EASE OF USE OF DIGITAL PLATFORMS FOR EDUCATIONAL PURPOSES: PERCEPTION OF SECONDARY SCHOOL STUDENTS, TEACHERS AND ADMINISTRATORS

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ABSTRACT

The aim of this paper was to ascertain the perception of teachers, students and administrators concerning the ease of using certain digital platforms that were adopted during the lockdown period necessitated by the Covid-19 pandemic in Port Harcourt Local Government Area (PHALGA), Rivers State, Nigeria. Descriptive Survey Research design was adopted for this study. The sample size was seven hundred and forty-two (742) stakeholders which comprised four hundred and nine (409) students, two hundred and ninety-seven (297) teachers and thirty-six (36) administrators from thirty-two (32) private secondary schools. Multistage sampling procedure was employed using different sampling techniques. Three questionnaires (Teachers' E-learning Practice Questionnaire (TEPQ), Students' E-learning Practice Questionnaire (SEPQ) and Administrators' E-learning Practice Questionnaire (AEPQ)) were used to collect data. The reliability index calculated using Cronbach alpha for TEPQ, SEPQ and AEPT was 0.90, 0.78 and 0.91 respectively. The data were analysed using frequency, percentages, mean, standard deviation and chi-square test of independence. The findings revealed that the digital platforms identified in this study are easy to use for teaching, learning and administrative purposes. In addition, gender influenced the perception of teachers and students at a statistically significant level. However, it was not the case for administrators. The researchers therefore recommended that there should be trainings and support available on how the digital platforms should be used to make it easy to use. In addition, at the school level, digital platforms that centralise tasks by featuring tools that help teachers to teach, students to learn and administrators to carry out their administrative duties should be adopted.

KEYWORDS: *Perceived ease of use, Secondary education, Digital platforms*

INTRODUCTION

At some point in history, several countries were plagued with a pandemic known as Covid-19 caused by the Coronavirus in the year 2019. Nigeria was also affected; the first case discovered in Lagos on the 27th of February, 2020. Overtime, the disease spread across the different states of Nigeria. As at the 3rd quarter of 2021 in Nigeria, there were over one hundred and seventy-six thousand, five hundred and seventy-seven (176,577) confirmed cases; one hundred and sixty-five thousand, three hundred and thirty-three (165,333) discharged cases; and two thousand, one hundred and seventy-eight (2,178) deaths (Nigeria Centre for Disease Control (NCDC), 2021). Curbing the spread of the corona virus required both medical and behavioural remedies. The medical remedies included the administration of medical treatment in using the covid-19 vaccine, while the behavioural remedies included washing of hands, sanitizing of hands, wearing of nose mask, avoiding crowded places, social distancing, to mention few.

One of the consequences of the pandemic in Nigeria was the lockdown of schools as a means of limiting crowded gatherings to reduce the rate at which the disease spreads. During the lockdown period, some private secondary schools were able to continue teaching and learning activities. However, given the circumstances of no room for face to face modalities, they were forced to operate using online learning modalities. Online learning requires the use of digital platforms, gadgets and internet connectivity. Digital platforms include

social media platforms, video conferencing apps, digital assessment apps, learning management systems, to mention few. Technology such as digital platforms are enablers in online learning (Aparico et al., 2016).

According to Anderson (2010), there are certain digital literacy skills that are required to effectively function when using online learning modalities. They include using ICT skills to create and share information; searching, sifting, scanning, and sorting information; navigating through screens of information; locating and evaluating information; using ICT to research and solve problems; making multimedia presentations; retrieving, organizing, managing, and creating information; sending and receiving messages. The introduction of new technologies usually involves some form of change for users (Nov & Ye, 2008). Digital platforms usually feature tools that help users exercise these skills. The level of difficulty in using different digital platforms may vary as different platforms have their mode of operations.

LITERATURE REVIEW

The Technology Acceptance Model (TAM) developed by Fred Davis in 1985 stated that one of the key determinants of technology acceptance is Perceived Ease of Use (PEOU) (Alshammari & Rosli, 2020; Huang et al, 2020). In developing the TAM model, Davis adapted the Theory of Reasoned Act (TRA) (Attitude and subjective norm) and the Theory of Planned Behavior (ease or difficulty in using a technology) (Jimenez et al., 2021). Hamid et al. (2016) and Okumuş et al. (2016) stated that perceived ease of use (PEOU) is the degree to which a person believes that using a technology will be free from effort. If a system is relatively easy to use, individuals will be more willing to learn about its features and finally intend to continue using it. The researchers defined perceived ease of use as the degree to which teachers, students and administrators believe that the digital platform(s) can be used effortlessly for their respective tasks. Jimenez et al. (2021) noted that PEOU are affected by external and context-dependent factors. Abdullah et al (2016) noted that the best predictor of Perceived Ease of Use of technology such as an e-portfolio is Experience. Perceived ease of use plays a critical role in predicting and determining a user's decision to use an information system. Users perceive a system easier to use as they gain more knowledge and confidence through direct experience in using the system (Hackbarth, et al, 2003). Studies indicate that PEOU is positively associated with continuance intention in the context of online learning (Brown, 2002; Hackbarth, et al, 2003; Fagan et al, 2008; Hamid et al, 2016).

