YEMENI UNDERGRADUATES' TECHNOLOGY USE PREFERENCES IN COURSES:

a Field Study on Taiz University and Al-Saeed University

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Abstract:

This descriptive study aims at assessing how much technology Yemeni undergraduates prefer to use in their academic courses. Technology amount refers to the amount of information and communication technology used in academic courses of Yemeni universities. Technology amount is ranked as follows: no technology, limited technology, moderate technology, extensive technology, or exclusive technology. Data have been collected through a survey questionnaire offered to a random sample of 620 undergraduates at Taiz University and Al-Saeed University. Five hundred seventy students responded to the questionnaire. 355 (62.28%) and 215 (37.72) respondents belong to each university, respectively. The researcher anarmajore data using SPSS. The analyzed data revealed that only 12.98 percent of surveyed respondents preferred to take courses that do not use any technology while the majority of them (87.2 percent) preferred to take courses that use technology. However, techminded students had different degrees of preference for technology use in their courses. Also, the study found that there was no statistically significant difference among undergraduates on the basis of their demographics except for age, study status, and major. For example, students from engineering and business management showed more interest in the use of technology in their studies compared to other majors. The study has been carried out on two major Yemeni universities. More Yemeni universities should be targeted by future research. The paper dealt only with undergraduate student preferences for technology amount to use in their academic courses. Other aspects like technology skills, benefits, applications, training, and so on can be addressed by future research.

Keywords: technology, preference, courses, undergraduates.

تفضيلات الطلاب الجامعيين اليمنيين لاستخدام التكنلوجيا في المقررات الدراسية
دراسة ميدانية على جامعة تعز وجامعة السعيد

الملخص:

هدفت هذه الدراسة الوصفية الى تقييم كمية التكنلوجيا التي يفضل الطلاب الجامعيين اليمنيين في مرحلة البكالوريوس استخدامها في مقرراتهم الدراسية. وتشير كمية تكنلوجيا المعلومات الى كمية تكنلوجيا المعلومات والاتصالات المستخدمة في المقررات الدراسية في الجامعات اليمنية. وتم ترتيب كمية التكنلوجيا كما يلي: عدم استخدام التكنولوجيا، او استخدام تكنلوجيا محدودة، او استخدام تكنلوجيا معتدلة او استخدام تكنلوجيا مكثفة او استخدام كامل للتكنلوجيا. وقد تم جمع البيانات باستخدام استبانة وزعت على 620 طالب وطالبة في جامعة تعز وجامعة السعيد. وقد اجاب الاستبيان عدد 570 طالب وطالبة. حيث بلغ عدد الطلاب المستجيبين من جامعة تعز 355 (62.28 في المائة) وعدد المستجيبين من جامعة السعيد 215 (37.72 في المائة). وقد قام الباحث بتحليل البيانات باستخدام برنامج الحزم الإحصائية للعلوم الاجتماعية (SPSS) وقد اظهرت النتائج ان نسبة 12.98 في المائة من المستجيبين لا يرغبون في دراسة مقررات تستخدم التكنلوجيا بينما بلغت نسبة الذين يفضلون دراسة مقررات تستخدم التكنلوجيا 87.2 في المائة لكن نسبة تفضيلهم لاستخدام التكنلوجيا في المقررات جاءت بدرجات متفاوتة. كما بينت الدراسة انه لا توجد فروق ذات دلالة إحصائية بين إجابات افراد العينة في تفضيلاتهم لاستخدام التكنلوجيا في المقررات تعزى لخصائصهم الديموغرافية فيما عدا العمر والوضع الدراسي والتخصص فمثلا جاء تفضيل طلاب الهندسة وادارة الاعمال لاستخدام التكنلوجيا في المقررات الدراسية بدرجة اعلى عن تفضيل طلاب التخصصات الاخرى. وقد تم اجراء الدراسة على جامعتين رئيستين في اليمن وينبغي اجراء بحوث مستقبلية على جامعات يمنية اخرى. ايضا تطرقت الدراسة الى جانب من جوانب التكنلوجيا وهو كمية التكنلوجيا التي يفضل الطلاب الجامعيين اليمنيين استخدامها في مقرراتهم الدراسية وينبغي ان تجرى دراسات مستقبلية عن جوانب اخرى مثل مهارات الطلاب التكنلوجية والتطبيقات التي يستخدمونها والتدريب الذي يتلقونه في استخدام التكنلوجيا وغيرها من الجوانب .

