

Online teaching styles and age, sex, and degree program: A correlational - descriptive study

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ABSTRACT

Diverse online teaching styles have become essential tools for developing quality distance education in private tertiary schools. This study explores college students' preferred online teaching styles conceptualized by Rodriguez and Fahara. It also investigates and assumes no significant relationship exists between online teaching styles and students' age, sex, or degree program. Three-hundred-three students from The College of Maasin participated in the study via Zoom. Utilizing a Google Form, data from the validated questionnaire was collected. According to the findings, students favored the "designer-oriented" style. Their age and sex correlate with their online teaching styles. However, insufficient evidence cannot establish a correlation between degree programs and online teaching styles. The paper also addressed implications and recommendations regarding how school administrators can assist instructors in adapting their teaching strategies to students' preferred online teaching style, as well as how instructors can incorporate age-appropriate and sex-sensitive activities in their instruction in online distance education. In conclusion, this study provides a case study for future reference.

1. Introduction

In the wake of the Covid-19 virus, the urgent need to shift online prompted unprepared school systems in private tertiary institutions in the Philippines to embrace digital learning, putting all students and instructors at risk, especially those who may be disadvantaged in the virtual classroom. This situation significantly impacted schools, leading to the most significant disruption of educational systems in human history.

Changing instructional methods to accommodate students' varied learning styles and preferences is one method for boosting student motivation and performance. Learning style preferences refer to how and under what conditions information is perceived, processed, retained, and recalled most efficiently and effectively by the learner.

Student learning is enhanced when students' learning styles align with instructors' teaching styles. Matching teaching styles and learning styles does not imply that the lecturer should adapt their teaching style to each student's individual learning style, nor does it suggest that the lecturer should use a single teaching style for all students (Gilakjani, 2012; Mkonto, 2015), rather than that, a more balanced teaching technique is necessary, one that accommodates the class's diverse learning styles (Felder & Brent, 2005; Gilakjani, 2012; Reid, 1987). Felder and Brent (2005) believe that a teaching style tailored to a single learning style will fail to meet the demands of the

remainder of the students. Peacock (2001) and Robotham (1999) suggest that when students' learning styles conflict with the lecturer's teaching style, they are likely to reject the learning environment. A mismatch between teaching and learning styles may cause students to lose interest in class, resulting in poor performance on tests and examinations, course failure, and eventual dropout (Peacock, 2001; Williamson & Watson, 2007).

It cannot be denied that online teaching and learning have significantly changed many responsibilities in these new learning contexts. Compared to assumed jobs in a face-to-face setting, these roles present some challenges. In addition to becoming effective facilitators of students' knowledge acquisition, one of the most difficult challenges for online instructors is serving as vehicles to encourage students to become more self-directed and collaborate with colleagues from other geographic latitudes, whose messages may be asynchronous (Conrad & Donaldson, 2011). According to Bates (2005), online education is a type of remote education that utilizes technology to provide courses, namely the use of a computer and Internet connectivity. Examining learning and teaching styles in online education for the sake of research and pedagogy is not a new concept. Liu and Ginther (2002) examine the characteristics of students and online technology and recommend that instructional materials match the student's preferred learning modes and that instructional strategies be varied to satisfy all students' preferences.

When students and instructors have been coerced to enroll in online courses without the necessary transition period of at least two academic years, the urgent requirement to migrate online in response to the growth of Covid-19 forced digital learning on unprepared school systems (Hodges, Moore, Lockee, Trust, & Bond, 2020) has contributed to many private college students' academic issues.

According to Moore and Kearsley (1996), the nature of instruction and the instructor's role in distance education are distinct from those in conventional classrooms. Therefore, this research is urgent and essential. This study determined students' preferences using the developed online teaching styles of Rodríguez and Fahara's study in 2010.

