

Technology or Educators in the Digital Era: Which One Should Be the Main Prior?

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Abstract: The Digital Age demands the optimization of the use of technology in the learning process and the role of educators is increasingly becoming a question of "which role is more needed between technology and educators?" This study looks at the perspectives of students of the Faculty of Tarbiyah and Keguruan Sciences, Kerinci State Islamic Institute, totaling 642 students consisting of 240 men and 412 women about the role that is more needed in learning. The method used in the study was a cross-sectional survey design and the data were analyzed using descriptive data analysis techniques based on gender. Based on survey data 56.07% of women tend to spend more time using technology in learning than men (32%), in dealing with difficulties in learning students both 52.92% of men and 56.07% of women prefer to find solutions using the internet, and in understanding learning materials. Survey data also states that the role of educators is still the main one. Although the survey data says that technology has a significant role in student learning, students admit that the role of lecturers cannot be released because students consider lecturer explanations are still needed to support the use of technology.


1 INTRODUCTION


Today's technological developments influence education, where the integration of technology in learning is needed. (Haif E. Bannayan, Ivan Kalaš, Leslie Conery, Ernesto Laval, Diana Laurillard, Cher Ping Lim, Sarietjie Musgrave, Alexei Semenov, 2011). When teaching these new-age students, teachers need to remain flexible and find new ways to improve their level of education (Handajani et al., 2018). One of them is by utilizing edutainment-based learning models that have the potential to be applied in the current era (Anikina & Yakimenko, 2015). Students born between 1982 and 2000 are categorized as millennials or also known as Gen-Y and are often described as tech-savvy (Best et al., 2013). These


generations have an impact on the transformation of education in the digital era, which is intertwined with the use of technology in everyday life (Hashim, 2018).


The terms used to describe today's learners vary, including Generation X, Net Generation, and Generation Y/Millennial (Oblinger & Oblinger, 2008). The student population crosses all generations with the latest, Gen-Z or Net Generation being very different in their learning characteristics and expectations, (Hashim, 2018). The use of technology can maximize the learning experience for both Millennials because of the common learner-oriented characteristics that they possess (Coyner, 2008). Wesley Lowery & Strauss, (2001) state that the millennial generation is characterized by seven

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common traits and can be considered achievement-oriented, team-oriented, stressed, conventional, confident, sheltered, and privileged. Seeing that the current generation is already living with the influence of technology. The use of technology in net generation learning has variations such as (1) Video Game Edutainment (Handican & Setyaningrum, 2021), (2) Mobile Technology: involves connectivity to download, upload, and/or work online via wireless networks and/or cellular networks (Kukulkska-Hulme et al., 2009); (3) Massive Open Online Courses (MOOCs): an online platform where everyone can sign up as it is free and globally integrated which makes it more interactive (Balfour, 2013); (4) Game dan Gamification: an effective tool for scaffolding concepts and stimulating real-world experiences from an abstract world that presents the unseen. (Laremenko, 2017) (Qamariah et al., 2017); (5) Augmented Reality (AR): technology for adding digital content to printed material objects that are presented in real time and can be accessed anywhere. (Hawkinson et al., 2017); (6) Virtual Reality (VR): the role of memory in learning can improve both affective skills and cognitive skills (Christou, 2010).

The integration of technology in education today has been researched for its effectiveness in improving students' learning outcomes and behavior. For example, empirical findings by (Vasimalairaja et al., 2020) which examines the impact of technology on higher education, research by (Ghavifekr & Rosdy, 2015) which looks at the quality of learning using technology, findings by (Harris et al., 2020) which looks at its effect on learner achievement and motivation, and the findings of the (Sivin-Kachala & Bialo, 2000) which explains that Technology can improve teaching and learning, but simply having technology does not automatically translate into better instructional outcomes. Looking at the use of technology in education, it becomes a question that is there still a need for educators in learning? This new generation challenges the traditional teacher-centered teaching paradigm to be able to learn actively but does not curtail the essence of an educator (Setyaningrum, 2016). However, some empirical findings still see that students tend to be passive in class and teachers tend to be less innovative in teaching. (Ayu Ardani et al., 2018). However, some empirical findings still see that students tend to be passive in class and teachers tend to be less innovative in teaching (Garrett, 2008). These changes require teachers to change to adapt to the needs of the Net Generation era. (Varank et al., 2006). Empirical findings related to the development of technology-based learning in various science subjects such as; (1)