الكلمات المفتاحية: التكنلوجيا - التفضيلات - المقررات - الطلاب الجامعيين

1. Introduction:

Nowadays we find computers everywhere: desktops, laptops, e-books, digital cameras, cellphones, smartphones, etc. Firms such as UPS and FedEx use ISs to track their packages….at schools students register for classes online; use e-mail, WhatsApp, Facebook, etc. to communicate with their classmates and teachers; access e-books from their electronic libraries; and do or submit assignments using online learning platforms such as Moodle and BlackBoard (Valacich & Shneider, 2018). The Internet allows virtual classrooms; digital libraries provide knowledge warehouses; the Web offers latest information for seminar discussions; computer simulations offer an alternative to labs. In spite of the dominance of traditional lecture/discussion method in college education, more and more technological applications are gaining hold in the classrooms (Dhiraj, 2008).

To lessen the dependency of education on spatial and time boundaries technology should be integrated in the learning experiences of students (Garrison & Kanuka, 2004).

Although the use of technology to support classroom teaching is desirable to heighten student-centered learning experience (Torrisi-Steele & Drew, 2013), learner technology preferences are vital to guarantee their acceptance of such technologies which in turn can yield innovative and flexible blended learning experiences (Mirriahi & Alonzo, 2015).

It is manifest that learning supported by technology differs in terms of efficiency and effectiveness from techless traditional learning. It is presumed that in technology-supported learning students have the potential to be better technology literate performers that can find their feet in the current knowledge age. In general, the uppermost of Yemeni education is undergraduate education. When Yemeni students decide to pursue their graduate study, particularly if they wish to study overseas, they may be weak graduate learners if they have not taken courses that used enough amount of technology. If a student determines to have a job, they will not be easily accommodated in the modern workplace where technology is necessary and prevalent. Hence, Yemeni students should be friends with technology in learning to succeed in their graduate education and to be marketable job seekers. Thus, the study is an initiative to improve teaching/learning in Yemen (esp. in university education) and will generate interest among education stakeholders in employing technology in learning/teaching activities. Thus, the research problem is how much technology do Yemeni undergraduates prefer to use in their academic courses.

The main objective of this paper is to assess the amount of technology Yemeni undergraduates prefer to use in their academic study. The specific objectives of this study are stated below:

- to identify how much technology Yemeni university students prefer to use in their academic courses; and
- to check whether technology use preferences in courses vary across respondent demographics.

The researcher has developed the following main hypothesis:
There is no significant difference among respondents in their preferences for technology amount to use in courses on the basis of their demographics.

The main hypothesis consists of the following sub hypotheses:
- There is no significant difference among respondents in their preferences for technology amount to use in courses on the basis of their gender.

• There is no significant difference among respondents in their preferences for technology amount to use in courses on the basis of their age.

• There is no significant difference among respondents in their preferences for technology amount to use in courses on the basis of their university affiliation.

• There is no significant difference among respondents in their preferences for technology amount to use in courses on the basis of their study status.

• There is no significant difference among respondents in their preferences for technology amount to use in courses on the basis of their major.

Figure 1 shows the pattern of the study to test the differences in technology preferences among respondents.