One of the comprehensive extensions of TAM which considers factors that influence PEOU is TAM 3 developed by Venkatesh and Bala in 2008 as shown in figure 1.
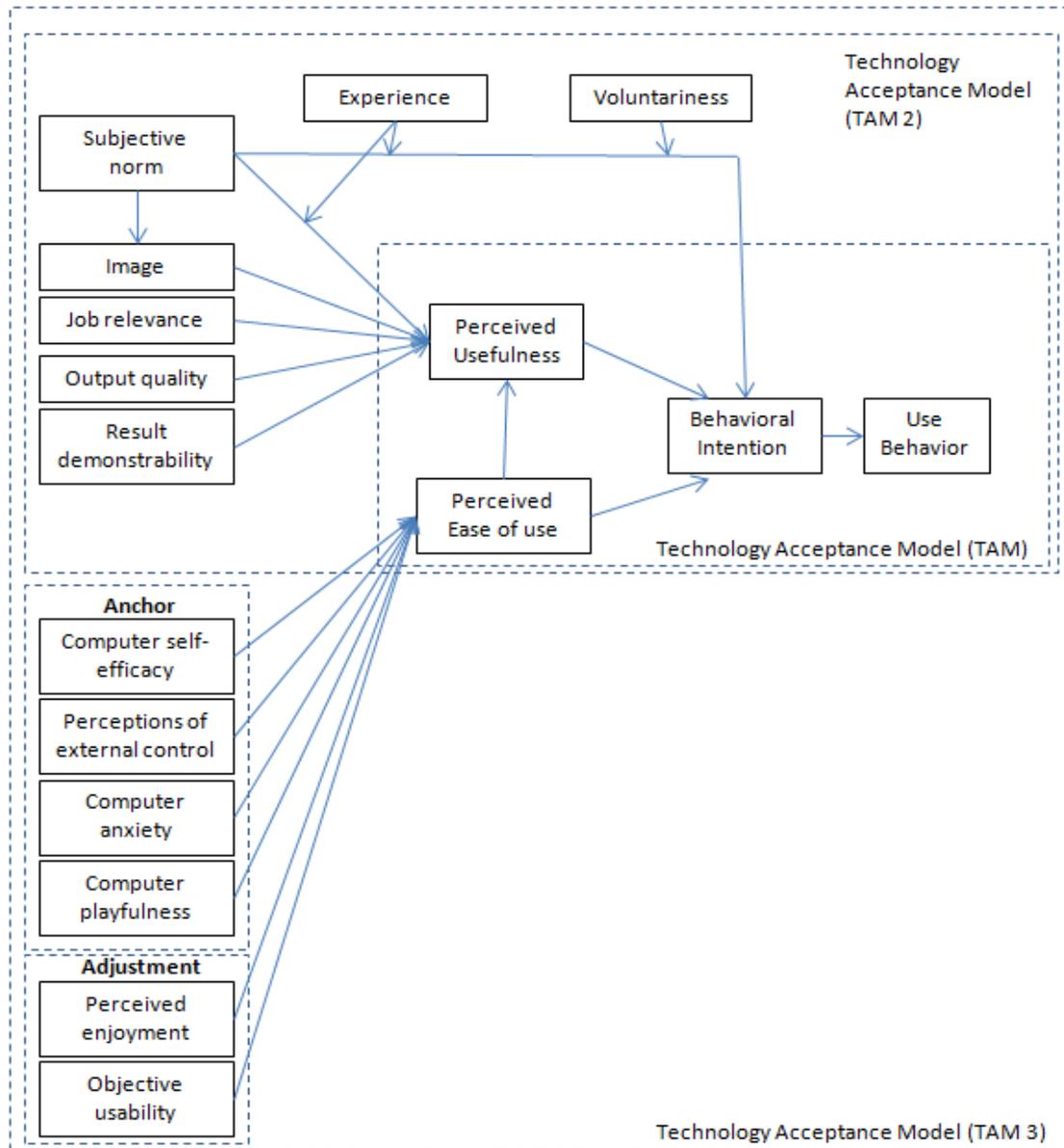
Figure 1: Technology Acceptance Model (TAM 3)

Source: https://www.bing.com/images/

Okumuş et al. (2016) stated that perceived usefulness is indirectly influenced by perceived ease of use. In other words, people can perceive a software as not useful if it is not easy to use. Gefen and Straub (2000) noted that PEOU relates to assessment of the intrinsic characteristics of the digital platforms such as the ease of use, ease for learning, flexibility, and clarity of its interface. Şahin, and Dursun (2022) indicated that high self-efficacy can positively influence a person's ease of use of a technology. They also noted that self-efficacy is closely tied to self-confidence and competence. Huang et al (2020) noted that students' perception of external control significantly influenced their perceived ease of use of the internet for learning. As different digital platforms can be used to implement online learning, the acceptance of these digital platforms may vary. It is therefore important to consider the factors that influence teachers, students and administrators' perceived ease of use of digital platforms based on their experiences with such platforms. This

can guide recommendations for trainings and support structures. In this study, PEOU was measured using a 4-point Likert scale of Very easy, Easy, Difficult and Very difficult.

