From Blackboards to Gadgets: Unveiling Academic Dynamics and Digital Landscapes in Far Eastern University-Manila through the Integration of Technology in Classrooms

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ABSTRACT: The researchers ought to shed light on the importance of educational technology in the student's academic performance by looking into how students perceive the integration of educational technology in Far Eastern University–Manila, aiming to collect insights from 60 students and discuss how these students' perception of the integration of technology affects their familiarity and confidence in utilizing innovative educational technologies. Using quantitative research method, the data were gathered through an online survey questionnaire to collect key insights on how students view technology integrated into their classes. The responses from the survey were analyzed by comparing and correlating their responses and finding their common grounds. Through the data analysis, the findings reveal that many of the students perceive integration of technology as something that is academically advantageous, utilizing diverse educational technologies to make their academic journey easier, more motivating, and more engaging. In the same responses, it is reported that few students still regard educational technology as a limitation that challenges their academic performance, limiting their performance in a way that distracts them from achieving their maximum focus and academic retention. These findings suggest that how students perceive the incorporation of different technological tools and platforms impacts how they perform in their classes by either developing or provoking regression in their capabilities and behavior.

KEYWORDS: classroom engagement, learning experience, learning outcomes, teacher competence, technology-enhanced instruction, traditional classroom instruction

INTRODUCTION

As years pass, society has embraced and advocated for advancements in many ways. Technology, one of the many advancements that have contributed to the development of different industries worldwide, has been taking over and causing changes in people's daily lives. Technology is the scientific knowledge applied to engineer innovations to support practical human needs. There are several types of technologies; there is a technology used to manipulate an environment, generate energy, treat food production, aid constructions for engineering, manufacture modes of transportation, make communication easier and accessible, manufacture products, and aid medical and military fields [6]. These technologies have driven advancement in different fields, allowing the general public to do their professional and non-professional tasks easier [7].

Among the many environments in which technology has been manipulated and redesigned, education is one of the most influenced. Over time, education has undergone different reforms and advancements; from the changes in teaching strategies to the changes in learning spaces, technology has undeniably impacted the teaching and learning environment. It has influenced and reshaped how educators facilitate classes, how students process learning, and how classroom engagement and motivation are enhanced and prioritized. Educational technology has been coined as technology got more engraved and intertwined with the education industry. Educational technology is a form of innovation that augments education to make teaching and assessing students' academic performance less complicated and more efficient while providing a more engaging and motivating learning experience for students [21]. Many classrooms have adapted to these advancements and use technology in teaching and learning strategies.

Despite technology's unshakeable and continuously rising popularity, people overlook its ability to achieve greater things, far more significant than personal merriment. The way the students perceive technology integration in classroom settings varies as some of them have yet to recognize the importance and the ability of technologies to make teaching and learning fun, interactive,

and academically rewarding. Different variables have caused students to perceive technology integration differently, such as the lack of proper introduction to educational technology or teachers' competence to keep up with the newer educational technological trends. This research study explores students' perceptions regarding technology integration in college courses. Discuss how often they use technology in their daily lives, how they think it benefits their learning experience, what challenges they encounter with the integration of technology, what their thoughts about the integration of technology, and how competent their professors are when it comes to integrating technologies during lectures and activities.

Research Objectives
This research aims to:

1. To profile the demographic characteristics of the respondents, including gender, year level, institute, and program affiliation.
2. To determine the frequency of technology utilization among respondents for academic purposes.
3. To enumerate the specific types of technology utilized in respondents' academic settings.
4. To identify the educational applications commonly employed in respondents' classes.
5. To explore the perceived benefits experienced by respondents resulting from the integration of technology in their academic endeavors.
6. To examine the challenges respondents perceive regarding integrating technology in their academic pursuits.
7. To investigate the preferred mode of instructional delivery among respondents.
8. To assess respondents' perspectives on courses that effectively integrate technology and those that do not.
9. To evaluate teachers' proficiency in leveraging technology for instructional purposes.
10. To solicit recommendations from respondents for enhancing technology integration in academic settings.

METHODOLOGY
Data Collection

The study is a quantitative research project whose primary method is to collect numerical and statistical figures to be interpreted to develop generalized outcomes. According to Coghlan & Brydon-Miller (2014), quantitative research or quantitative methodology is a procedure that applies a set of strategies, techniques, and assumptions to investigate psychological, social, and economic activities using numerical patterns. With its nature, quantitative research musters a range of numeric data to develop statistical analysis to show the relationships between the variables and compare aggregated data. Using quantitative methods would allow the researchers to attain the study's aims objectively and unbiasedly, which can be interpreted through statistics and numbers.

The researchers aimed to gather data at Far Eastern University – Manila in this study. Far Eastern University, more commonly known as FEU, is a private, non-sectarian university that has been one of the leading universities in the country since its foundation in 1928. As one of the outstanding institutions in the country, it offers a wide array of professional degrees for undergraduate and graduate studies as well as Junior and Senior High. Also, FEU takes pride in its technological advancement by keeping up with the 21st-century world and incorporating it into its students' education. With these qualities and its commendable profile, the researchers chose this university as it will be able to show how technology is integrated into their classes, which would give the researchers valuable data and insights.

The researchers were able to successfully collect a total of 567 responses from Far Eastern University – Manila selecting ten (10) participants from each of its six (6) institutes namely Institute of Accounts, Business, and Finance (IABF), Institute of Arts and Sciences (IAS), Institute of Architecture and Fine Arts (IARFA), Institute of Education (IE), Institute of Health Sciences and Nursing (IHSN), and Institute of Tourism and Hotel Management (ITHM), constituting to a total of sixty (60) respondents. A survey comprising twenty-two (22) questions that are answerable through multiple choice, ranking, and narrative form were distributed through online social media platforms and face-to-face interaction with students from each institute. After answering the survey, the students showed proof of their submission and were thanked for their efforts. Questions used in this study are in the link provided at the end of the recommendation section.

Data Analysis and Limit

The data from the survey forms disseminated to the FEU students will be analyzed through descriptive and inferential statistical analysis. As described by Hayes (2024), descriptive statistical analysis refers to the analysis, summary, and communication of the results from a data set. This method of statistical analysis is composed of three (3) groups of measures, namely the 1) measures of central tendency, which describes the mean, median, and mode or overall called the centers of the data set; 2) measures of variability or the spread where it expresses the variance and standard deviation or the dispersion of the data; and 3) the frequency distribution where it presents the count of the occurrence of data within the set of figures. Using this method, the researchers will describe and summarize the data set gathered from the surveys to provide a starting point for data analysis. Descriptive statistical analysis can also help researchers outline the data, summarize the central characteristics of the data collected, and advise on selecting suitable statistical methods for supplementary data analysis [18].

On the other hand, inferential statistical analysis is stated by Kalish (2014) as the use of measurements from a study's group of participants to compare their outcomes and draw generalized conclusions about the wider target population. This statistical analysis technique will assist the researchers in proposing interpretations for a condition or phenomenon from the findings of the data mustered. Compared to the descriptive method, which merely summarizes the measured data, the inferential method is fundamentally distinct because it draws inferences based on already-known information or extrapolations. Using both statistical analysis methods, the researchers would be able to create an analysis that not only gives the basic information about the data that highlights their potential relationships but also provides general findings that can be noted as effective and efficient with its population-based conclusion.

In this study, the researchers limited their participants to consider some aspects and preferences. With the integration of technology in classes as the focus of this research, the proponents of this paper limited their study to students only. Participants not enrolled are excluded as it may affect the research results since the paper delves into the perception of the students in the technological integration in classes. Considering the proximity, the researchers noted to accept students who are within the Far Eastern University – Manila walls for participants to be accessible and to make communication with them easier. Students studying at the other nearby Far Eastern University (FEU) branches, such as FEU Tech, FEU High School, and FEU Makati, are also not part of the study. The study is also limited to the six (6) institutes, the IABF, IAS, IARFA, IE, IHSN, and ITHM, excluding the Institute of Law. The number of participants is also limited to ten (10) responses from each institute, a total of 60 from all institutes mentioned. The data gathered beyond the said number are not taken for this research. The study is limited to the perceptions and experiences of the respondents, which are bounded by the limitations. With that, the experiences of those outside Far Eastern University – Manila, not part of the institutes mentioned, and out-of-school individuals are excluded from this study. This study does not generalize the students' experiences towards integrating technology in classes since only the insights within the scope of the paper are discussed.