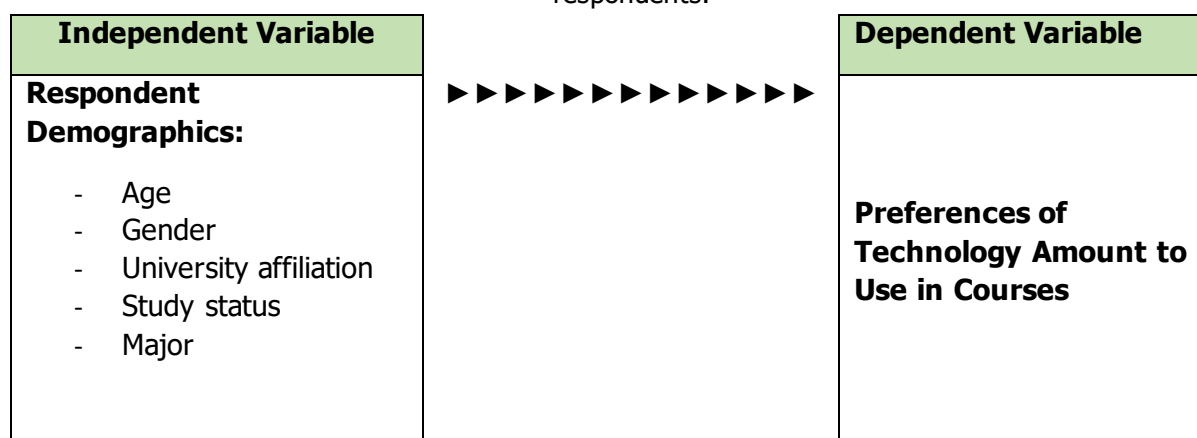| Independent Variable		Dependent Variable
Respondent Demographics: - Age - Gender - University affiliation - Study status - Major	►►►►►►►►►►►►	**Preferences of Technology Amount to Use in Courses**

Figure 1: Pattern of the study

2. Information technology and e-learning in Yemen:

Undergraduate student preferences for the amount of technology to use in their academic courses can be considered in the framework of e-learning and the employment of technology in university education. In spite of the importance of information technology and its undeniable support to learning, only few edutechoriented studies have been conducted about Yemen's employment of information technology in its educational programs.

In their study called Factors Influencing Students' Intention to Use Mobile Learning: a Study at Yemeni Higher Education Institutions, Shuhd Basurra and Samer Bamansoor collected data from a sample of 381 students at different Yemeni higher education institutions. SPSS was what the researchers used for data analysis. The study stated that there was a discrepancy between students and their universities with regards to their sights about technology, and there was insufficient knowledge and integration of student approval when making decisions to invest in technology. Furthermore, it revealed that respondents' intention to use mobile learning services was highly affected by factors such as perceived ease of use, perceived usefulness, information quality, and social influence (Basurra & Bamansoor, 2021).

Alkamel and Chouthaiwale in their study, ICT Availability and Uses among Yemeni University EFL Students, discovered the availability of information and communication technology (ICT) at English departments of Yemeni universities. They used a questionnaire to gather data from 240 students who belonged to three public universities and 163 students who belonged to private universities. They found that there was a discrepancy in the usages of ICT by students of both public and private universities due the absence of sufficient

technology infrastructure. They found that computer use for English learning is the same in both public and private universities. However, their study revealed that internet connection in public universities was better than the connection in private ones (Alkamel & Chouthaiwale, 2020).

Al-Ragawi and Zahary in their study, Obstacles and Opportunities for Yemeni Students to Use Mobile Learning, identified the possible obstacles and opportunities of universities using mobile learning in Yemen. They conducted a field survey which focused on various types of schools and universities in Yemen. The study sample consisted of 148 male and female students. The study found that 74.4 percent of the respondents had a high desire to use mobile learning in their learning process (Alragawi & Zahary, 2017).

In his study, Perceptions of Yemeni College Students about Technology Impact on Courses, Thabit measured the attitudes of Yemeni undergraduate students about the impact of technology on courses. Data were collected through a survey questionnaire given to 403 undergraduate students who responded to the questionnaire. Those students came from Sanaa University, Aden University, and University of Science and Technology. In addition, he conducted personal interviews with 30 students. The study found that 77.4 percent of respondents agreed that technology improved their learning. 14.2 percent disagreed that technology in courses improved their learning. No significant difference took place among target students in their perceptions about technology impact on courses with respect to their major. Females showed more optimism about technology impact on courses. Consistent response patterns for the study's outcome statements about the impact of technology on courses appeared across the factors of university, age, class standing, and performance percentage (Thabit, 2014).