Beyond the design of online courses and the ever-increasing enrollments two years after the pandemic, which compelled many private tertiary institutions to turn to online distance education, it is crucial to recognize the teaching style demands of students. It can be an integral part of their academic success. Additionally, studies have revealed the correlation between students' age, Sex, degree program, and online teaching styles. It is for this reason, as well as a case in some private tertiary schools within the country that this study was undertaken. Students' preferences for online teaching styles were to be determined, as well as whether sex, age, and college degree program correlate with online teaching styles. The primary objective is to develop strategies to improve online teaching practices in distance education and to meet the educational needs of college students in private tertiary institutions.

1.1. Statement of the problem

The following questions were sought for this research:

1.1.1. What is the profile of the students in terms of:

1.1.1.1. Age;

1.1.1.2. Sex; and

1.1.1.3. Degree program?

1.1.2. Based on Rodriguez and Fahara's four online teaching styles, what is the most preferred online teaching style among students?

1.1.3. Is there no significant relationship between the online teaching styles of the students and their age?

1.1.4. Is there no significant relationship between the online teaching styles of the students and their sex?

1.1.5. Is there no significant relationship between the online teaching styles of the students and their degree programs?

1.1.6. What strategies can be proposed based on the findings of the study?

2. Related literature

Instructors' preferences for particular teaching strategies impact their selection of specific educational models. Instructors adjust their methods to the learning preferences and characteristics of their students. From a metacognitive standpoint, it is essential to distinguish teaching and learning processes in classrooms increasingly defined by super-diversity (Vertovec, 2007). Utilizing a learning-styles approach facilitates differentiation of instruction: recognizing students' learning styles enables instructors to employ diversified strategies to benefit diverse learners. While diversified education has become commonplace in every school system, no one knows how to differentiate instruction or what to base differentiation on without a foundation in learning styles (Dunn, 2009). Moreover, these characteristics are closely linked to instructors' conceptions of teaching, the school, and their interactions with students.

Warner, Christie, and Choy (1998) introduced the notion of preparedness for online learning in the Australian vocational education and training sector. They defined readiness for online learning in three ways: (1) students' preference for electronic communication over face-to-face classroom instruction; (2) students' confidence in using electronic communication for learning, which includes competence and trust in the use of the Internet and computer-based communication; and (3) capability to engage in autonomous learning. Smith, Murphy, and Mahoney (2003) did an exploratory study to evaluate McVay's (2000) online readiness questionnaire and developed a two-factor framework for "Comfort with e-learning" and "Self-management of learning". Subsequently, additional research was conducted to operationalize the concept of ready-for-online learning (Evans, 1999; Smith, 2000). According to researchers, the following factors influenced readiness for online learning: self-directed learning (Lin & Hsieh, 2001; McVay, 2000); motivation for learning (Fairchild, Horst, Finney, & Barron, 2005; Ryan & Deci, 2013), learner control (Hung, Chou, Chen, & Own, 2010; Reeves, 1993), computer and internet self-efficacy.

Any effort to increase the effectiveness of online learning must begin with understanding how users perceive it. Numerous studies have revealed both positive and negative student opinions of online learning. Numerous studies demonstrate that the instructor's engagement with students significantly impacts students' preference for online distance education. Consistency in degree program design (Swan, Shea, Fredericksen, Pickett, & Maher, 2000), the ability to interact with degree program instructors to promote critical thinking ability and information processing (Duffy, Deuber, & Hawley, 1998; Picciano, 2002), the level of interactivity in an online setting (Arbaugh, 2000), the degree to which instructional emphasis is placed on interaction-based learning, the flexibility of online learning (Chizmar & Walbert, 1999). Thus, an effective online class requires well-structured degree program content (Sun & Chen, 2016), well-prepared instructors (Sun & Chen, 2016), advanced technologies (Sun & Chen, 2016), as well as feedback, and clear directions (Gilbert & Stoneman, 2015).

Moreover, multiple factors determine student preferences (Dunn & Dunn, 1999), and online teaching practice validates them. It is based on the fact that styles are not absolute and change to the students' and instructors' needs, personalities, and preferences (Sternberg, 1997). In addition, it should be recognized that styles are rarely conclusive, and certain instructors may demonstrate characteristics shared by numerous types. The contrast between role and style is as follows: role relates to the variety of activities a teacher may perform, while style refers to how those responsibilities are carried out. The second is the unique manner in which the teacher can implement these exercises.