mathematics subject field (Charsky, 2010); (2) physics subject field (Fadieny & Fauzi, 2019); (3) chemistry subject field (Priyambodo & Wulaningrum, 2017); (4) social subject field (Abdelraheem & Al-Rabane, 2005); (5) medicine subject field (Omeng & Priscah, 2016); (6) religious subject field (Roth, 2017). This article will discuss the net generation's perception of students' preferred learning needs between technology and educators. In addition, it also discusses the potential effects of the loss of the role of an educator in this day and age influenced by learning technology. The importance of technology in schools cannot be ignored. In fact, with computers in education, it becomes easier for teachers to impart knowledge and for students to acquire it (Maslin, 2021).

2 METHOD

The method used in this study is a cross-sectional survey design. It involves collecting data on attitudes, opinions, or beliefs at a single point in time (Creswell, 2008). The subjects of this study were students of the Faculty of Tarbiyah and Education Sciences, Institut Agama Islam Negeri Kerinci who were given survey sheets through the SIAKAD (Academic Information System) application owned by Institut Agama Islam Negeri Kerinci and distributed at one time. The survey questionnaire is accessed by respondents through a link in the SIAKAD application which is filled in by respondents when they want to see the results of the study. survey questionnaires are given with a Likert scale, short answers, and answer choices.

Snowball sampling technique was used to select 652 students at the Faculty of Tarbiyah and Teaching Science, Kerinci State Islamic Religious Institute. Data were analyzed using descriptive data analysis techniques based on gender so that it can be concluded the direction of the needs of educators today in conducting learning. The data obtained were made into pictures, charts, and tables in order to facilitate their presentation. The survey instrument has previously been tested on 30 test respondents and has met the validity and reliability of the instrument.

3 FINDING AND DISCUSSION

3.1 Students Perspektive

3.1.1 Students Data as Respondent

Based on the results of distributing survey instruments through the SIAKAD application, general information data on students who responded to the survey sheet were obtained. Statistical data of research respondents based on gender can be seen in Table 1.

Table 1: Gender of Students.

Gender	Frequency	Percent (%)
Male	240	36.8
Female	412	63.19
Total	652	

Table 1 shows that the majority of respondents were female: 412 (63.19%) out of a total of 652 students. Only 240 (36.8%) male students were respondents. A comparison of the number of students based on their gender can be seen in Figure 1.

This difference in numbers could be due to the fact that on average, men did not have the willingness to fill out the survey sheet provided while women were compliant and volunteered to fill out the survey sheet.

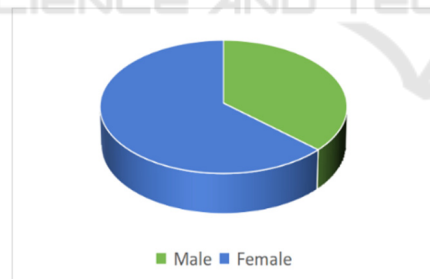


Figure 1: Data on Gender Differences of Respondents.

The diagram in Figure 1 explains that at the Faculty of Tarbiyah and Teaching Sciences at the Kerinci State Islamic Institute the majority of students are women and it can be concluded that women are more interested in becoming teachers or educators than men.

3.1.2 How Often Do You Use Technology on a Daily Basis?

In the first perspective, students were asked about the use of mobile devices both in daily student learning

activities and other activities based on the number of hours. The results of these questions can be seen in Table 2.

Table 2: Average Usage of Mobile Devices.