RESULTS AND DISCUSSION

A. Demographic characteristics of the respondents, including gender, year level, institute, and program affiliation.

Through an online survey, the researchers gathered 576 responses from randomly picked students from Far Eastern University. Here, the researchers extracted 60 responses, gathering ten individuals from each existing institute under Far Eastern University — Institue of Accounts, Business, and Finance (IABF), Institute of Architecture and Fine Arts (IARFA), Institute of Arts and Sciences (IAS), Institute of Education (IE), Institute of Health Sciences and Nursing (IHSN), and Institute of Tourism and Hotel Management (ITHM). As seen in Figure 1.1, there is an estimated 16.7% fraction per institute.
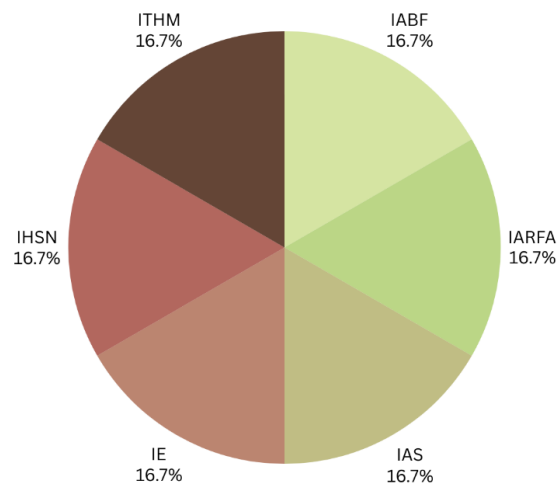
Figure 1.1 Respondents From Different Institutes

Moreover, Figure 1.2 illustrates that most of the responses that the researchers picked came from female participants, with around 55% (N = 33) of responses coming from them. This was followed by 38.3% (N = 23) responses from male participants. The least number of responses came from individuals who prefer not to disclose their sexual orientation, with only 6.7% (N = 4) responses.
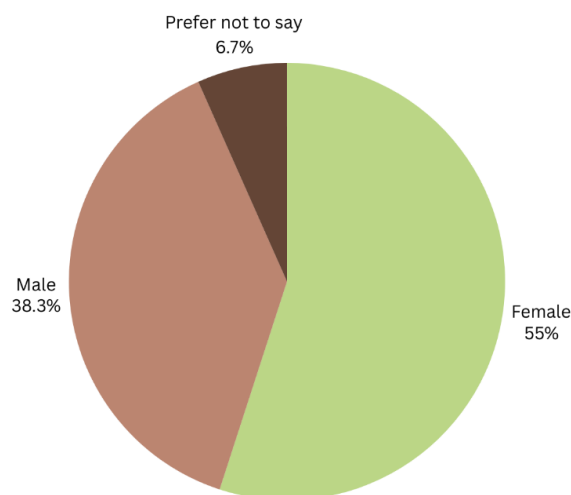

Figure 1.2 Respondent Demographic by Gender

As per their year level shown in Figure 1.3, most responses are from third-year college students, while the minority come from first-year college students. There is 5% (N = 3) from first-year college students, 25% (N = 15) from second-year college students, 56.7% (N = 34) from third-year college, and 13.3% (N = 8) from fourth-year college students.
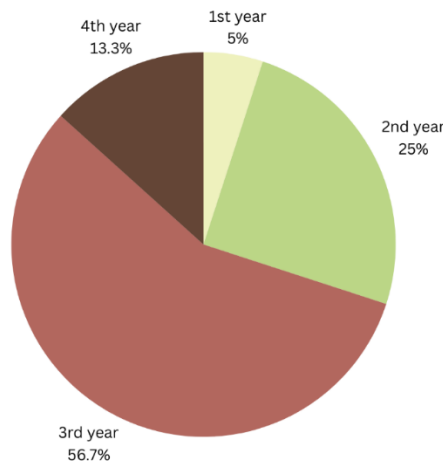
Figure 1.3 Respondents Demographic by Year Level

These individuals come from different programs offered by their respective institutes. Referring to figure 1.4, five (5) participants from IABF are under the Bachelor of Science in Accountancy (BSA), two (2) from Bachelor of Science in Internal Auditing (BSIA), and three (3) from Bachelor of Science in Business Administration (BSBA). Furthermore, all ten (10) respondents from IARFA are in the Bachelor of Science in Architecture (BS Architecture) program. Moreover, respondents from IAS are more diverse as seven (7) of them have a Bachelor of Arts in Political Science (BA Political Science), one (1) from Bachelor of Science in Psychology (BS Psychology), one (1) from Bachelor of Arts in Internal Studies (BA IS), and one (1) from Bachelor of Arts in Communication (BA Communication). Likewise, respondents from IE come from different programs, with six (6) respondents from Bachelor of Secondary Education (BSED) with different majors, three (3) from Bachelor of Special Needs Education (BSNE), and one (1) from Bachelor of Physical Education (BPE). IHSN also houses participants coming from different programs, with eight (8) respondents having a Bachelor of Science in Medical Technology (BSMT) and two (2) having a Bachelor of Science in Nursing (BS Nursing). Lastly, most participants from ITHM came from Bachelor of Science in Tourism Management (BSTM) with eight (8) responses, while Bachelor of Science in Hotel and Restaurant Management (BSHRM) had two (2) responses.
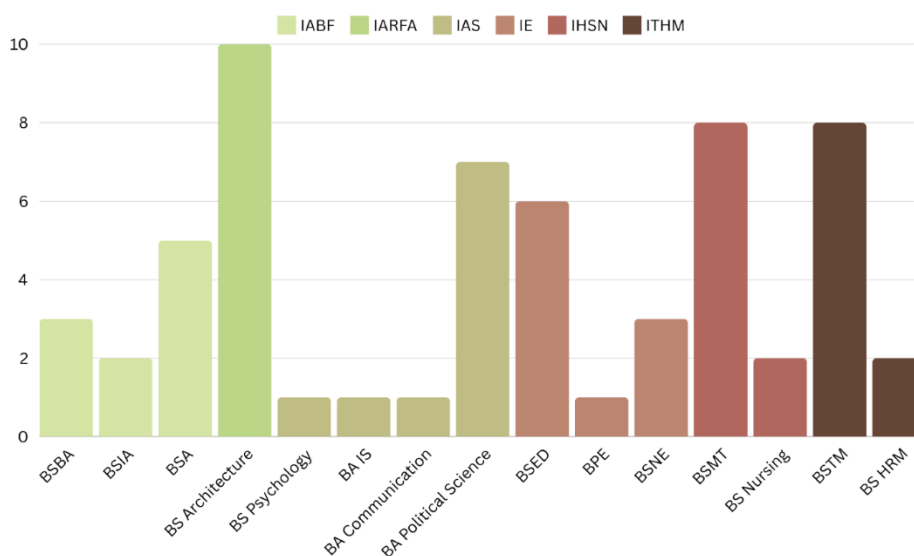

Figure 1.4 Respondents' Demographic by College Programs

B. Frequency of Technology Utilization among Respondents for Academic Purposes.

With the emergence of technology in the 21st century, people continue to use it daily through its incorporation into their work, hobbies, and schooling. Technology is a great help to multiple industries worldwide as it amplifies the services they offer and boosts the quality of work [17]. Technology has reached many people with its massive help in creating a better quality of life. Looking into one of the industries — the education field- technology use here is enormous as people transcend into the age of a new century adapting to its changes. Kalima (2021) mentioned that technology allows new approaches to education that foster the inclusion and growth of learners' digital literacy, extend education beyond the four walls of the classroom, and provide exposure to global online communities for students and teachers. Kalima (2021) also stated that education can now be accessible to everyone as technology extends it to people who want to experience education without access to a traditional face-to-face setup using instructional technology and the execution of distance learning. Education now is not just limited to what happens within the classroom but extends its reach beyond what is tangibly accessible to everyone.