In his study, E-Learning in Yemeni Universities, Reality and Expected, Qatran studied e-learning in 7 Yemeni public universities and 16 private universities. He evaluated the websites of the universities based on the criteria for evaluating e-learning sites. The study stated that the university websites lacked in services and lacked in the role of e-learning. He further found that some of these universities did not have e-learning at all. The study showed that the target universities did not utilize e-learning systems (e.g., moodle, LMS, ESL). Most Yemeni universities did not use the e-learning tools, especially interactive tools. There was no clear detailed plan for the installation and implementation of e-learning. The target universities interest in e-learning was a kind of advertisement rather than a genuine and effective teaching medium. The e-learning content was scarce, only pdf-format documents were available. The universities adopted e-learning while they lacked in the necessary infrastructure for it. There was no mechanism for evaluating e-learning. No technical criteria were used for designing the e-learning programs. The faculty was not able to deliver e-learning. The Yemeni culture had not the capacity to accept e-learning (Qatran, 2010).

Al-Maqtari presented a project that proposed a detailed three-year implementation plan for the e-learning system of Sanaa Community College (SCC). In addition, it developed a prototype web-based e-learning system in order to assist SCC in managing its educational activities. Unified Modeling Languages (UML) was used to model the current and the proposed systems. The plans of international higher education institutions were utilized by the project. The project promised a great improvement in supporting conventional education in the institutions of the Yemeni higher education (Almaqtari, 2009).

Abdulghani attempted to measure how effective a computer multimedia program was in improving basic student skills at using technology at Faculty of Education, Sanaa University. It also attempted to identify how effective the program was on student knowledge and attitudes towards technology. The computer multimedia program was applied at the Faculty of Education, Sanaa University, in order to improve student teacher attitudes and skills on the use of technology in teaching. The skills that needed improvement were identified and the program specifications were determined. The program proved to be successful in increasing student teacher knowledge on the use of technology. The program proved effective in heightening the skill level of student teachers at using technology devices. However, the program failed in improving the student attitudes towards technology (Abdulghani, 2007).

Khushafa conducted a study (2006) about the needs of Yemeni Universities for computer to improve academic and administrative functions. The targeted audience consisted of college deans and department heads. The study aimed at recognizing the needs of such administrators for computerizing their academic and administrative tasks of planning, organization, supervision, and evaluation. It also aimed at providing a database for the deans and heads to be used for improvement and future planning. The researcher used a questionnaire to collect the data. The questionnaire was distributed to a sample of 65 deans and heads in Aden and Ibb Universities. The study found that college administrators, including deans and department heads, expressed their interest in the use of computer as an administrative tool and a teaching aid. However, there was an apparent lack in the number of computers and the administrators did not have sufficient time to utilize the available ones. He recommended that universities should have had sufficient computers to use in academic and administrative purposes and the administrators should have made use of the available ones at their best. (Khushafa, 2006).

Alsalhi conducted a research study on the computer as a teaching aid and its use in Sana'a University. The study aimed at diagnosing the condition of the computer at Sana'a University and describing the status quo of learning/teaching activities therein. The researcher distributed a survey questionnaire to a sample of 40 respondents. The sample consisted of computer instructors, specialists, and relevant administrators. The most important findings of the study were: 1) Yemeni university teachers were aware of the importance of computer as a teaching aid; but 2) there were some financial and technical difficulties that hindered its use; also 3) the university lacked the technical infrastructure needed for computer use. Overall, the employment of computer in teaching/learning process was weak. The most important recommendations were to: 1) teach computer as a subject matter in all the specializations of the university; 2) train the faculty and relevant educators on the basics of computer; 3) revitalize computer departments and provide computer specialists with incentives and qualification; 4) make use of the already available computer sets; and 5) conduct research on the use of computer in the teaching/learning processes in the university (Alsalehi, 2001).

With reference to the abovementioned studies, there is no specific study that describes the amount of technology Yemeni undergraduate students who belong to different majors of university education prefer to use in their academic courses. Although the study of Basurra and Bamansoor stated that both students and university management had good (though variable) views on technology and the use of mobile learning, students were not involved in technology-related decision making and the study measured student intentions to use mobile learning and did not address student preferences on how much technology to use in their academic courses. While the study of Alkamel and Chouthaiwale focused on ICT availability

and uses in three public universities and some private universities, their study encompassed only one discipline of university education, i.e., English language learning. Al-Ragawi and Zahary stated the general preference of undergraduate students to use technology in their learning. Their study found that 74.4 percent of the respondents had a high desire to use M-learning in their learning process. The finding is general and does not give details pertaining to the different amounts of technology preferences in courses. Another study which has more relevance to this study is Thabit's, which revealed that undergraduates who have positive attitudes about technology impact on courses would be more likely to welcome using technology in their academic activities.