PROBLEM STATEMENT
The predominant mode of secondary schools' operation in Port Harcourt, Rivers State, Nigeria is the traditional face-to-face system. Although some teachers, students and administrators may have been using certain digital platforms for social and personal purposes or even for academic purposes at a somewhat personal level, the integrated use of digital platforms at the school level may be novel to teachers, students and administrators. Finding out the areas where teachers, students and administrators find the digital platforms difficult to use will highlight learning gaps and training needs. It was important to investigate the ease of use of certain digital platforms adopted for teaching, learning and administrative purposes as it will serve as an indication of their continuous use. This can affect the overall state of e-learning implementation in secondary schools and strategies of advocating for technology integration.

AIM AND OBJECTIVES
The aim of the paper was to ascertain teachers, students and administrators' perceived ease of use of digital platforms for their respective tasks. The specific objectives were to:
1) Ascertain teachers' perceived ease of use of digital platforms for teaching.
2) Find out students' perceived ease of use of digital platforms for learning.
3) Determine administrators' perceived ease of use of digital platforms for administrative purposes.

RESEARCH QUESTIONS
1) What are teachers' perceived ease of use of digital platforms for teaching?
2) What are students' perceived ease of use of digital platforms for learning?
3) What are administrators perceived ease of use of digital platforms for administrative purposes?

HYPOTHESES
1) Teachers' perceived ease of use of digital platforms for teaching is not significantly dependent on their gender.
2) Students' perceived ease of use of digital platforms for learning is not significantly dependent on their gender.
3) Administrators' perceived ease of use of digital platforms for administrative purposes is not significantly dependent on their gender.
4) There is no significant difference among the teachers, students and administrators' perceived ease of use of the digital platforms for teaching, learning and administrative purposes respectively.

METHODS
Descriptive Survey research design was adopted for this study. The study focused on the attitude of teachers, students and administrators towards e-learning in the context of e-learning implementation during and beyond the lockdown period necessitated by the Covid-19 pandemic. It was delimited to some private secondary schools that implemented e-learning during the lockdown period. The independent variable of the study was e-learning while the dependent variable was attitude. The moderating variable was gender; male and female. The area of study was Port Harcourt Local Government Area (PHALGA) which is one of the 23 local government areas in Rivers State, Nigeria. PHALGA has twenty (20) electoral wards. It is one of the metropolitan parts of Rivers State with numerous private secondary schools. Multi-stage sampling procedure was adopted for this study. In stage one, stratified sampling technique was used to group the government-approved private secondary schools based on the twenty (20) electoral wards in PHALGA. In the second stage, sampling random sampling was used to select through balloting eight (8) electoral wards. In the third stage, purposive sampling technique was used to select four (4) schools from each ward that implemented e-learning during the lockdown period. A total of thirty-two (32) schools were involved in the study. Within a school, purposive sampling technique was also used to select only the teachers, students and administrators who used digital platforms for teaching, learning and administrative purposes respectively during the lockdown period.

The sample size obtained from the thirty-two (32) schools was seven hundred and forty-two (742) participants which comprised four hundred and nine (409) students, two hundred and ninety-seven (297) teachers and thirty-six (36) administrators. The class of students used were those that were in JSS 3 as at 2020 during the peak of the pandemic when schools were locked down. This was because, most schools that implemented e-learning most likely ensured that the classes that were to sit for external examinations (JSS 3 and

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SSS 3) were participants in the e-learning exercise even in cases where all the classes may not have been considered for the e-learning exercise. At the time of the study, the JSS 3 students in 2020 were in SSS 2 as a result of the rush in the academic calendar of secondary schools. And the SSS 3 students had graduated and moved on to higher institutions. Therefore, the students used in this study were only the SSS 2 students in private secondary schools. The teachers used in this study were private secondary school teachers who taught using e-learning modalities during the lockdown period of 2020. The administrators in this study were the administrators of the private secondary schools that implemented e-learning during the lockdown period of 2020.