In the survey, the respondents were asked the frequency of their technology usage. Figure 2 shows that the option "always" was picked most, obtaining 95% (N = 57) responses among the choices presented. This was picked by nine (9) students, each from IABF, IE, and ITHM, and ten (10) students, each from IARFA, IHSN, and IAS. Meanwhile, the choice "frequently" came second from the previously mentioned option, where it gained 5% (N = 3) responses and was picked by one (1) student each from IABF, IE, and ITHM. As for the remaining categories — "occasionally" and "rarely," no students voted for these options.
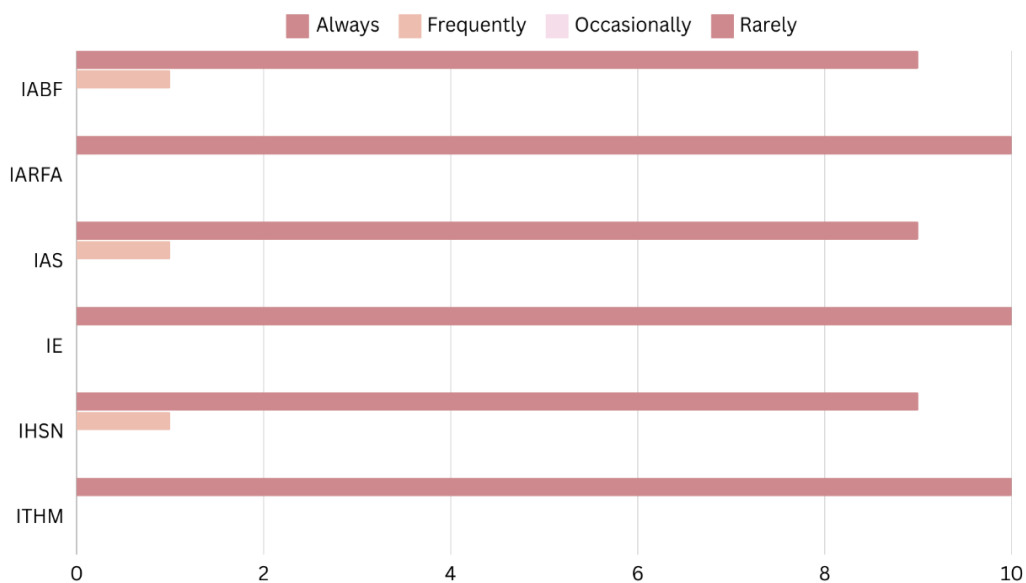

Figure 2. Respondents' Frequency of Using Technology

As shown in Figure 2, students do always use technology. It is undeniable that technology has consumed us as it is part of our everyday life. Whether in our homes, workplaces, personal things, or schooling, technology is present and shares its benefits by making our lives easier. Even if few students voted for "frequently," it may still be deemed that technology has always been used by them whenever they need it. Zero students voted for using technology occasionally or rarely. Therefore, students are always attached to their gadgets and other technological tools; this supports the claim above. Howarth (2023) states that, globally, the average screen time statistics as of 2024 is 6 hours and 58 minutes per day. This is around 7 hours daily. Compared to the daily screen time of 50 minutes per day in 2013, it has expanded to a huge amount of screen time. We can infer that technological advancements may have affected the increase in people's screen time. Technology's help in daily tasks has increased people's use, especially for students who engage in multiple class tasks.

C. Specific Types of Technology Utilized in Respondents' Academic Settings.

In the survey conducted by the researchers, the respondents were asked to rank the type of gadget they typically used in their classes. Figure 3 shows the visual summary of the results. Among the choices in the survey, the "Smartphones" gadget was picked by the students, with a total of 61.7% (N = 37) responses that it was what they used most often among the other three (3) gadgets. Six (6) students chose this from IABF, eight (8) students from IARFA, six (6) students from IE, six (6) students from IHSN, eight (8) students from ITHM, and three (3) students from IAS. This gadget was followed by "Laptop" with a total of 25% (N = 15) responses with two (2) votes from IABF, IARFA, and ITHM, three (3) votes from IE, one (1) vote from IHSN, and five (5) votes from IAS. This was followed by "Tablets," which was able to gather 8.33% (N = 5) having chosen one (1) respondent from ITHM, IE, three (3) from IHSN, while none for IARFA, ITHM, and IAS. Can be seen at the last spot is the "Computer Desktops" obtaining 5% (N = 3) with one (1) vote from IABF, two (2) from IAS, and none from IARFA, IE, IHSN, and ITHM.
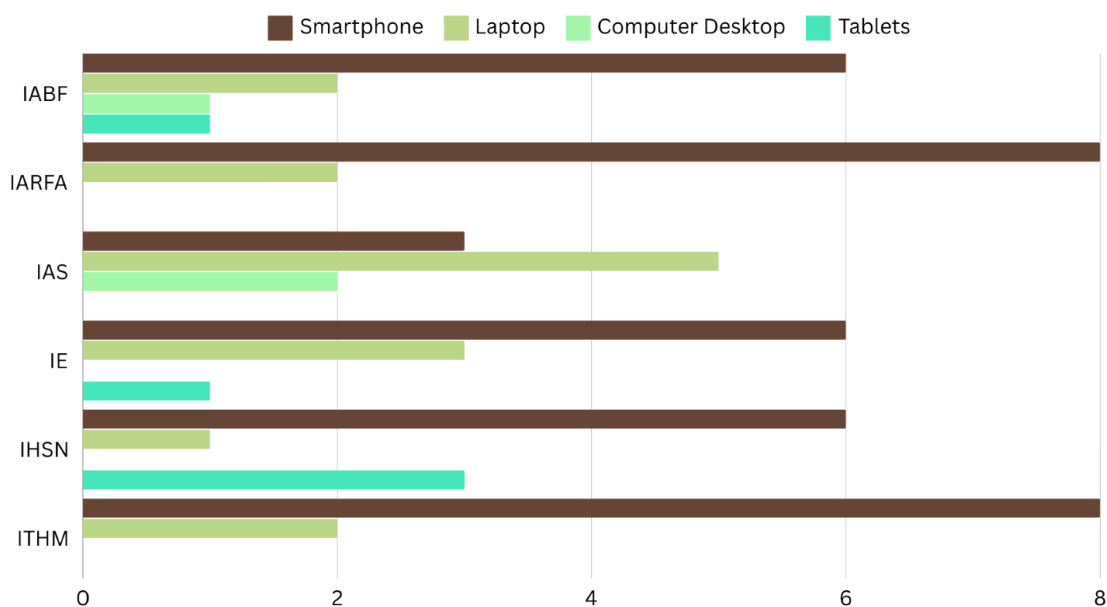

Figure 3.1 Respondents' Frequency and Specific Type of Technology Used

As stated in Figure 3.1, it is visible that many students use smartphones most often in their classes. With the smartphone's accessibility, it is an on-the-go option for every student to do their academic-related agendas and personal life events. Smartphones are so convenient that even with just a few touches, students can access their lectures, create assessments, and talk with their classmates and professors. This data can be supported by Lin (2024), where the author mentioned that as of March 2024, 97.6% of consumers own smartphones, ranking it almost at the top of the survey, being in second place next to any mobile phone with 97.8%. This shows how influential a smartphone can be with many people making use of it, especially for students who have great demands in schoolwork that can be eased with the use of technology.
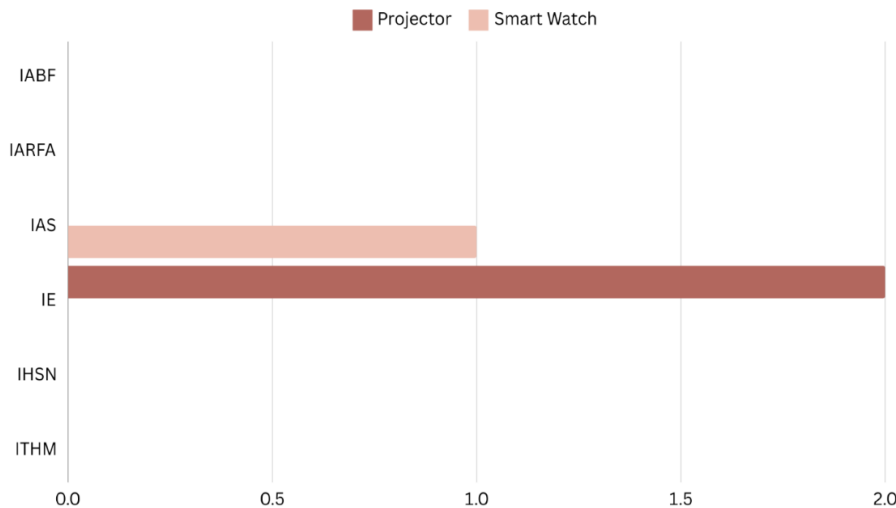
Figure 3.2 Additional Gadgets That Respondents Use

Other than the four options, the students input other gadgets they use that should have been mentioned in the survey form choices, shown in Figure 3.2. The respondents stated that they also use projectors answered by two (2) students from IE and smart watches by one (1) student from IAS. Projectors are present in classrooms in the IE building. This tool is used for PPTs, audio-visual presentations, and lecture discussions during classes. Additionally, smartwatches are like mobile devices with a touchscreen display whose functions are somehow like smartphones but are designed to be worn on the wrist instead of handheld. With its accessibility, students can also use it in their classes.