Average (Hours)	Male	Percent (%)	Female	Percent (%)
$0 < x < 2$	9	3.75	4	0.97
$2 < x < 4$	27	11.25	14	3.40
$4 < x < 6$	77	32.08	67	16.26
$6 < x < 8$	69	28.75	231	56.07
$8 < x < 10$	31	12.92	43	10.44
$x > 10$	27	11.25	53	12.86

Table 2 explains that most men use technology in learning for 4 to 6 hours a day with a percentage of 32% of the total male respondents. Whereas most women spend 6 to 8 hours using technology in learning with a percentage of 56.07% of total female respondents. This identifies that women use technology more often in their daily lives. Whereas men tend to spend time using technology only for other purposes such as playing games, social media, etc.

This difference in use will affect the purpose of the technology used. women will choose to use technology for things that are beneficial to the development of their learning while men prefer for pleasures

3.1.3 If You Face Difficulties in Your Learning, What Do You Do?

Based on the answers from the research respondents, the data on student choices are obtained as in Table 3.

Table 3: How to Face Difficulties in Learning.

Answer	Male	%	Female	%
Ask Friends	42	17.50	57	13.83
Ask Lecturers	62	25.83	113	27.43
Ask Technology	127	52.92	231	56.07
Nothing	9	3.75	11	2.67

Table 3 shows how the students dealt with difficulties in their learning. The results are very surprising. 52.92% of males and 56.07% of females prefer to ask the Internet through Google, Firefox, Opera, etc. during the process of associating learning. Other data presented that asking questions to lecturers is done by males with a percentage of 25.83% while females with a percentage of 27.43%. It can be assumed that lecturers are not the first place to ask

when students face difficulties. This raises the next problem: do lectures still need the role of lecturers?

3.1.4 Where Is Your Greatest Source of Understanding when Learning?

The survey instrument also asked about students' perceptions of their main learning resources in learning activities, discussions, making papers, and completing lecture assignments.

Table 4: Sources of Learning.

Answer	Male	%	Female	%
Book	11	4.58	45	10.92
Lecturer	46	19.17	52	12.62
Browsing	95	39.58	213	51.70
Youtube	88	36.67	102	24.76

Based on Table 4, it is known that on average students use the main learning resource in the form of browsing by utilizing the internet, this can be seen where 39.58% and 31.70% of women stated that they prefer to find learning resources from browsing activities. This indicates that 47.23% of the total respondents choose to find learning resources from browsing activities.

3.1.5 Which Explanation Can Improve Your Understanding? Technology or Lecturer?

The survey also asked about whose explanations were more useful in the process of deepening the material taught in lectures. The results can be seen in Figure 2 below.

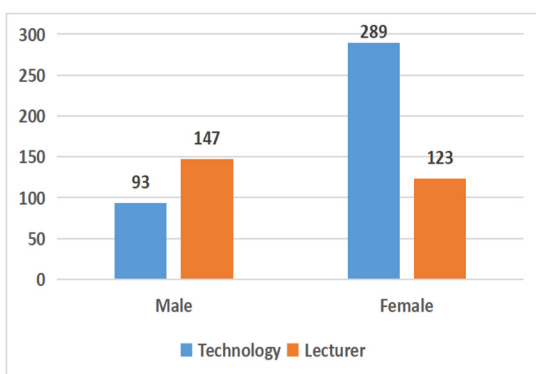


Figure 2: Best Explainer Technology vs Lecturer.

Based on Figure 2, men as many as 147 students with a percentage of 61.25% tend to choose lecturers as the best explainers when studying and for women

as many as 289 students with a percentage of 70.15% choose technology to have the ability to explain material better. Based on this data, the average student states that technology-based explanations such as from Google, Youtube, and other learning resources have better abilities than lecturers who teach.