According to the CIA's Facebook, the number of people connected to the Internet in Yemen is 8.06 million (2021 est.) ("Internet Users - the World Factbook," n.d.). This makes the researcher feel optimistic because the introduction of the Internet and the increase in connectivity will help increase Yemeni people's enthusiasm for e-learning and the improvement of learning through supporting it by the use of information technology.

3. Methodology:

The researcher surveyed a remarkable amount of literature on e-learning and information technology employment in education for the purpose of defining the major elements of the study and developing its objectives. The researcher used the term 'technology amount' to refer to the amount of information and communication technology used in academic courses of Yemeni universities.

For the purpose of this descriptive study, the researcher designed a survey questionnaire to gather quantitative data on respondent demographics and to identify student preferences for technology amount to use in their courses. He benefited from Educause Center for Applied Research's (ECAR) longitudinal studies on students and information technology, esp. Kvavik et al (2004), in developing the survey questionnaire (Kvavik, Caruso, & Morgan, 2004). The study's population consisted of 13300 undergraduates. 2275 belong to Al-Saeed University and 11025 to Taiz University who were registered at the relevant majors covered by the study. The population statistics were obtained from the website of Taiz University (taiz.edu) and from the student affairs at Al-Saeed University. The questionnaire was distributed to a random sample of 620 students at Taiz University and Al-Saeed University, both located in the city of Taiz, in 2022. The questionnaire was administered with the cooperation of several student representatives and colleagues from different disciplines. A number of 570 undergraduates responded to the questionnaire. The respondents were proportionately distributed among demographics as reflected in figure 2.

Figure 2: Respondent demographics in percentage
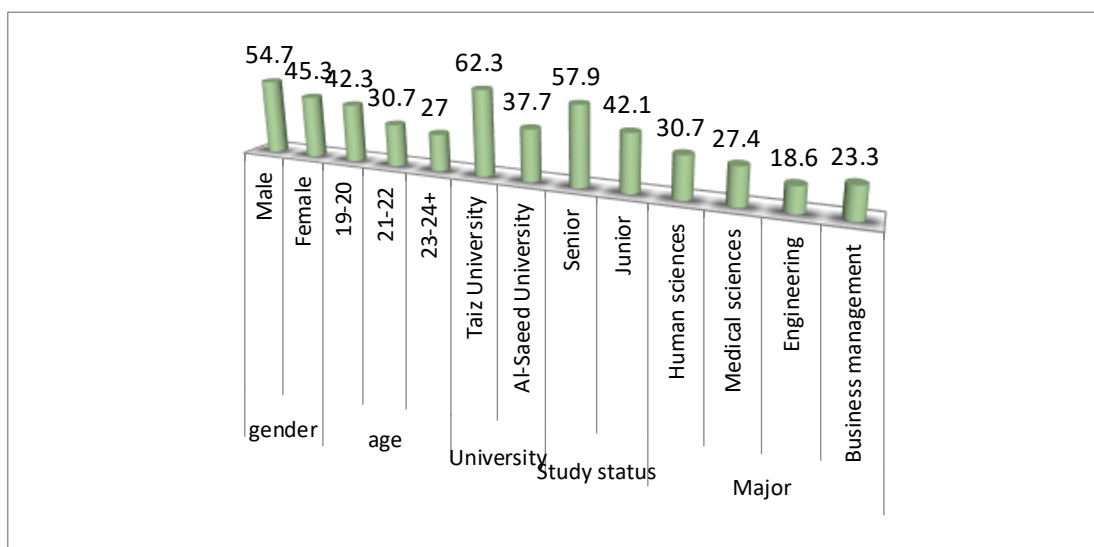
The researcher ranked technology amount as follows: no technology (i.e. no use of technological applications in courses), limited technology (e.g. e-mail to instructors and limited use of PowerPoint in class), moderate technology (e.g. e-mail, several PowerPoint presentations, and some online content), extensive technology (e.g. online lecture notes, PowerPoint presentations, simulations, and video/audio streaming), or exclusive technology (i.e. courses are taken entirely online).The surveyor asked the respondents to answer questions on their demographics and the following question:

Which of the following best describes your preferences?