D. Educational Applications Commonly Employed in Respondents' Classes.

With technology continuously influencing the different industries in the world, companies make their way to penetrate the market by creating tools tailored to the needs of their consumers — the people. Year by year, it can be observed that software businesses worldwide release multiple applications. Turner (2024) discussed that, in 2024, Apple App Store is anticipated to have over 1.83 million apps. A huge number of applications are ready to be downloaded with just a few taps and are used by Apple users. Also, it was mentioned that there are 8.93 million apps available worldwide; this extensive number of applications is a combination of iOS and Android mobile operating systems [22]. With this vast selection of applications, people can easily make their lives easier, especially for students in the current digital age.
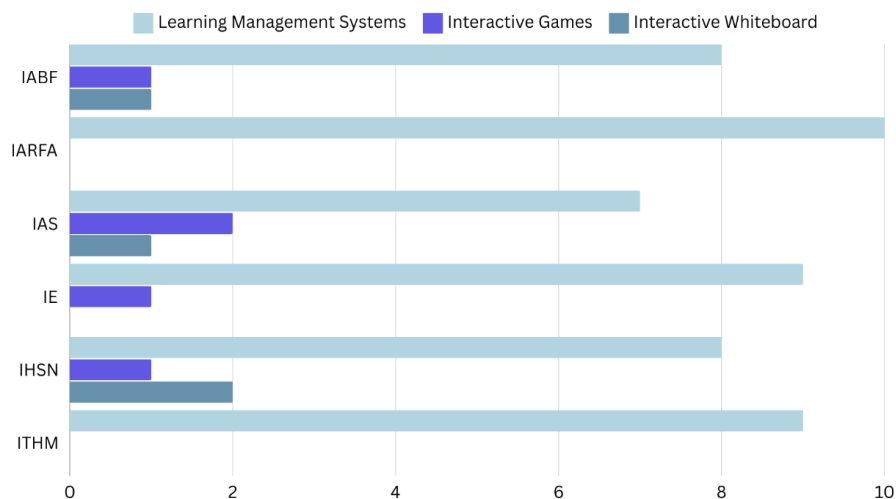

Figure 4. Respondents' Commonly Used Educational Applications

In the survey, the students were asked to rank which applications they commonly employ in their classes among the given choices. In Figure 4, it is shown that among the three choices, the application that is picked most often is "Learning Management System (LMS) (e.g., Canvas, Google Classroom)," with a total of 85% (N = 51) votes. This was chosen by eight (8) IABF and IHSN students, ten (10) IARFA students, nine (9) students from each IE and ITHM, and seven (7) IAS students for the second spot sits the option "Interactive Games (e.g., Kahoot)," obtaining 8.33% (N = 5) votes. One (1) student from IABF, IE, and ITHM contributes to this number and two (2) from IAS. On the least used comes " Interactive Whiteboards (e.g., Jamboard)," containing 6.67% (N=4) with one (1) vote each from IABF and IAS while two (2) votes from IHSN.

The results show that using a Learning Management System (LMS) is popular among the students. Universities usually use LMS for academic purposes such as access to course modules, dissemination of information, and communication between students and teachers. At Far Eastern University – Manila, the school uses an LMS called Canvas. Canvas is a platform for conducting asynchronous classes wherein teachers post modules students use in studying. This tool is also for browsing lectures, receiving announcements from different school offices, and doing many more academic-related activities. Cottle (2023) listed the advantages of using LMS: 1) supports efficient distribution of class materials, 2) provides resources in a variety of formats, 3) parental access to class schedules, outlines, and assessments, 4) enables diverse assessment options, 5) transparency on feedback, 6) provides several communication options, 7) tracking student data, 8) enhances student organization, 9) digitalization of teaching and learning, and 10) transition to remote learning in a heartbeat. Additionally, Cypher Learning (n.d.) further holds up to the benefits of using LMS through these enumerated gains of using LMS: 1) access to learning materials anytime, anywhere — this is essential for conducting flipped classroom and asynchronous classes, 2) centralized education — students locate their materials with ease and get the update version of the document, 3) increased communication — students can collaborate on tasks given even if they are not physically present as well as communicate with the teacher effortlessly, 4) learning becomes more personalized — LMS enables students to study at their own pace, they could take as much time as they need when going through difficult lessons, and 5) time-saving — an LMS shows real-time progress and reports of the students' learning data where they can immediately monitor how well they are progressing with their course. With these benefits, it is beyond doubt why students commonly utilize LMS in their classes, for it gives them convenience and efficiency in studying.

The respondents also input other applications and sites not mentioned in the survey form choices besides the three options. For IABF students, they use Notion, Word, and MS Teams. For IARFA students they mentioned that they use MS Teams, Canva, MS 365, Canvas, YouTube, Canva, and Google Extensions such as Google Docs, Google Sheets, and Google Slides. Next, IE students commented that they use interactive math software like GeoGebra and Desmos, MS Office, Padlet, Google Apps, and Canvas. Furthermore, IHSN students use Goodnotes and Canvas. ITHM students also use Outlook, Gmail, Canva, iPhone, ChatGPT, and entertaining informative videos. Lastly, IAS students used Quora, Canva, Google Scholar, JSTOR, Canvas, and Kahoot. Some applications mentioned by the respondents are already present in the choices, such as Canvas, which falls under the Learning Management System or LMS category, and Kahoot as interactive games. All these applications are significant to the student's educational growth and progress as these assist them in their schooling needs.

E. Perceived Benefits Experienced by Respondents Resulting from the Integration of Technology in their Academic Endeavors.

As technology continuously advances, it has become more beneficial for personal and professional use. According to Cox (2024), technology's impact in classrooms is recognized for its significance in developing students' academic excellence and technological skills. Its benefits are seen through the widespread integration of technology, allowing reform in teaching and learning experiences. Cox (2024) listed several benefits of integrating technologies inside the classroom, saying that technology 1) enhances classroom engagement, 2) prepares the students for the digital world, 3) builds personalized learning experiences, 4) allows students to connect, and 5) increases the teacher and the students' access to digital information.
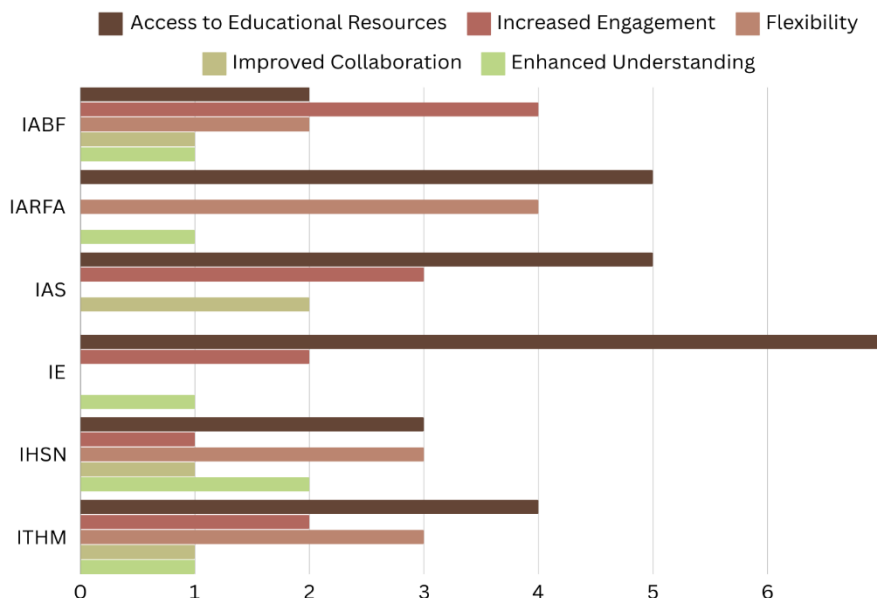
Figure 5. Perceived Benefits of Respondents Regarding the Integration of Technology

In the survey, the respondents were asked to rank the benefits of technology they observed in their classes. In Figure 5, it is visible that, among the choices provided in the survey, one benefit is picked most often by the students, with a total of 43.3% (N = 26) of participants ranking "access to a wide range of educational resources" as what they believe to be technology integration's most significant benefit, two (2) participants pick this from IABF, five (5) participants from IARFA and IAS, seven (7) participants from IE, three (3) from IHSN, and four (4) from ITHM. Followed by 20% (N = 12) from both options, "increased engagement in learning" and "flexibility in learning pace and style." The former option gathered four (4) votes from IABF, none from IARFA, three (3) from IAS, two (2) from IE and ITHM, and one (1) from IHSN; while the latter option gathered two (2) votes from IABF, four (4) from IARFA, none from IAS and IE, and three (3) votes from IHSN AND ITHM. Afterward, another draw from options was "improved collaboration from classrooms" and "enhanced understanding of course material," with 8.3% (N = 5) of the participants picking it as mostly beneficial. The former option was picked by one (1) participant each from IABF, IHSN, and ITHM, two (2) from IAS, and none from IARFA and IE, while the latter option was picked by one (1) participant each from IABF, IARFA, and IE, two (2) from IHSN, and none from ITHM and IAS.

