settings when they feel a strong sense of social belonging and connectedness.
Greenhow & Robelia (2009)	1) Fulfill social learning functions within and across informal and formal learning spheres of activity. 2) Obtaining validation of creative work through feedback on their profile pages.
Kurkela (2011)	1) Social media related competencies are becoming more important for learners' vocational growth and life-long learning.
Rahimi, van den Berg & Veen (2013)	1) Students have an opportunity to manage their on learning environments and thus become more independent, lifelong learners.

(Source: Blaschke, 2014; Coleman, 2013; Dabbagh & Kitsantas, 2012; Greenhow, 2011; Greenhow & Robelia, 2009; Hussain, 2012; Kurkela, 2011; Minoca, 2009; Rahimi, van den Berg & Veen, 2013)

2.2.3 Social Media Support for Visual Learning Style of the Millennials

Social media further assist in millennials' teaching and learning with its' visual aspects, as precedent studies found that millennials are most likely visual learners. In a study of preferences for reflective, sensing, visual, and sequential learning styles among different generations, Shepherd (2017) found that the millennials' preference for active and visual learning is higher than the other generations. In other studies, the millennial students are inclined towards visual and visual-related learning styles (Fesol, Salam, Osman, Bakar & Salim, 2016). Kriegel's findings in 2013 also categorized the majority of the millennial respondents as visual learners, where the data were high on the visual-related learning activities, as indicated in Table 4.

Table 4. Millennials' Learning Activity Preferences (N=89)

LEARNING ACTIVITIES	PERCENTAGES
Reviewing information in graphic format (tables, charts, graphs).	64.8%
Using search engines for online research.	44.3%
Practicing real-world interactions in online simulations.	37.5%
Reading text (theories, concepts, non-fiction).	36.4%
Interacting with computer simulations.	34.1%
Viewing video-recorded lectures.	34.1%

(Source: Kriegel, 2013)

Some characteristics of visual learners include learning by seeing charts and diagrams, thinking in pictures, and taking detailed notes (Md. Noor, 2016). Hoffman et al. (2015) establish that millennial students gather information better from visual cues rather than the traditional teaching approach that mainly utilizes text- and lecture-based methods. They also appreciate aesthetically excellent academic presentations (Suh and Hargis, 2016). In the case of design students, visually appealing educational sources are most likely relevant and attractive to them, hence the researcher's purpose in investigating the students' preference of social media utilization in a design-related course.

3.0 Methodology

3.1 Research Method

As mentioned earlier, this study is projected as an action research to experiment with the digital technology approach in millennials' learning. According to Machin-Mastromatteo (2012), action research "is intended to help discover and reflect upon teaching and learning practices in a technologically mediated educational setting" (p.571). This research is intended to know whether the approach works with the participants, as Bradbury (2015) specifies that action research is a practical solution that is accomplished together with the associated group of people. Therefore, for this study, it is crucial to get research data in the form of feedbacks and comments from the perspective of the participants – students of the course.

To achieve the research objective, the methodology implemented is a questionnaire survey with a Likert scale on the preference of millennial students' regarding social media usage as a platform to submit their assignment in a design-related course. Additional comments are allowed for in-depth and specific feedback from the respondents. The structured questionnaire derives the percentages of respondents' preference while the open-ended comments allow for respondents' personalized feedbacks. The questionnaire was distributed to the respondents when they completed the course, which provided them ample time to experience and reflect on the learning activity thoroughly – preparation of the assignment, during submission, and post-submission. The social media platform that was utilized in this action research is Instagram because it is one of the most used by the young generation nowadays, and also due to its features that combine both graphic (photo) and writing (caption).

3.2 Respondents

The respondents are 129 students from an interior architecture program in a Malaysian public university, who were born between 1991 to 2000, indicating that they belong to the millennial generation. The course that this research was carried on studies environmental psychology concerning interior design. The course is mainly joined by second-year degree students, where critical thinking and problem-

solving skills are expected from the students' works. It is, therefore, the requirement of the assignment is not merely a beautiful photo, but a meaningful photo that comes with a critical and thought-provoking caption.

3.2 Limitation

This research was conducted specifically with a group of students in a design-related course. Thus, a generalization of the findings may only be applicable to design students, rather than other disciplines. It is also noted that the respondents are the youngest range of the millennial generation; therefore, future study of higher institution students may look into the next generation, which is Generation Z.