[ ] a. I prefer taking classes that use no information technology.

[ ] b. I prefer taking classes that use limited technology features (e.g., e-mail to instructors and limited use of

PowerPoint in class).

[ ] c. I prefer taking classes that use a moderate level technology (e.g. e-mail, several PowerPoint

presentations, some online activities or content).

[ ] d. I prefer taking classes that use technology extensively (e.g., class lecture notes on-line, computer

simulations, PowerPoint presentations, streaming video, or audio, etc.).

[ ] e. I prefer taking classes that are entirely "online" with no required face-to-face interactions.

The researcher used SPSS (V 21) to analyze the data collected through the questionnaire.

4. Results and Discussion:

Undergraduate students were asked about how much technology they prefer taking in their courses, using a 5-point scale from "no technology" to "exclusive technology." The researcher assumed that undergraduate students would prefer courses that included a lot of technology, in support of both learning and course administration. Figure 3 shows respondent preferences for the amount of technology to use in their educational courses.
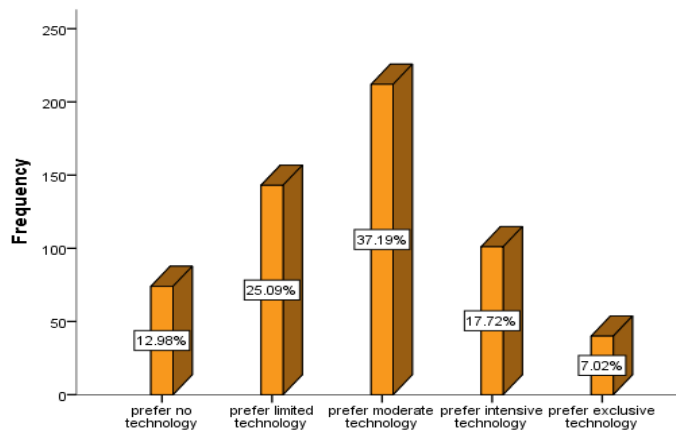
Figure 3: Technology amount undergraduates prefer to use in courses.

Figure 3 indicates that 12.98 percent of the respondents prefer not to take any course that employs technology in its delivery. 25.09 percent prefer to take courses that use limited technology. 37.19 percent prefer to take courses that use moderate technology. 17.72 percent prefer to take courses that use intensive technology. And 7.02 percent prefer to take courses that use exclusive technology in their delivery. The majority of the respondent students (87.02 percent) prefer to take courses that use technology in their delivery. However, undergraduate students preferences of technology amount to use in their academic courses are of different degrees.

4.1 Tech preferences and gender

The researcher assumed that no significant difference existed between male and female respondents in their preferences for technology amount to use in courses. Table 1 gives a picture on gender preferences.

Table 1: Technology preferences by gender

Gender	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Min	Max	F	Sig
					Lower Bound	Upper Bound				
Male	312	2.78	1.137	.064	2.65	2.90	1	5	.568	.451
Fem	258	2.84	1.036	.064	2.72	2.97	1	5		
Total	570	2.81	1.092	.046	2.72	2.90	1	5		

Table 1 shows the calculated mean values of gender. The mean value of females is slightly higher than the mean value of males, at 2.84 and 2.78 respectively. To test whether there is a significant difference between males and females in their technology preferences in academic courses One-Way ANOVA has been conducted. F-value equals .568 and p-value is .451 (>.05). The null hypothesis is accepted. The data express no significant difference between males and females with regard to their preferences for technology use in courses.

4.2 Tech preference and age

The researcher assumed that there was no significant difference among respondents in their preferences for technology amount to use in courses based on their age. technology preference and their age. This variance is reflected in table 2.