Three questionnaires titled Teachers' E-learning Practice Questionnaire (TEPQ), Students' E-learning Practice Questionnaire (SEPQ) and Administrators' E-learning Practice Questionnaire (AEPQ) were used to collect data. The questionnaires were designed by the researcher using the logical method. The internal consistency of the questionnaires was calculated using Cronbach alpha and a reliability index of 0.90, 0.78 and 0.91 was obtained for TEPQ, SEPQ and AEPQ respectively. The researchers worked with five (5) research assistants to locate and obtain permission from government-approved secondary schools in the selected eight (8) electoral wards that were used for this study. An introduction video was used to enlighten the schools on the essence of the research. Hard copies of the questionnaires were delivered to the schools The link to the online version of the questionnaires *(https://forms.gle/TjkkUTQLbLh8rLQJ8)* was also shared alongside the introduction video to the schools. In some cases, the authors went to some schools to distribute the hardcopy of the questionnaires to other stakeholders when only a few teachers or administrators filled the online version of the questionnaire. Data analysis was conducted using Statistical Package for the Social Sciences (SPSS) at 0.05 level of significance. The data were analysed using frequency, percentage, mean, standard deviation and chi-square test of independence. The criterion mean was 2.5.

A preliminary study was conducted to identify the digital platforms that were used by the sampled schools. The results revealed several digital platforms which led to the grouping of the platforms into nine (9) categories based on how they were used by the teachers, students and administrators. The categories are shown on table 1.

Table 1: Categories of Digital Platform

S/n		Category	Digital platform(s)	Description
	1.	A	WhatsApp only	Social media platform
	2.	B	Zoom only	Meeting app
	3.	C	Google Classroom only	Learning Management System
	4.	D	Telegram only	Social media platform
	5.	E	WhatsApp and Telegram	Social media platforms
	6.	F	WhatsApp or Telegram and Zoom	Social media platforms and meeting app
	7.	G	Zoom and Google Classroom	Meeting app and Learning Management System
	8.	H	WhatsApp or Telegram and Google Classroom	Social media platform and Learning Management System
	9.	I	WhatsApp or Telegram, Zoom and Google Classroom	Social media platform, meeting app and Learning Management System

Category G did not apply to administrators as none reported to have used the combination of only Zoom and Google Classroom for administrative purposes. The analysis about the perception of teachers, student and administrators was conducted based on the category of digital platforms used.

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RESULTS

Table 2: Teachers' Perceived Ease of Use of the Digital Platforms for Teaching

Categories of Digital Platforms	Ease of Use		Total
	Difficult	Easy	
WhatsApp only	20	75	95
Zoom only	0	17	17
Google classroom only	0	14	14
Telegram only	0	12	12
WhatsApp and Telegram	0	2	2
WhatsApp (Telegram) and Zoom	6	59	65
Zoom and Google Classroom	2	25	27
WhatsApp and Google Classroom	0	31	31
WhatsApp (Telegram), Zoom and Google Classroom	2	32	34
Total	**30**	**267**	**297**

Table 2 shows the perceived ease of use of each category of digital platform used by teachers for teaching purposes. A higher number of teachers perceived the digital platforms as easy to use for teaching purposes. Though a higher number of teachers (20 of 30) perceived the use of WhatsApp only as difficult for teaching purposes when compared to other categories of digital platforms.

Table 3: Mean Score of Teachers' Perceived Ease of Use of the Digital Platforms for Teaching

Platform category		Download app	Sign up	Navigate	Understand icons	Log in	Compliance	Upload content	Download content	Communicate	Overall ease of use
A (Whatsapp only)	$\bar{x}$	3.16	3.07	2.88	3.01	3.05	2.81	2.98	2.89	2.76	2.74
	n	95	95	95	95	95	95	95	95	95	95
	SD	0.78	0.79	0.82	0.78	0.75	0.82	0.79	0.72	0.80	0.80
B (Zoom only)	$\bar{x}$	3.29	3.06	2.82	3.29	3.18	3.18	3.06	3.29	3.18	3.18
	n	17	17	17	17	17	17	17	17	17	17
	SD	0.69	0.75	0.73	0.69	0.64	0.81	0.90	0.47	0.81	0.64
C (Google classroom only)	$\bar{x}$	3.14	2.57	2.71	2.71	3.14	3.14	3.00	2.29	2.86	2.86
	n	14	14	14	14	14	14	14	14	14	14
	SD	0.66	0.51	0.73	0.73	0.36	0.66	0.55	0.47	0.66	0.36
D (Telegram only)	$\bar{x}$	3.83	3.83	3.50	3.50	3.50	3.33	3.67	3.33	3.33	3.17
	n	12	12	12	12	12	12	12	12	12	12
	SD	0.39	0.39	0.80	0.52	0.52	0.49	0.49	0.49	0.49	0.39
E (WhatsApp and Telelgram)	$\bar{x}$	3.00	3.00	**2.00**	3.00	3.00	3.00	4.00	4.00	4.00	3.00
	n	2	2	2	2	2	2	2	2	2	2
	SD	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
F (Whatsapp (Telegram) and Zoom)	$\bar{x}$	3.51	3.28	3.09	3.26	3.38	3.12	3.15	3.15	2.92	3.00
	n	65	65	65	65	65	65	65	65	65	65
	SD	0.56	0.63	0.72	0.73	0.58	0.74	0.75	0.67	0.80	0.71
G	$\bar{x}$	3.59	3.44	3.15	3.30	3.63	3.07	3.15	3.07	3.00	3.00
	n	27	27	27	27	27	27	27	27	27	27