As seen from the result, it is visible that many students think that the integration of technology's most significant contribution to the education industry is its ability to provide access to different variations of educational resources and platforms. Accessibility and availability of technology increase the number of opportunities and new experiences the students are exposed to by allowing them to interact with different learning platforms, giving them the right to acquire knowledge whenever they want, and providing them with innovative ways to develop their critical thinking and problem-solving skills [9]. Despite having fewer votes, the other four options are still considered benefits of integrating technology in the classroom. Educational technology indeed increases engagement, offers flexible teaching strategies, enhances understanding of the material, and prioritizes improving student collaboration.

Besides these five options, the students also input other benefits of integrating technology not mentioned in the survey. The students commented that technology makes complying with school tasks and activities easier. It is also easy to use and readily available, making learning possible anywhere. It is a great assistance for self-directed learning, as well as exercising the students' critical thinking, problem-solving, and communication skills.

F.   Challenges Perceived by Respondents Regarding the Integration of Technology in their Academic Pursuits.

Technology has become a significant tool in people's daily lives. With its benefits in several industries, technology has become necessary for everyone, and people cannot live without it. But despite its crucial role in our existence, technology still bears drawbacks and detrimental impacts. Smith Gambrell Russel Law Firm (2014) listed some of the challenges faced in using technology: 1) data security – personal data could be leaked through the internet, 2) big data – pose great security concerns with data, 3) cloud computing – high security risk and difficulty in managing enormous amount of data, 4) open-source software – could compromise the ownership an online product like software, 5) mobile payments – misdirected payments and unauthorized access to money holding accounts, 6) social media related liabilities – infringement of third-party intellectual property rights when people post contents and noncompliance with online platform policies, 7) wearable computing – privacy and security concerns where anyone may be able to possibly track a person without consent, 8) the internet of things – things offered by internet has drawbacks in terms of privacy issues, 9) virtual currencies – do not fit into the present legal frameworks which may attract criminal acts, and 10) remote automation and control – placement of the liability between the provider and the consumers of technological products such as smartphones is yet to be sorted in a balance way.
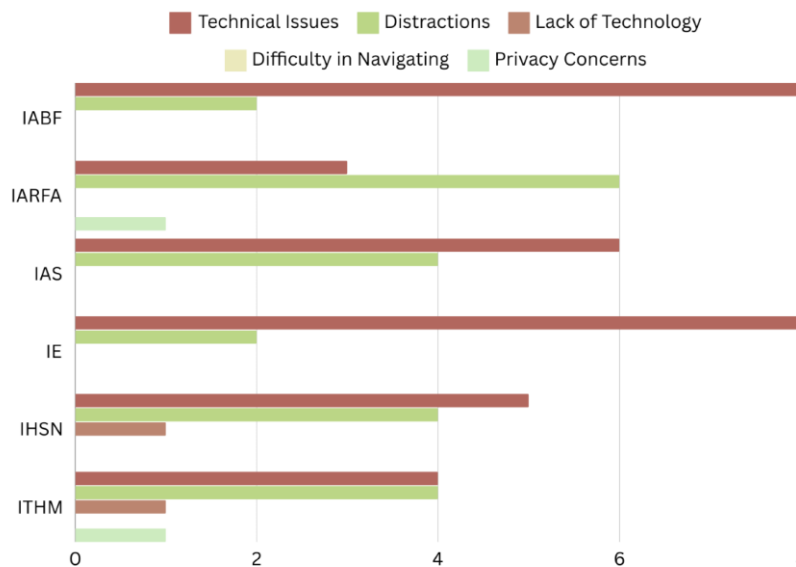

Figure 6. Challenges Encountered by Respondents in Integration of Technology in Classes

Seeing the list, it can be observed that most of the problems faced by technology involve the high risk of data breaches. The long roll of the difficulties encountered in using technology is wider than those mentioned. While these threats mostly stem from the overall use of technology in several industries, education is not a safe place to face challenges.

The survey asked the respondents to rank the challenges they encountered when integrating technology into their classes. Among the choices in the survey, as shown in Figure 6, "Technical issues (e.g., Wi-Fi connectivity problems, software glitches)" was picked by the students, with a total of 56.7% (N = 34) stating it as the challenge that they most encountered. This was chosen by eight (8) respondents from IABF, three (3) from IARFA, eight (8) from IE, five (5) respondents from IHSN, four (4) from ITHM, and six (6) from IAS. This choice was followed by "Distractions caused by technology (e.g., switching from an academic app to a non-academic one)," with a total of 36.7% (N = 22) answers with two (2) votes from IABF and IE, four (4) votes from IARFA, and four (4) votes from IHSN, ITHM, and IAS. Coming behind this option were "Lack of access to required technology/devices" and "Concerns about privacy and data security," where both were able to gather 3.33% (N = 2), each having chosen by one (1) respondent from IHSN, and ITHM, and one (1) from IARFA and ITHM on the latter. Sitting at the last spot is the "Difficulty in navigating digital resources," obtaining zero votes from any institutes.

The "technical issues" that umbrella the problems, such as Wi-Fi connectivity problems and software glitches, are ranked first among the five options. The internet speed in the Philippines is about 92.2 Mbps [20]. Pagkatotohanan (2023) stated that the

Philippines ranked 86th out of 138 participating countries in terms of the average internet speed for mobile devices. However, the country was seen at 42nd place out of 180 countries in average fixed broadband speed. The internet speed of the Philippines is nothing compared to that of its neighboring countries, which ranked in first place with 242.01 Mbps in Singapore, while 215.80 Mbps for China was in second place [16]. With this speed, students would struggle to accomplish their academic tasks and join online classes if they have one. Moreover, given the digital age, there is no doubt that zero students answered "Difficulty in navigating digital resources" as the challenge they faced in technological integration. It can be inferred that students are already experts in using digital devices and resources.

Other than the five options, the students mentioned other challenges they encountered that were not stated in the survey form choices. One (1) student from IABF stated that "consumption of battery use" is also a challenge. In comparison, another (1) student from the same institute said that it is "expensive," which may pertain to the prices of technology used in classes. Three (3) participants from IARFA and one (1) from IHSN input the same challenges from the survey options but more specifically where they stated that social media apps are a distraction for them, the lack of data connection or Wi-Fi, and capability or performance which may be in the context of the gadgets they use. Meanwhile, two (2) students from ITHM mentioned "can cause an unhealthy lifestyle" and "dependency on technology." For IAS, three (3) students stated the same challenges as the students from IARFA and IHSN experienced, stating that the problem with internet connection prevents them from doing their reading and lesson tasks and that technology causes distractions for them. These participants' additional answers manifest the huge problem with the top lister in this survey question – technical issues, specifically the Wi-Fi/internet connectivity and how it affects their studies and classes.

G. Preferred Mode of Instructional Delivery among Respondents.

Like all other new and foreign concepts introduced to the public, opinions will always be divided. Some people see and recognize its benefits, while others see its challenges. Amidst the growing popularity of technological advancement, only some find this change as helpful as it seems. As the survey shows in Figure 7, 18.3% (N = 11) of the respondents prefer traditional classroom instruction over technology-enhanced learning modality. Three (3) of these come from IABF and IAS, two (2) from IARFA and ITHM, and one (1) from IHSN, while no one from IE picks traditional classroom instruction.

These individuals provided reasons as to why they prefer this type of instructional design; most of them argue that it is better to learn in a traditional set-up, with no technology, no gadgets, just the educator and the students directly passing and receiving knowledge, as this approach practices the students' social and cognitive skills. Some of them also argue that technology does more harm than good, as it appears to be a distraction that hinders the fostering of academic knowledge. Others also picked this design because they think technology is not always readily available for everyone. One respondent said,

"Technology is feasible but may not be that effective. Yes, it helps in terms of a wider spectrum of information that we can observe and learn from, but in terms of access, not everyone can have it. Thus, I prefer [traditional classroom design], as it is inclusive for those who lack such things. I want to keep things traditional and just use technology as an "aid" and not become the mainstream."