Table 2: Preference for technology use in courses by age group

Age grp.	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Min	Max	F	Sig.
					Lower bnd	Upper bnd				
19-20	241	2.66	1.021	.066	2.53	2.79	1	5	5.889	.003
21-22	175	2.81	1.162	.088	2.64	2.98	1	5		
23-24+	154	3.04	1.084	.087	2.87	3.21	1	5		
Total	570	2.81	1.092	.046	2.72	2.90	1	5		

In table 2 the mean values of different age groups are calculated. The mean value of the group 23-24+ is the highest at 3.04 followed by the mean value of the group 21-22 at 2.81. The mean value of the group 19-20 is the lowest at 2.66.

One-Way ANOVA has been conducted to test whether there is a significant difference among the means. F-value is 5.889 (>1) and p-value is .003 (<.05). The null hypothesis is rejected at 5% level of significance. The data show that there is a significant relationship between respondent technology preferences and their age.

To test which of the age groups has the significant differences, LSD has been conducted. Table 3 elucidates this.

Table 3: LSD among age groups

(I) age	(J) age	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
19-20	21-22	-.156-	.108	.148	-.37-	.06
	23-24+	-.383-*	.112	.001	-.60-	-.16-
21-22	19-20	.156	.108	.148	-.06-	.37
	23-24+	-.228-	.120	.058	-.46-	.01
23-24+	19-20	.383*	.112	.001	.16	.60
	21-22	.228	.120	.058	-.01-	.46

*. The mean difference is significant at the 0.05 level.

Table 3 shows that the mean difference between age group 23-24+ and group 19-20 is .383 and the p value is .001 (<.05), which means that the age group 23-24+ has the most preference for technology use in their academic courses.

4.4 Tech preferences and university affiliation

The researcher assumed that there was no significant difference between respondent technology amount preferences on the basis of the university they belong to. Table 4 depicts this assumption.

Table 4: Preference for technology to use in courses by university.

	N	Mean	Std. Devi	95% Confidence Interval for Mean		F	Sig.

			ation	Std. Error	Lower Bound	Upper Bound	Min	Max		
Taiz Univ	355	2.77	1.133	.060	2.65	2.89	1	5	.977	.323
Al-Saeed Univ	215	2.87	1.021	.070	2.73	3.00	1	5		
Total	570	2.81	1.092	.046	2.72	2.90	1	5		

Table 4 shows the mean values of each university. The mean value of Al-Saeed University is 2.87 and the mean value of Taiz University is 2.77.

To verify whether there is a significant difference among the mean values of the universities One-Way ANOVA is conducted. F-value is .977 (<1) and the p-value is .323 (>.05). Thus, the null hypothesis is accepted. The data reveal that no significant difference exists among respondents with respect to technology preference on the basis of the university they belong to.

4.5 Tech preference and study status

The researcher assumed that there was no significant difference between respondent technology amount preferences on the basis of their study status. Table 5 indicates technology preferences by study status.

Table 5: Technology preference in courses by study status

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Min	Max	F	Sig.
					Lower bound	Upper bound				
Senior	330	2.92	1.096	.060	2.81	3.04	1	5	9.158	.003
Junior	240	2.65	1.069	.069	2.51	2.78	1	5		
Total	570	2.81	1.092	.046	2.72	2.90	1	5		

Table 5 shows the mean values of student study statuses. The mean value of senior is 2.92 and the mean value junior is 2.65.

To verify whether there is a significant difference among the mean values of the study statuses One-Way ANOVA has been conducted. F-value is 9.158 (>1) and the p-value is .003 (<.05). Thus, the null hypothesis is rejected. The data reveal that a significant difference exists among respondents with respect to technology preference on the basis of their study statuses. The mean values of senior and junior technology preferences are 2.92 and 2.65 respectively. Thus, students in later stages of their study show more preference for technology use in their academic courses than juniors do. This might be attributed to student increased awareness of the importance of technology as they have grown in their education.

4.6 Tech preference and major

The researcher assumed that there was no significant difference among respondents with regard to their technology preferences based on their majors. This relationship appears in table 6.