(Zoom and Google Classroom)	SD	0.50	0.64	0.77	0.61	0.49	0.73	0.86	0.73	0.78	0.88
	x̄	3.61	3.52	3.32	3.03	3.35	3.06	3.00	3.06	3.29	3.13
H	n	31	31	31	31	31	31	31	31	31	31
(Whatsapp and Google Classroom)	SD	0.50	0.51	0.60	0.60	0.66	0.68	0.63	0.57	0.53	0.62
	x̄	3.65	3.47	3.18	3.35	3.53	3.18	3.24	3.24	3.29	3.24
I	n	34	34	34	34	34	34	34	34	34	34
(Whatsapp (Telegram), Zoom and Google Classroom)	SD	0.60	0.71	0.80	0.69	0.51	0.72	0.82	0.74	0.84	0.74
	x̄	3.41	3.25	3.04	3.15	3.29	3.03	3.10	3.04	2.99	2.97
Total	n	297	297	297	297	297	297	297	297	297	297
	SD	0.67	0.72	0.78	0.72	0.65	0.75	0.77	0.70	0.78	0.74

Table 3 shows the mean and standard deviation of teachers' perceived ease of use of the different categories of the digital platforms for teaching. The only aspect of ease of use that was below the criterion mean of 2.5 was the teachers' difficulty to navigate Telegram.

Table 4: Teachers' Perception of the Ease of Use of the Digital Platform based on their Gender

Gender	Ease of Use		Total
	Difficult	**Easy**	
Male	10 (6.17%)	152 (93.83%)	162
Female	20 (14.81%)	115 (85.19%)	135
Total	**30**	**267**	**297**

Table 4 shows teachers' perceived ease of use of the digital platforms in relation to their gender. The results show that a higher percent of female teachers (14.81%) perceived the use of the digital platforms for teaching to be difficult as opposed to their male counterparts (6.17%).

Null Hypothesis One: Teachers' perceived ease of use of digital platforms for teaching is not significantly dependent on their gender.

Table 5: Chi Square Test of Independence showing the Association between Teachers' Perceived Ease of Use of Digital Platform for Teaching and their Gender

	Value	df	Asymptotic Significance (2-sided)	Exact Sig. (2-sided)	Decision
Pearson Chi-Square	6.056[a]	1	.014		
Continuity Correction[b]	5.142	1	.023		Significant
Likelihood Ratio	6.084	1	.014		
n	297				

Table 5 shows the Chi square value of 6.056 $p < 0.05$, i.e. $p = .014$ is less than 0.05 and this is statistically significant at the chosen alpha level of 0.05. This led to the rejection of the null hypothesis. This shows that there is an association between gender and the teachers' perceived ease of use of the digital platforms for teaching purposes.

Table 6: Students' Perceived Ease of Use of the Digital Platforms for Learning

Categories of Digital Platforms	Ease of Use		Total
	Difficult	**Easy**	
WhatsApp only	6	181	187
Zoom only	2	32	34
Google classroom only	4	10	14
Telegram only	2	14	16

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WhatsApp and Telegram	1	7	8
WhatsApp (Telegram) and Zoom	3	40	43
Zoom and Google Classroom	0	42	42
WhatsApp and Google Classroom	8	55	63
WhatsApp (Telegram), Zoom and Google Classroom	0	2	2
Total	**26**	**383**	**409**

Table 6 shows the perceived ease of use of each category of digital platform used by students for learning purposes. A higher number of students perceived the digital platforms as easy to use for learning. Though a higher number of students (8) perceived the use of the combination of WhatsApp and Google Classroom as difficult for learning when compared to other categories of digital platforms. This was followed by the use of WhatsApp only (6 students), Google Classroom only (4 students), WhatsApp (Telegram) and Zoom (3 students), Zoom only (2 students), Telegram only (2 students) and WhatsApp and Telegram (1 student).