It seems that these scenarios are not as uncommon as Graceland (2023) listed almost the same reasons as to why integration of technology might not be as beneficial to others given that it 1) distracts students from their academic tasks, 2) gives students too much screen time, compromising their time to interact with their peers socially, 3) does not promote the development of some cognitive skills properly, and 4) is not being utilized well due to the limited or controlled ways it is used in the classroom.
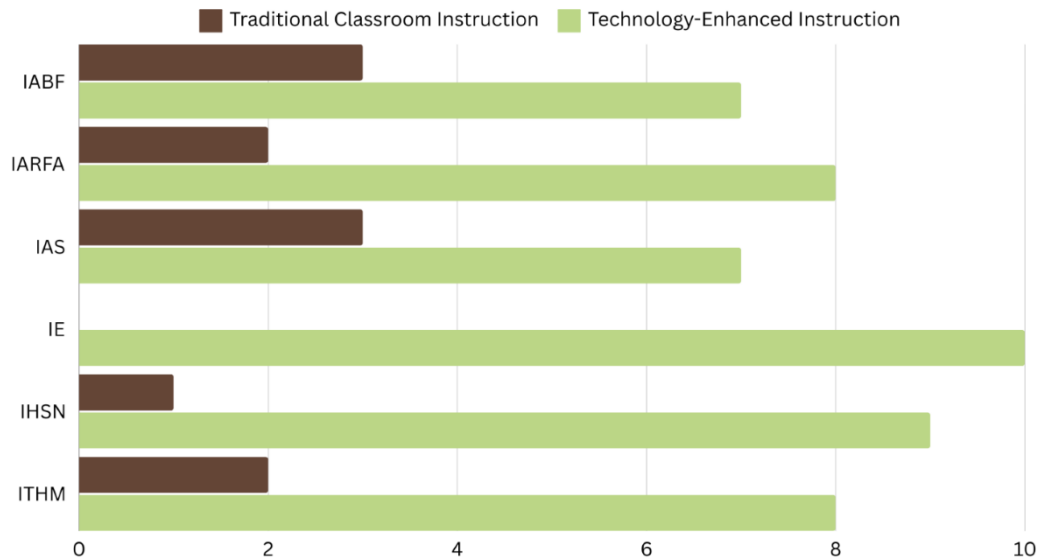
Figure 7. Respondents' Preference on Classroom Design

However, despite these challenges, many recognized its benefits and prefer being in a technology-enhanced environment rather than a traditional classroom. With 81.6% (N = 49) votes from the participants — seven (7) of which come from IABF and IAS, eight (8) from IARFA and ITHM, nine (9) from IHSN, and ten (10) from IE, most of them pick a technology-enhanced instructional design because of the same benefits mentioned above such as providing access to educational resources, being readily available, making the task easier, allowing students to collaborate and socialize with each other, enhancing engagement, promoting flexible teaching strategies, and more. With the numbers presented, it is undeniable how most of the current generation of students lean more toward the use of technology.

H. Respondents' perspectives on courses that effectively integrate technology and those that do not.

Technology's integration in class has improved students' learning. According to Morris (2023), technology helps improve communication and collaboration skills, enhance learning opportunities for pupils, and acquire new abilities. This shows how technology has revolutionized the way students learn currently.

In the survey, students encountered a question that sought to answer which among their current courses best showed technology integration and were asked to explain why. The respondents have various answers ranging from general education (GED) courses to their major courses. Starting with IABF, students mentioned "business statistics," "GED subjects," and "strategic management," with an explanation on the latter that they use e-books because their professor believes that it is more accessible if they answer academic activities such as quizzes in online mode and added that they also conduct online classes and use social media platforms. Like this answer, a student also mentioned how they utilize online tools such as Microsoft Excel to organize financial information and research — the internet is full of information and Kahoot games for collaborative and interactive class activities that make their class enjoyable. A student also said technology makes it convenient to take notes from their class.

In summary, students from IABF find technology relevant to their major and GED courses as it makes learning accommodating and interesting. Moving on to IARFA, respondents mentioned how technology makes communication between teachers and students easier when outside the classroom walls. As architecture students, a participant also mentioned "computer-aided designs" or CAD, "AutoCAD," and "SketchUp" as useful tools aided by technology in creating visuals for their masterpieces. Respondents also stated their major courses, such as "building technology 1," "design," and "calculus" as subjects that they think best manifest the integration of technology through interactive tools that help them understand lessons through visual representations. Onto the next institute, several IE students input how technology is incorporated into their courses, such as its use in making assistive technology for their students with special needs, fusing technology into physical education and health, their course "SEE1120," technology as a tool for studying long readings and use in class presentations and for their research course where

they use it to collaborate with groupmates and surf the internet in crafting their paper. A student also stated the use of technology in their "stylistics and discourse analysis."

Contrary to earlier testimonies, one student said their courses show technology integration. However, it could be applied better. This transcends how technology can be used in classes, but it is not applicable in their course. Next, the IHSN participants discussed how their major subjects — nursing informatics, MT laws, molecular biology, computer-related subjects, and GED course — applied ethics utilize technology in their classes. Respondents wrote that they use technology in the courses above to encode view materials in Canvas — a learning management system used in FEU, conducting blended learning courses where they accomplish asynchronous tasks, take notes, gather and access information, especially for their research, and in running machines used for laboratory classes like imaging systems and thermal cyclers. It is clear how technology is widely used by students from this institute and in the science field. In the ITHM, students shared that technology applies in their MICE (meetings, incentives, conferences, and exhibitions) class, IT and engineering courses, Applied Business Tools, and Amadeus. According to them, technology is used to organize and prepare for events where information and applications are within the reach of their fingertips when needed.

It is also used in the simulation of their future careers where they use online booking of flights in one of their courses. Technology in their course is also being used for doing their research, as stated by one student. Lastly, IAS respondents enumerated that they use technology in the following courses: Political Parties and Interest Groups in the Philippines, Philippine Foreign Relations, Integrated Marketing Communications, and Contemporary Issues in International Development and Cooperation. According to these students, these courses best exhibit technological integration as they require access to information unavailable in traditional resources like textbooks. Technology is also utilized in doing online classes, taking online exams, reaching more reading articles and materials, as visual aids in in-class presentations, using tools like MS Forms, conducting research, and accessing marketing and communication aspects.

The survey also asked the students which of their current courses least shows technology integration in their classes, and they must also explain why. The students have various answers mentioning their GED courses and major ones. According to participants from IABF, the courses that least show the integration of technology are as follows: their major subjects always use e-books as default. A student mentioned that their professor in the "Cost Accounting" course believes traditional learning is more efficient and effective. This leads to not using PPTs in their class and limited updates and online communication. The "Business Law and Regulations" course also stated that they only rely on traditional books since laws existed long before technology became prevalent. A student mentioned the WRP course, saying that technology is not needed much in this course. Other answers include lack of access to required technological devices, distractions caused by technology hindering studying harder, and conducting online classes since not every student has internet or gadgets to join this class delivery mode. To summarize, the traditional approach in education causes the students to experience minimal technology integration in their classes. Onto the next institute, IARFA participants answered "Theory" courses, "Ethics," and "History." "Visual Communication" — because these courses are best taught traditionally, said by a student. Courses such as "Differential and Integral Calculus" — because this course is not entirely dependent on technology, but it still poses beneficial attributes through being able to access resource materials from the internet and the "Engineering" course — traditional approach was implemented were also added. A student also enumerated that in their program, assessments are delivered using manual drafting involving pen/pencil and paper. With technological advancement, they can use tablets with the necessary software while yielding the same results as the traditional pen-and-paper approach. With this, it can be assumed that the student uses technology least in their courses where manual drafting is involved. The nature and actual activities of their program hinder the use of technology since it is not necessary for them to use it. Moving on to IE, a student mentions that there is poor to no technology integration in their classroom instruction since they mostly do manual computations and share concept ideas. "Adaptations in Teaching Math and Sciences" was stated by a student who, in this course, usually does not use technology unless they need to resort to the internet for information about instructional materials. "Educational Research" class was mentioned by a respondent stating that the only manifestation of technology is when the teacher presents using PPT. The respondent also added that they do not use interactive games and whiteboards. Other courses with limited use of technology are "Literary Criticism," "Cell and Molecular Biology," and a special needs education course that was not specified. Diving into the responses of IHSN students, major medical technology courses like "MT Laws" most require traditional classroom lectures to understand the lessons better. The course "Mycology Virology" is more theoretical and uses laboratory materials rather than technology, as said by the respondents.