4.0 Findings and Discussion

4.1 Millennial Design Students' Preference for Using Social Media in Learning Activities

Data from the questionnaire survey were analyzed as in descriptive analysis. Fig. 1 shows the gender distributions of survey respondents. Out of the 129 respondents, 70% of them are female students, and the other 30% are male students. Fig. 2 that displays the age range distribution of the respondents indicates that the majority of respondents fall into 18-22 years old (64%) while the rest of respondents fall into 23-27 years old (36%). The age range of all respondents denotes that all of them are from the millennial generation who were born between 1991-2000.

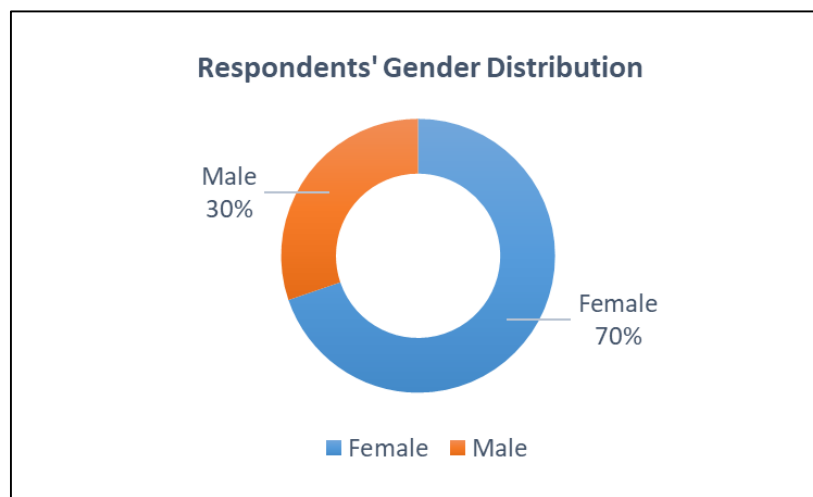


Fig. 1: Respondents' Gender Distribution

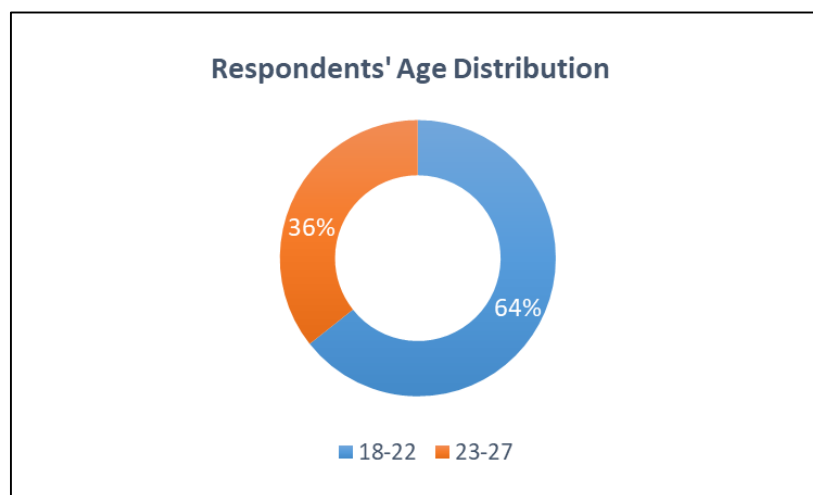


Fig. 2: Respondents' Age Distribution

Fig. 3 shows the respondents' preference for the use of social media in their learning activity. From the graph, it is clear that the majority of the respondents rated 5 (Love it!) for their preference of the learning approach (65.9%, n = 85). A number of 33 respondents rated 4 (Like), which is equivalent to 25.6%, while the rest of respondents (8.5%, n = 11) rated 3 (Neutral) for the survey. None of the

respondents rated 'Dislike' nor 'Strongly Dislike.' The highest rate (5) refers to 'Love it!' as the researcher's strategy to connect the respondents with social media features that use 'love' term and heart symbol as the positive response towards a user's online post.