Table 7: Mean Score of Students' Perceived Ease of Use of the Digital Platforms for Learning

Platform category		Download app	Sign up	Navigate	Understand icons	Log in	Compliance	Upload content	Download content	Communicate	Overall ease of use
A (Whatsapp only)	$\bar{x}$	3.41	3.28	3.16	3.42	3.61	3.26	3.38	3.36	3.38	3.29
	n	187	187	187	187	187	187	187	187	187	187
	SD	0.79	0.73	0.83	0.69	0.62	0.85	0.76	0.83	0.82	0.80
B (Zoom only)	$\bar{x}$	3.76	3.68	3.50	3.35	3.62	3.38	3.21	3.47	3.38	3.18
	n	34	34	34	34	34	34	34	34	34	34
	SD	0.55	0.68	0.71	0.69	0.60	0.65	0.88	0.61	0.78	0.72
C (Google classroom only)	$\bar{x}$	3.43	2.86	3.00	3.29	3.00	3.00	2.71	2.86	3.00	2.86
	n	14	14	14	14	14	14	14	14	14	14
	SD	0.76	1.03	1.11	0.47	0.78	0.78	0.91	0.86	0.55	1.03
D (Telegram only)	$\bar{x}$	3.25	3.00	3.25	3.50	3.38	3.50	3.38	3.00	3.63	3.50
	n	16	16	16	16	16	16	16	16	16	16
	SD	0.86	1.26	0.68	0.73	0.72	0.73	0.72	0.73	0.50	0.73
E (WhatsApp and Telelgram)	$\bar{x}$	3.63	3.38	3.00	3.50	3.75	3.38	3.38	3.25	3.13	3.38
	n	8	8	8	8	8	8	8	8	8	8
	SD	0.74	0.92	0.76	0.76	0.71	0.74	0.74	0.71	0.64	0.74
F (Whatsapp (Telegram) and Zoom)	$\bar{x}$	3.47	3.23	3.21	3.44	3.49	3.05	3.37	3.23	3.14	3.09
	n	43	43	43	43	43	43	43	43	43	43
	SD	0.70	0.81	0.67	0.55	0.63	0.84	0.72	0.68	0.86	0.84
G (Zoom and Google Classroom)	$\bar{x}$	3.67	3.40	3.33	3.50	3.50	3.19	3.02	3.12	3.45	3.50
	n	42	42	42	42	42	42	42	42	42	42
	SD	0.48	0.50	0.69	0.59	0.74	0.71	0.56	0.63	0.59	0.59
H (Whatsapp and Google Classroom)	$\bar{x}$	3.73	3.16	3.03	3.13	3.35	3.06	3.00	3.43	3.16	3.22
	n	63	63	63	63	63	63	63	63	63	63
	SD	1.61	0.63	0.74	0.75	0.79	0.82	0.97	0.59	0.72	0.61

I (Whatsapp (Telegram), Zoom and Google Classroom)	$\bar{x}$	4.00	3.00	3.00	4.00	4.00	3.00	4.00	4.00	4.00	**2.00**
	n	2	2	2	2	2	2	2	2	2	2
	SD	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	$\bar{x}$	3.52	3.28	3.18	3.38	3.52	3.21	3.25	3.31	3.32	3.26
	n	409	409	409	409	409	409	409	409	409	409
	SD	0.93	0.75	0.78	0.68	0.68	0.81	0.81	0.75	0.77	0.76

Table 7 shows the mean and standard deviation of students' perceived ease of use of the different categories of the digital platforms for learning. The only aspect of ease of use that was below the criterion mean of 2.5 was the overall use of the combination of WhatsApp (or Telegram), Zoom and Google Classroom for learning.

Table 8: Students' Perception of the Ease of Use of the Digital Platform based on their Gender

Gender	Ease of Use		Total
	Difficult	**Easy**	
Male	8 (3.69%)	209 (96.31%)	217
Female	18 (9.38%)	174 (90.62%)	192
Total	**26**	**383**	**409**

Table 8 shows students' perceived ease of use of the digital platforms in relation to their gender. The results show that a higher percent of female students (9.38%) perceived the use of the digital platforms for learning to be difficult as opposed to their male counterparts (3.69%).

Null Hypothesis Two: Students' perceived ease of use of digital platforms for learning is not significantly dependent on their gender.

Table 9: Chi Square Test of Independence showing the Association between Students' Perceived Ease of Use of Digital Platform for Learning and their Gender

	Value	df	Asymptotic Significance (2-sided)	(2- Exact sided)	Sig. (2-	Decision
Pearson Chi-Square	5.537[a]	1	.019			
Continuity Correction[b]	4.623	1	.032			Significant
Likelihood Ratio	5.621	1	.018			
n	409					

Table 9 shows the Chi square value of 5.537 $p < 0.05$, i.e. p = .019 is less than 0.05 and this is statistically significant at the chosen alpha level of 0.05. This led to the rejection of the null hypothesis. This shows that there is an association between gender and the students' perceived ease of use of the digital platforms for learning purposes.