3.1.6 Between the Role of Technology and Lecturers, Which Is More Needed?

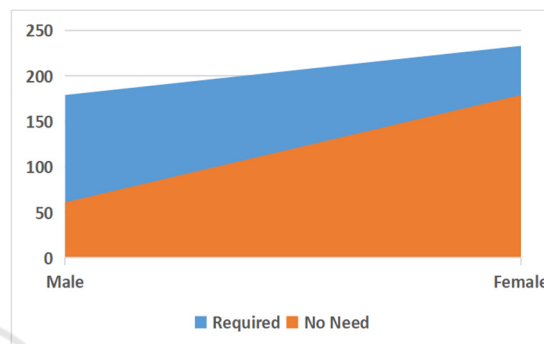


Figure 3: Lecturer's role in teaching.

Based on the data exposure in Figure 3, it can be concluded that students tend to state that the role of lecturers is still needed in learning both according to men (74.58%) and according to women (56.55%). this identifies that even though students actively use technology in learning, students still need the role of lecturers in explaining the material.

3.2 Discussion

Based on the results of a survey that researchers have conducted on 652 students at the Faculty of Tarbiyah and Keguruan Sciences, Kerinci State Islamic Institute, information was obtained that respondents were classified by gender with 240 male students and 412 female students. This number indicates that women are more likely to want to become teachers than men. This is in accordance with the results of Indriani's research (Indriani, 2019) and it can be because women have more interactive abilities in teaching and have a passion in the field of nurturing someone (Auladuna et al., 2018).

The first question is related to how often students use technology in their daily learning process. The survey data states that women are more active in using technology in the learning process related to completing assignments, finding references, and learning new materials. This is in contrast to Bustaman and Yosman's findings that women's role in the development of information technology is still

a minority compared to the large number of men. (Bustaman, 2013); (Lestari, 2013).

The learning process sometimes experiences struggles both in terms of understanding and finding learning references. The survey results state that women seek solutions to these obstacles by searching for information via the internet by utilizing browsing technology such as Google, Youtube and men are more likely to ask the lecturer who teaches. The difference in choice between men and women is due to men's ability to understand prioritizing the audio-visual ability of the lecturer. (Skelton & Read, 2006) but men's reception skills are better than women's when the lecturer explains (Darrin Wood, 2012).

Understanding in learning using technology based on the survey, it is known that the internet and YouTube are the main sources in class learning compared to sources from books and lecturers. This is influenced by the lecturer's ability to explain (Porter, 1958). In addition, the lack of teachers' ability to design teaching materials also causes students to prefer to look for other references (Bouckaert, 2019). Therefore, students consider that technology has a better ability to explain the material they learn, this is because technology can provide diverse references (Alam, 2021).

The last survey results asked about the role of lecturers in the learning process. All respondents stated that the role of lecturers is still needed to be able to understand more deeply when compared to only using technology in the learning process. This is because lecturers have more interactive abilities than other technology-based media. When used by an excellent teacher, technology can only help to improve learning. Teachers' roles in the classroom will inevitably change as the resources available to them evolve (Hamiti & Reka, 2012).

Educational technology is becoming more prevalent in the classroom. The next generation of children will be ready to work with these new technologies, which will play an important role in their learning and acquisition of various cognitive knowledge, so educational technology must be incorporated into future curricula (Stošić, 2015). While the role of lecturers in learning is still very much needed by students, it should also be remembered that information and communication technology must be integrated into the learning process if education is to be meaningful, engaging, entertaining and accessible to all (Khiste, G.P., Maske, D.B. & Veer, 2017). Therefore, to make learners better, it is necessary to integrate lecturers and technology both in explaining material and

developing learning. (Mfreke Umoh & Bassey, 2020); (Flemming et al., 2016).

4 CONCLUSIONS

Based on the results of a survey conducted on 642 students, it can be concluded that there are differences in perspectives between men and women in seeing the role of lecturers and technology in teaching. Women tend to spend more time using technology in learning more than men, in facing difficulties in learning students both men and women prefer to find solutions by using the internet and in understanding learning materials students prefer explanations from the internet such as browsing and youtube to explore the material taught compared to the role of the teacher in explaining.

Although the survey data says that technology has a significant role in student learning, students admit that the role of lecturers cannot be released because students think that lecturer explanations are still needed.

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