"WRP," "Education," and "MCN" were the other courses the students inputted. Next, according to ITHM respondents, when technology is integrated into their "Foreign Language" course, terminologies used tend to confuse them. This may mean that translations of words vary from what is being taught in their class and what the internet says, confusing them about the real meanings of the terminologies used. Another course is the "HRM" and "Fundamental on Food Service" course, where they usually do physical work instead of technology and require labor. "Korean Language Class" was also stated by a student whose professor only focused on teaching them using the traditional approach. The "Heritage Tourism" course was mentioned because it focuses on studying historical sites, culture, etc. Technology may have helped unless you are doing a virtual tour. Still, the experience of being a tour guide or a person involved in the subject itself does not require much technological use since it involves physical presence. Lastly, students from IAS mentioned that their courses "Political Parties and Interest Groups in the Philippines," "Introduction to Comparative Politics," "Anatomy and Physiology," and "Integrated Marketing" do not utilize technology in their classes because the information from these subjects is main from traditional mediums such as books. Their "Comparative Politics" course also implements pen and paper modes. A respondent also added that their professor in "International Non-Governmental Organizations" lacks knowledge of technology; even so, they help their professors with access to technology to enrich their knowledge.

Understandably, professors and students may face difficulties blending technology into their classes. Some may need more resources to keep up with the advancements due to a lack of resources, while some are already equipped with knowledge. However, without proper employment in students' courses, their knowledge and skills in using technology in their classes may not develop or deteriorate. Beg (2023) stated that a blend of strategies and activities must be implemented to efficiently utilize technology. A few of the things mentioned are: 1) utilize technology — use tools that would improve time management and productivity, such as calendars and making lists. In other words, use technology whenever it would help, and 2) continuous learning — keep up-to-date with the recent advancements in technology and pick up new learnings on software and tools from it. These strategies emphasized the positive effect of constant use of technology in enhancing a person or students' technological expertise. Moreover, these techniques could be employed in the students' courses to support and show how to integrate technology into classes effectively.

I. Teachers' Proficiency in Leveraging Technology for Instructional Purposes.

The researchers asked the students to rate their teachers' competence when integrating educational technology in their classrooms —with five as the highest possible rating. As shown in figure 8, participants from IABF rate their professors' competence, with two (2) participants rated 5 points, six (6) rated 4 points, and another two (2) rated 3 points. Participants from IARFA also rate their professors, with five (5) of them rating their professors with 5 points, three (3) rated 4 points, and two (2) rated 3 points. Moreover, ratings from the IAS were composed of three (3) respondents, who rated 5 points, five (5) rated 4 points, and two (2) rated 3 points. Furthermore, for the participants in IE, two (2) rated 5 points and 3 points, respectively, while five (5) rated 4 points, and one (1) left a 2-point rating. As per IHSN, most of them have higher ratings for their professors as five (5) of them give 5 points, four (4) give 4 points, and only one (1) left a three-point rating. Lastly, for ITHM, three (3) left a rating of 5 points and 4 points, respectively, while the other four (4) left a rating of 3 points.
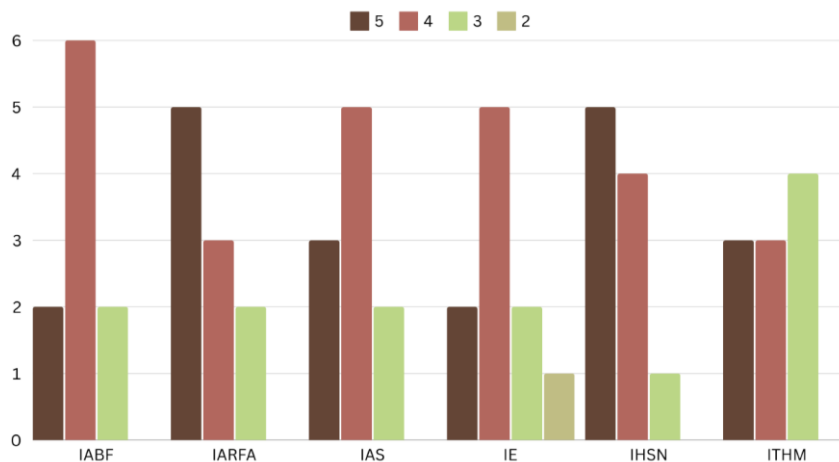

Figure 8. Respondents Rating Their Teachers' Competence in Integrating Technology

There is a total of 33.3% (N = 20) respondents who have ranked their professors with the highest possible score (5 points) regarding the teacher's competence in integrating technology. Students reason that their professors master integrating technology in the classroom, using available technologies to make the teaching and learning experiences more fun, engaging, motivating, and interactive, which means that many professors at FEU showcase competence in their courses by maximizing the utilization of educational technology in their classes. On the other hand, with 43.3% (N = 26) of the picked population, most of the participants rank their professors as slightly less competent (4 points) as not all of their professors show competence in integrating technology in their classes. Moreover, there is also 21.7% (N = 13) of the population rates their professors as average (3 points); some of them justify their rating as having a neutral opinion on their professors' competence, while others reasoned that most of their professors utilize technology but not efficiently. Lastly, one (1) participant, taking 1.7% of the rating, gives a 2-point rate for her professors; she reasoned that the integration of technology in most of her classes only sums up to educators using PowerPoint Presentation, "which one can hardly call "integration of technology" she adds.

J. Solicit Recommendations from Respondents for Enhancing the Integration of Technology in Academic Settings.

Before concluding the survey, the researchers asked the students if they had suggestions or additional comments for improving educational technology integration in the school community. Around 60% (N = 36) of them left comments. Six (6) participants from IABF commented that educators should undergo training or seminars to keep up with innovative technologies and learn how to apply them in their classes. Additionally, their concerns fall under the inconsistency and unavailability of internet connection in some buildings and classrooms. They suggest that these should be prioritized if technology integration is being advocated in the school.

Four (4) participants from IARFA voice a different suggestion, as one of them suggests that the use of technology in classes should be limited. This is followed by a suggestion by a different participant arguing that educators should recognize the digital divide before advocating for technology integration. Not everyone has the privilege to have "necessary gadgets" used in the digital age of education. In contrast to the first two suggestions, the other two suggest widening the incorporation of technology in the university. One participant suggests using virtual reality (VR) to help architecture students visualize their designs better. He argues that this will also train them with spatial recognition, an important concept these students need to grasp. The other participants suggest creating an educational platform that provides organized and easy-to-manage space for the students to review, especially at events where students take important exams.

Five (5) participants from IAS provided significant suggestions they want to be implemented in the university to maximize the potential of technology integration. Their suggestions included 1) asking professors to upload learning materials before discussion to allow students to read in advance, 2) utilizing online interactive whiteboards during classes to maximize collaboration and sharing of ideas, 3) hosting seminars for both teachers and students to inform them about new technologies and how to utilize them properly, and 4) solidifying existing technologies used in the university by providing better security of data privacy.

Ten (10) participants from IE also voiced their suggestions to maximize educational technology integration. Their suggestions involve proposals where they want educators to go beyond the "average" use of technologies. They encourage educators to elevate their teaching strategies by implementing diverse technologies and not just using the usual software like word processors and presentations. Moreover, the participants also suggest that universities should implement better policies for the extent of using Artificial Intelligence (AI), as some educators and aspiring educators practice using AI as a tool rather than regard it as an enemy of the academic field. The participants also suggest that schools provide stable internet access and updated digital technologies like projectors and devices inside the classroom. Additionally, they share their comments on how technology should be implemented not just in higher education but should be introduced at earlier stages of education to enhance discussions and deepen the lessons.

Five (5) participants from IHSN suggested that the university should provide faster and more accessible internet connections on campus, allow students to use personal gadgets in the classroom while the class is ongoing, and use hybrid learning in classes where possible.

Lastly, six (6) participants from ITHM have the same suggestions mentioned earlier. They want to have accessible internet connections available for everyone in every corner of the campus, seminars or training for teachers to help them maximize the use of technology in their classes, enhancing interaction and engagement in the classroom with the use of diverse educational technologies, and balancing the use of technology in the academic routine.

CONCLUSION

In summary, technology has become an inescapable phenomenon that people would never be able to survive without. Its emergence into the 21st century has drastically changed how humans live. In medicine, marketing, economics, politics, and all industries, technology took part in their amelioration and enhancements to be better for the people's interests. On the other hand, technology's beneficial attributes extend to the education field through its incorporation into the schools and the education stakeholders. Technological advancements are implemented in education, particularly for Far Eastern University – Manila learners. With the university being well equipped with the necessary mediums for technological integration, it can keep up with the education instruction needs of the students and teachers, thus making them globally competitive in the use of technology.