Table 10: Administrators' Perceived Ease of Use of the Digital Platforms for Administrative Purposes

Categories of Digital Platforms	Ease of Use		Total
	Difficult	**Easy**	
WhatsApp only	0	9	9
Zoom only	0	2	2
Google classroom only	0	5	5
Telegram only	0	1	1
WhatsApp and Telegram	0	1	1
WhatsApp (Telegram) and Zoom	0	8	8
WhatsApp and Google Classroom	0	1	1
WhatsApp (Telegram), Zoom and Google Classroom	1	8	9
Total	**1**	**35**	**36**

Table 10 shows the perceived ease of use of each category of digital platform used by administrators for administrative purposes. A higher number of administrators perceived the digital platforms as easy to use for administrative purposes (35 of 36). One administrator reported the combination of WhatsApp (Telegram), Zoom and Google Classroom as difficult to use for administrative purposes.

Table 11: Mean Score of Administrators' Perceived Ease of Use of the Digital Platforms for Administrative Purposes

Platform category		Download app	Sign up	Navigate	Understand icons	Log in	Compliance	Upload content	Download content	Communicate	Overall ease of use
A (Whatsapp only)	x̄	3.22	3.11	3.00	3.00	3.22	2.78	3.11	3.11	3.22	2.89
	n	9	9	9	9	9	9	9	9	9	9
	SD	0.44	0.33	0.50	0.50	0.44	0.44	0.33	0.33	0.44	0.33
B (Zoom only)	x̄	4.00	4.00	3.50	3.50	4.00	3.50	4.00	3.50	3.00	3.50
	n	2	2	2	2	2	2	2	2	2	2
	SD	0.00	0.00	0.71	0.71	0.00	0.71	0.00	0.71	0.00	0.71
C (Google classroom only)	x̄	2.60	3.40	3.00	2.80	3.60	3.00	**2.20**	3.00	3.00	**1.80**
	n	5	5	5	5	5	5	5	5	5	5
	SD	0.55	0.55	1.00	0.84	0.55	1.00	0.45	0.00	0.00	0.84
D (Telegram only)	x̄	4.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	4.00
	n	1	1	1	1	1	1	1	1	1	1
	SD										
E (WhatsApp and Telelgram)	x̄	4.00	3.00	3.00	3.00	3.00	**2.00**	3.00	3.00	3.00	3.00
	n	1	1	1	1	1	1	1	1	1	1
	SD										
F (Whatsapp (Telegram) and Zoom)	x̄	4.00	4.00	3.50	4.00	4.00	3.50	3.75	3.50	3.50	3.50
	n	8	8	8	8	8	8	8	8	8	8
	SD	0.00	0.00	0.53	0.00	0.00	0.53	0.46	0.53	0.53	0.53
H (Whatsapp and Google Classroom)	x̄	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	**2.00**	3.00
	n	1	1	1	1	1	1	1	1	1	1
	SD										
I (Whatsapp (Telegram), Zoom and Google Classroom)	x̄	3.67	3.33	3.56	3.33	3.22	3.00	3.00	3.00	3.11	3.00
	n	9	9	9	9	9	9	9	9	9	9
	SD	0.50	0.50	0.53	0.50	0.83	0.50	0.50	0.50	0.93	0.50

Total	$\bar{x}$	3.53	3.47	3.31	3.33	3.50	3.08	3.17	3.19	3.17	2.97
	n	36	36	36	36	36	36	36	36	36	36
	SD	0.61	0.51	0.62	0.63	0.61	0.65	0.65	0.47	0.61	0.74

Table 11 shows the mean and standard deviation of teachers' perceived ease of use of the different categories of the digital platforms for administrative purposes. The aspects of ease of use that were below the criterion mean of 2.5 were difficulty in content upload and the overall use of Google classroom for administrative purposes; non-compliance of WhatsApp and Telegram compliance with administrative tasks and; difficulty in communicating using a combination of WhatsApp (or Telegram) and Zoom.

Table 12: Administrators' Perception of the Ease of Use of the Digital Platform based on their Gender

	Ease of Use		
Gender	**Difficult**	**Easy**	**Total**
Male	1 (5%)	19 (95%)	20
Female	0 (0%)	16 (100%)	16
Total	**1**	**35**	**36**

Table 12 shows administrators perceived ease of use of the digital platforms in relation to their gender. The results show that a higher percent of male administrators (5%) perceived the use of the digital platforms for administrative purposes to be difficult as opposed to their female counterparts (0%).

Null Hypothesis Three: Administrators' perceived ease of use of digital platforms for administrative purposes is not significantly dependent on their gender.

Table 13: Chi Square Test of Independence showing the Association between Administrators' Perceived Ease of Use of Digital Platform for Administrative Purposes and their Gender

	Value	**df**	**Asymptotic Significance (2-sided)**	**Exact Sig. (2-sided)**	**Decision**
Pearson Chi-Square	.823[a]	1	.364		
Continuity Correction[b]	.000	1	1.000		
Likelihood Ratio	1.198	1	.274		Not significant
Fisher's Exact Test				1.000	
n	36				

Table 13 shows the Chi square value of 0.823 p > 0.05, i.e. p = 1.00 is greater than 0.05 and this is not statistically significant at the chosen alpha level of 0.05. This led to retaining the null hypothesis. This shows that there is no association between gender and the administrators' perceived ease of use of the digital platforms for administrative purposes.