Table 6: Technology preference in courses by major

Major	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Min	Max	F	Sig.
					Lower Bound	Upper Bound				
Human Sciences	175	2.59	1.110	.084	2.43	2.76	1	5	4.193	.006
Medical Sciences	156	2.79	1.029	.082	2.63	2.95	1	5		
Engineering	106	2.99	1.151	.112	2.77	3.21	1	5		
Business Management	133	2.96	1.055	.091	2.78	3.14	1	5		
Total	570	2.81	1.092	.046	2.72	2.90	1	5		

Table 6 displays the mean values of different majors. Overall, the mean values range between 2.76 and 3.21 The mean value of engineering is the highest at 3.21 followed by the mean value of business management at 3.14 followed by the mean value of medical sciences at 2.95. The mean value of human sciences is the lowest at 2.76.

To test whether there is a significant difference in the mean values of the major, One-Way ANOVA is conducted. F-value is 4.193 (>1) and p-value .006 (<.05). The null hypothesis is rejected at 5% level of significance. The data show significant difference among respondents in their technology preference based on their different majors.

To test which major has the significant differences, LSD has been conducted. Table 7 shows the comparisons.

Table 7: LSD among majors

(I) major of study	(J) major of study	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bnd	Upper Bnd
Human Sciences	Medical Sciences	-.194-	.119	.104	-.43-	.04
	Engineering	-.396-*	.133	.003	-.66-	-.13-
	Business Management	-.368-*	.125	.003	-.61-	-.12-
Medical Sciences	Human Sciences	.194	.119	.104	-.04-	.43
	Engineering	-.202-	.136	.139	-.47-	.07
	Business Management	-.174-	.128	.174	-.43-	.08
Engineering	Human Sciences	.396*	.133	.003	.13	.66
	Medical Sciences	.202	.136	.139	-.07-	.47
	Business Management	.028	.141	.842	-.25-	.31
Business Management	Human Sciences	.368*	.125	.003	.12	.61
	Medical Sciences	.174	.128	.174	-.08-	.43
	Engineering	-.028-	.141	.842	-.31-	.25

*. The mean difference is significant at the 0.05 level.

Table 7 shows that the mean difference between engineering and human sciences is .396 and the p value is .003 (<.05), which means that engineering students have more preference for technology use in their academic courses than human sciences students do. Table 7 also clarifies that the mean difference between business management and human sciences is .368 and the p value is .003 (<.05), which means that business management students have more preference for technology use in their academic courses than human sciences students do.

Overall, the majority of Yemeni undergraduates have expressed their interest in taking courses that use technology in their delivery at various degrees: 7.02 percent prefer to take courses that have exclusive use of technology, 17.72 percent extensive, 37.19 percent moderate, and 25.09 percent limited. Only 12.98 percent preferred not to take courses that use technology in the classroom. This implies that Yemeni higher education institutions, including the ministry of higher education and public and private universities, should consider promoting the use of technology in classes.

Student preferences for the use of technology in courses varied with respect to their age. Students of age group 23-24+ have the highest preference followed by those of age group 21-22, and finally came the students of age group 19-20. Age group 23-24+ has the most preference for technology use in their academic courses. This might be because students falling in this category have some entrepreneurial or part-time work which hinders them from attending brick and mortar classes. So they need technology support to keep in pace with physical classes.

Also, student preferences for the use of technology in courses differed with respect to their major. Engineering students have the highest preference followed by business management students followed by medical science students, and eventually came the students of human sciences. Both engineering students and business students have more preferences for technology use in courses than human science students. In addition, seniors expressed more preference for technology use in courses than juniors did. This finding shows the importance of technology for engineering and business majors which should be met through providing them with sufficient technological infrastructure to enhance their learning experience.

5. Conclusion

In congruence with the felt importance of technology use in different disciplines, respondents expressed their preferences for the integration of technology in their academic activities. The study results show that only 12.98 percent prefer not to take any courses that use technology while the majority of the respondent students (87.02 percent) prefer to use technology in courses. However, students have differing degrees of preference for technology use in courses: 7.02 percent exclusive, 17.72 percent extensive, 37.19 percent moderate, and 25.09 percent limited. Students who belong to engineering and business management majors show more interest in using technology in their studies compared to other majors. Yemeni higher education institution should promote the integration of technology in students' academic classes. The right balance between technology and face-to-face interaction should be considered by educational decision makers and practitioners in or order to provide the best learning environment for Yemeni undergraduate students.

Further research should be done with regard to e-learning and the employment of information technology in Yemeni educational system whether in primary, secondary, or higher education.

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