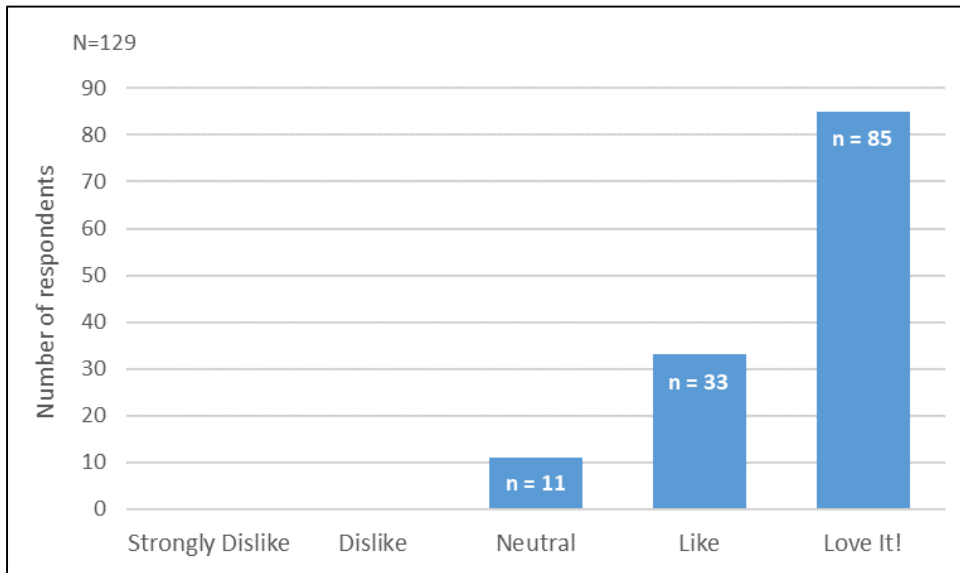


Fig. 3: Respondents' Preference for the Use of Social Media in Learning Activity

This finding indicates that the millennial design students have a high preference (about 65%) towards utilizing social media in their learning activities; about 25% of them like the approach, while less than 10% of them feeling neutral about the method. The high preference among the students reflects the millennials' characteristic that is highly dependent on digital technology (Dolby, 2014; McAlister, 2009). The next findings and discussion may discover the particular reasons behind their favor of social media integration in the design-related course.

4.2 Millennial Design Students' Feedbacks on Using Social Media in Learning Activities

The additional comments from most of the respondents (n=80) were run through a 'word cloud' application to generate the frequency of words used, as shown in Fig. 4. Based on the word cloud, among the most frequent terms mentioned by the students are new-approach, knowledge, interesting, learning, easy, share, and love. In general, this word's frequency reflects positive responses of the millennial design students' feedback on their experience of using social media as a platform to submit an assignment.



Fig. 4: Words Frequency of Millennial Design Students' Feedbacks on Using Social Media in Learning Activities

Table 5 shows the frequency of students' feedback, which is categorized into different reasons of their preference for social media usage in learning activities. The table also lists selected comments to ascertain the students' in-depth and personalized opinions. The

main aspects indicating different reasons of the respondents' preference include knowledge and creative sharing, new and interesting approach, gain knowledge and enhance understanding, convenient to submit assignment and cost-saving, and young generation's frequent use of social media.

These findings conform to some of the characteristics of the millennials, their technology dependency, and the ways social media may assist in the millennial students' learning, as discussed previously in the literature review. The students' appreciation of knowledge and creative sharing through the assignment submission on social media is parallel to their role as a content creator or influencer to the members of their online networks (Dabbagh & Kitsantas, 2012; Hussain, 2012). Some students mention that they appreciate the positive feedbacks from their online followers for the creative content that they shared. The students also get excited about the idea of utilizing social media as a new and exciting approach in education, which portrays them as the generation of innovative digital natives and curious, fast learners (Md. Noor, 2016).

Besides, the students' feedback on knowledge gain and enhanced understanding supports the idea that social media usage may assist in students' PLE creation (Blaschke, 2014; Dabbagh & Kitsantas, 2012). The students mentioned that they gain a better understanding of the subject matter while doing and interacting with the online assignment. This also corresponds to the millennial students as being visual learners who learn more efficiently from visual cues, as described by Hoffman et al. (2015) and Md. Noor (2016). This shows that the millennial students may understand the subject matter more when they engage with the assignment through the cognitive process, visual sense, and constructive feedback from others.