Null Hypothesis Four: There is no significant difference among the perceived ease of use of digital platforms for teaching, learning and administrative purposes by teachers, students and administrators respectively.

Table 14: Chi Square Test of Independence showing the Association among Teachers, Students and Administrators' Perceived Ease of Use of Digital Platform

	Value	**df**	**Asymp. Significance (2-sided)**	**Exact Sig. (2-sided)**	**Decision**
Pearson Chi-Square	4.684[a]	2	.096	.092	
Likelihood Ratio	4.906	2	.086	.118	Not significant
Fisher's Exact Test	4.184			.114	
	742				

Table 14 shows the Chi square value of 4.684 p > 0.05, i.e. p = 0 .114 is greater than 0.05 and this is not statistically significant at the chosen alpha level of 0.05. This led to retaining the null hypothesis. This shows that there is no significant difference among the perception of teachers, students and administrators on the ease of use of the digital platforms for their respective duties.

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DISCUSSION OF FINDINGS

Teachers' Perceived Ease of Use of Digital Platforms for Teaching
The results revealed that more teachers perceived the different categories of digital platforms as easy to use for teaching. However, concerns over the use of only social media for teaching were raised as twenty out of thirty teachers indicated that using WhatsApp only was difficult for teaching. In addition, teachers pointed out that the navigation for Telegram which is also a social media platform was difficult for them. With respect to gender, more male teachers perceived the digital platforms to be easy to use for teaching than their female counterparts. In addition, the discrepancies in perception based on gender was statistically significant. In other words, the perception of teachers about the ease of use of the digital platforms for teaching is associated with their gender.

Students' Perceived Ease of Use of Digital Platforms for Learning
The results revealed that more students perceived the different categories of digital platforms as easy to use for learning. However, students perceived the combination of WhatsApp and Google Classroom as difficult to use for learning. They also perceived some other categories ranging from single platforms to combinations of platforms as difficult to use for learning. With respect to gender, more male students perceived the digital platforms to be easy to use for learning than their female counterparts. In addition, the discrepancies in perception based on gender was statistically significant. In other words, the perception of the students about the ease of use of the digital platforms for learning is associated with their gender. This finding is consistent with that of Akpunonu and Fomsi (2021) who stated that students perceived Google Classroom as a digital platform that is easy to use for learning.

Administrators' Perceived Ease of Use of Digital Platforms for Administrative Purposes
The results revealed that more administrators perceived the different categories of digital platforms as easy to use for administrative purposes. However, the combination of WhatsApp (Telegram), Zoom and Google Classroom was perceived as difficult to use for administrative purposes. In addition, specific areas of difficulties experienced by administrators were in content upload, digital platform compliance with certain administrative duties and communication. With respect to gender, more female administrators perceived the digital platforms to be easy to use for administrative purposes than their male counterparts. However, the discrepancies in perception based on gender was not statistically significant. In other words, the perception of the administrators about the ease of use of the digital platforms for administrative purposes is not associated with their gender.

Teachers, Students and Administrators' Perceived Ease of Use of Digital Platforms
The results revealed that the teachers, students and administrators on a general note perceived the digital platforms as easy to use for their respective tasks. It also revealed that there is no significant difference among the perception of teachers, students and administrators on the ease of use of the digital platforms for their respective duties. However, some digital platforms that may be suitable for teaching and learning may not have sufficient tools for administrative functions and vice versa. For instance, using only social media platform for teaching may not be advisable as navigation may become difficult especially when the conversation threads become so long. Combining so many digital platforms may also be a challenge to students. Using one that has so many functionalities may be more advisable as students may not be able to keep up with switching from one platform to the other. It is therefore necessary for schools to adopt digital platforms that can be used to satisfy teachers role to teach, students role to learn and administrators' role of administration. This will make centralisation of processes meaningful as each stakeholder will be able to perform his/her role using a specific digital platform.

CONCLUSIONS
1) The digital platforms identified in this study are easy to use for teaching, learning and administrative purposes.
2) The perception of teachers about the ease of use of the digital platforms for teaching is associated with their gender.
3) The perception of the students about the ease of use of the digital platforms for learning is associated with their gender.
4) The perception of the administrators about the ease of use of the digital platforms for administrative purposes is not associated with their gender.
5) There is no significant difference in the perception of teachers, students and administrators on the ease of use of the digital platforms for their respective duties.

RECOMMENDATIONS
1. Schools should be considerate of the type(s) of digital platform used for e-learning so that it does not become overly difficult for them to be used for teaching, learning and administrative purposes. In other words, at the school level, digital platforms

that centralise tasks by featuring tools that help teachers to teach, students to learn and administrators to carry out their administrative duties should be adopted.

2. There should be trainings and support available on how the digital platforms should be used to make it easy to use.

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