Using the study conducted by the researchers, the role of technology in education was illuminated and highlighted to see how crucial its part is for the members of the education field. This study underscores the significance of educational technology in learners' academic performance by diving into how they perceive the incorporation of technology in education. The role of technology in enhancing students' learning experience is evident in the research survey. Most students who answered the survey stated that they always use technology, specifically mentioning smartphones as the most used gadget and learning management systems or LMS as the most used application. Respondents also identified that access to a wide range of educational resources is the most significant benefit of technology since the accessibility of technology opens the door for opportunities to use various learning platforms, providing them with knowledge that is not limited to the available traditional resources. The challenges perceived by the students were also discussed in this research, where it was determined that technical issues (e.g., Wi-Fi connectivity problems and software glitches) were the main difficulties they encountered when using technology. Given the low ranking of the Philippines in terms of internet speed, it is unsurprising why students experience this problem the most. According to this study, students prefer technology-enhanced instructional delivery due to its benefits, such as access to educational resources, being readily available, enhancing engagement, and many more. However, despite the advancements in technology, some students still prefer traditional classroom instruction because of their experience of better learning in this instructional delivery. With technology infiltrating the institution, the participants identified which course best and least integrated it into their classes. Various answers appear where students mentioned the courses that best manifest technological integration, such as Business Statistics, General Education, and architectural courses involving computer-aided designs.

On the other hand, students also stated the courses that least exhibit technological integration, some of them are Cost Accounting, Business Law and Regulations, Introduction to Comparative Politics, and Visual Communication, since this course uses manual drafting tools. Despite its beneficial attributes, technology has yet to be fully implemented in the classes due to the traditional teaching approach and the lack of competency in terms of technological usage by some professors. Due to this, technology could be employed better in their classes. In connection with this, teachers were also evaluated on their proficiency in leveraging technology for instructional purposes. With 5 being the highest possible score, participants from each institute rated their teachers. Five raying marks show the professor's competence in using given technologies to provide students with a good teaching and learning experience. Most students ranked their teachers a 4 rating, which signifies that, according to them, their professors are slightly competent. At the end of the survey, the researchers solicited suggestions or additional comments from students for improving educational technology integration. While over half the population left no comments, some students shared their insights. Some mentioned that educators should undergo training or seminars to keep up with technological changes and innovations and apply these new experiences to their classes. Others raised their concerns about utilizing the available resources to implement technology in the class.

Technology left a lasting mark in every person's life. With its wide spectrum of uses, it remains a valuable tool for today's and tomorrow's people. As the world dives into the deeper depths of the exploration of the limitless potential of technology, people should still be cautious of its drawbacks to avoid causing harm that is not limited by just physical. The emergence of technology in the new century also comes with harm, such as cybercrimes, especially toward educational stakeholders. With that, awareness of the proper usage of technology plays a crucial role not just for the students but also for the teachers and professors who facilitate their pupils' learning. This paper provided massive amounts of information regarding the integration of technology in the classes of Far Eastern University – Manila students but does not generalize the experience of all the students in any university. FEU employs its system and capabilities to provide for the educational technology of its students. Therefore, the experiences and perspectives of the participants discussed in this study are unique to them and differ from other institutions.

RECOMMENDATION

This research study aims to shed light on how students perceive the integration of educational technology by focusing on discussing how frequently students use technology for academic purposes, what technology they use, what the benefits and challenges they recognize with the integration of technology, what instructional design students prefer, what college courses effectively integrate educational technology better, how competent current educators are, and suggestions from students to improve the integration of educational technology more. Based on the findings gathered through this study, a few actions are recommended to be considered further to improve the effectiveness and efficiency of educational technology integration.

Implementing technology training for teachers and students is a suggested action an educational establishment could take. The findings mention that there are still challenges that students and educators face when implementing technology in the classroom. Several students need to appreciate or recognize the potential of technology-enhanced instructional design, and educators need to be more competent when implementing technology in their classes. The mentioned challenges and limitations of technology integration in the classroom could be addressed by the administration of far-reaching technology training sessions for educators and students. The technology training would provide learners and educators with enough knowledge to help them recognize the potential of technology in making learning more effective and engaging; it could also boost their confidence in exploring and experimenting with different educational tools and technologies, provoking improvement in their classroom engagement and teaching strategies.

Moreover, to improve the research and gather more findings, it is recommended that the study be continued regarding the teachers' perceptions of integrating technology in the classroom. As this research focuses solely on students' perceptions of technology integration in different college course classes, the findings from this study could only be accountable for the student's perspective. Having a different study focusing on teachers' perspective —focusing on how integrating technology inside the classroom could affect the educators' teaching practices and their ability to achieve students' learning goals— would make stronger claims on the importance of integrating and maximizing the use of educational technology in different college courses.

For future studies, you may use the questionnaire in the following link: (*https://docs.google.com/document/d/e/2PACX-1vRzJTgkdPzprpYnYAcArYVSlCfkMLJ_xdBW82Ydkm83O7jMqnKx7dDTi1NnQDCdSg/pub*).

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REFERENCES

1. Beg, S. (2023, August 8). How to use Technology effectively and in a Efficient manner. https://www.linkedin.com/pulse/how-use-technology-effectively-efficient-manner-sadaf-beg
2. Coghlan, D., & Brydon-Miller, M. (2014). The SAGE Encyclopedia of Action Research. In SAGE Publications Ltd eBooks. https://doi.org/10.4135/9781446294406
3. Cox, J. (2024, February 23). Benefits of technology in the classroom. TeachHUB. https://www.teachhub.com/technology-in-the-classroom/2019/11/benefits-of-technology-in-the-classroom/
4. Cottle, P. (2023, August 21). 10 Benefits of using Learning Management Systems in K–12 Education. Schoolbox. https://schoolbox.education/blog/10-benefits-of-using-learning-management-systems-in-k-12-education/
5. Cypher Learning. (n.d.). Infographic: Top 5 LMS benefits for K-12 students » CYPHER Learning. https://www.cypherlearning.com/resources/infographics/academia/top-5-lms-benefits-for-k-12-students

6. Encyclopedia Britannica. (2024, April 24). Technology | Definition, examples, types, & facts. https://www.britannica.com/technology/technology

7. Ford, A., Cena, C., & Wood, D. (2023, November 21). Technology | definition, types & forms. study.com. https://study.com/academy/lesson/what-is-technology-definition-types.html

8. Graceland. (2023, June 13). 8 pros and cons of integrating technology in the classroom. https://www.graceland.edu/blog/8-prosand-cons-of-integrating-technology-in-the-classroom/

9. GoGuardian. (2023, July 11). Equitable access to technology for students & educators. https://www.goguardian.com/blog/equitable-access-to-technology

10. Hayes, A. (2024, April 26). Descriptive Statistics: Definition, Overview, types, and example. Investopedia. https://www.investopedia.com/terms/d/descriptive_statistics.asp

11. Howarth, J. (2023, December 4). Alarming average screen time statistics (2024). Exploding Topics. https://explodingtopics.com/blog/screen-time-stats

12. Kalima. (2021, November 1). Why technology is essential to the education of the 21st century? Kalima - Arabic Online Learning Platform. https://kalima-lessons.com/why-technology-is-essential-to-the-education-of-the-21st-century/

13. Kalish, C. W., & Thevenow-Harrison, J. T. (2014). Descriptive and inferential problems of induction. In The Psychology of learning and motivation/The psychology of learning and motivation (pp. 1–39). https://doi.org/10.1016/b978-0-12-800283-4.00001-0

14. Lin, Y. (2024, March). Most Popular Electronics Worldwide. Oberlo. https://www.oberlo.com/statistics/most-popular-electronics

15. Morris, A. (2023, February 22). How has technology changed education for schools? https://blog.teamsatchel.com/technology-in-education

16. Pagkatotohan, J. (2023, May 18). Internet in the Philippines: Its Current State, Plus Top Providers. Moneymax. https://www.moneymax.ph/lifestyle/articles/internet-philippines

17. Sagar, P. (2022, February 16). 7 Uses of technology in 21st century life. https://www.linkedin.com/pulse/7-uses-technology-21st-century-life-paresh-sagar

18. Simplilearn. (2023, October 19). What is Descriptive Statistics: Definition, Types, Applications, and Examples. Simplilearn.com. https://www.simplilearn.com/what-is-descriptive-statistics-article

19. Smith Gambrell Russell Law Firm. (2014, January 10). 10 Technology challenges - SGR Law. SGR Law. https://www.sgrlaw.com/ttl-articles/10-technology-challenges/

20. Statista. (2024, February 22). Internet connection speed Philippines 2023, by type. https://www.statista.com/statistics/1155438/philippines-internet-connection-speed-by-type-2019/

21. Top Hat. (2022, November 23). Educational technology. https://tophat.com/glossary/e/educational-technology

22. Turner, A. (2024, April 8). How many apps are on the App Store (2024). BankMyCell. https://www.bankmycell.com/blog/number-of-apps-on-apple-app-store/