Furthermore, according to the millennial design students' feedbacks, using social media as a platform to submit their assignment is cost-saving and student-friendly. Life as the interior architecture students means that they need to spend a massive amount of money on studio supplies and printing works. Thus, requiring the students to submit the assignment online may save their time and printing fee. This social media approach is also convenient for the students as they can learn within their own affinity spaces (Gee, 2018; Machin-Mastromatteo, 2012), at any time and any places that they have access to an online network. The feedbacks also assert that social media has become a part of their daily life; thus, the approach connects to the young generation better than the in-class long lectures and conventional presentation. With the right and convenient method, educators may be able to spark the 21st-century students' interest; thus, the students' intent and effort on learning may come naturally.

Table 5. Respondents' Feedbacks on the Use of Social Media in Learning Activities

MAIN ASPECT	NO. OF FEEDBACKS	SELECTED RESPONDENTS' FEEDBACK
Knowledge and creative sharing	18	<ul style="list-style-type: none"> The use of social media as a platform of submission is excellent because the understanding of the assignment can be shared with other people broadly. Using Instagram as the platform to share knowledge of design with other people is an excellent way to improve and engage the students to do the best in their assignments. It is easily accessed by the assessor. We can share the assignment and benefit others who are indirectly involved in the task. I can share the knowledge with the people in public social media. I can share my work and knowledge about this subject to my Instagram friends.
New and interesting approach	17	<ul style="list-style-type: none"> Unique platform for assignment. Fun and can be easily accessed by anyone, and everyone can learn new experiences from different views, places, time, and scenarios. It is something new in Malaysia and an excellent approach for us to make assignment fun. I found it interesting and a kind of new method or platform to do assignment in an interactive, attractive, and fun ways! My friends who study abroad said that their lecturer does the same method, so I feel like having the same experience as studying abroad too. I like this assignment because it uses an approach that is more exciting than a writing assignment. This is something new.
Gain knowledge and enhance understanding	9	<ul style="list-style-type: none"> It is easier for us students to explore things as we are currently in a digital technology age. Exploring ideas is useful for design students as they can act as an eye-opener to see things around the world and gain more knowledge. Enhance my understanding as compared to submitting my assignment via a typical way of report or essay writing. I think you must keep doing this type of teaching approach in your class. It makes me enjoy the assignment so well!! Keep it up. One of the reasons why I can easily remember the type of Gestalt Law is by doing this for the assignment. For me, it is good to review work this way so that people can easily remember and understand the subject matter.
Convenient to submit assignment and cost-saving	9	<ul style="list-style-type: none"> The use of the internet and technology makes the task easier to be completed as compared to the traditional method. Embracing modern technology in learning is the way to go! Easier learning medium and student friendly. Convenient for students to submit. Cost-saving. Easy and reduce the use of paper; help to save the planet.
Young generation's frequent use of social media	4	<ul style="list-style-type: none"> An excellent approach to connect with students via their most used application. This means that they do not have to use the traditional method to learn and widen their knowledge to be more creative. I love this kind of approach as it merges the innovation and latest trend. The students or the young generation mostly have media social, and using this platform connects people. It is a good approach for learning because everyone uses Instagram nowadays. It is not only good because of posting beautiful photos, but it must also come with great information.

5.0 Conclusion and Recommendation

This study concludes that most of the millennial students favor social media usage as a learning platform, particularly for courses related to design and creativity. Specifically, the students like to use this platform in their learning activity for its prospect of knowledge and

creative sharing, its innovative and fun learning process, its assistance in understanding the knowledge better, its time and cost convenience to design students, as well as its friendly approach towards the young generation. At the end of this action research, the researcher reflects that using social media in today's teaching and learning may be beneficial for both educator and students, as long as the learning activity is outlined according to the course learning outcomes.

Some of the students' feedbacks encourage educators to implement social media approach more frequently in today's learning activities. Even though there is a little drawback of the method where a few students are discreet and prefer more privacy in their social media networking, it is proposed that the educators encourage them to create a public account, especially for academic and professional purposes. This may benefit today's students primarily as many local and international educational institutions, and industry players have been actively creating and sharing informative content in the social networking world. New research direction may look into the younger generation's usage and benefits of using social media for their informal learning and networking with the industry players.

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