According to Mohan and Hull (1975), students can distinguish between good and terrible instructors. Excellent instructors are supportive of their students' schoolwork, informed and flawless in conversations and assignments, and possess a good sense of humor, according to most students (Mohan & Hull, 1975). Despite this, Mohan and Hull's (1975) survey revealed that students characterized poor instructors as unintentional, prejudiced toward more intelligent students, and displaying a condescending, unpleasant, and arrogant attitude.

According to studies, satisfaction with learning, level of control over the learning process, and study motivation for distance learning is positively associated with students' preferences for structured online learning. In contrast, independence in learning is positively associated with students' preferences for more open internet functionality (Katz, 2002). Most significantly, according to Emanuel and Potter (1992), sex, grade level, and college degree program influenced students' preferences for online learning and teaching techniques.

2.1. Online teaching styles

The digital learning environment includes a variety of resources, including transformed and untransformed knowledge, as well as mediated interactions. The information behavior of students combines acts typical of the traditional educational process with actions unique to the digital world, depending on the usage of digital tools and user interactions. Considered an indicator of students' engagement in various educational activities that contribute to the personalization of learning, students' information behavior in the digital environment is regarded as an essential factor in the personalization of learning. The results of a survey on the information resource preferences of students in the digital world indicate that students utilize a variety of information sources (Noskova, Pavlova, & Yakovleva, 2021).

Rodríguez and Fahara (2010) developed four online teaching styles based on the perceptions of the instructors concerning the strategies of online teaching in distance education. It extrapolated Zinn's (2004) philosophy of education, contrasting it with the results of their observations. These characteristics in each one follow the characteristics obtained by them in the analysis of the data and the confrontation with the literature in the area. The preferences are based on many factors (Dunn & Dunn, 1999) and are legitimized in online teaching practice; that was where their research took place. It is based on the fact that the styles are not absolute and respond to the instructors' needs, personalities, and preferences (Sternberg, 1997). Their study titled "Online Teaching Styles: A Study in Distance Education" extracted four significant online teaching styles that the proponents of this study utilized as bases to determine which is preferred by students. These are the following:

2.1.1. Designer-Oriented style - This instructor is a visionary and establishes constant innovations in the courses in which they participate.

2.1.2. Corrector-Oriented style - This type is a sleuth. They are analytic and look for perfectionism in students. They focus quite a bit on the structure of the assignments: words and format.

2.1.3. Mediator-Oriented style - This instructor is a humanist. They offer a vote of confidence to the students. They believe they are responsible for the problems of the students within the system. The students are not the perpetrators but the victims that try to subsist in a competitive and selective system.

2.1.4. Facilitator-Oriented style - This instructor considers students as thinking beings that find themselves in the formation process. They like to inquire if the students are confronting a problematic situation so that they will seek help. They want to advise students in cognitive holes when detected.

Moreover, when students' learning styles match the instructors' teaching styles, student learning is boosted (Healey & Jenkins, 2000; Peacock, 2001; Vita, 2001). Matching teaching styles and students' learning styles does not imply that the lecturer should adapt the teaching style to each student's learning style, nor should the lecturer utilize a single teaching style for all students (Gilakjani, 2012; Mkonto, 2015). Instead, a balanced teaching approach that fits the many learning styles in the classroom is required (Peacock, 2001). Felder and Brent (2005) argue that a teaching method that caters to a single learning style will not meet the demands of the remaining students. According to Peacock (2001) and Robotham (1999), if students perceive a mismatch between their learning styles and the instructor's teaching style, they are likely to reject the learning environment. A mismatch between teaching and learning styles could cause students to lose interest in class, resulting in poor performance on tests and exams, failing their courses, and eventually leaving out (Peacock, 2001; Williamson & Watson, 2007).

2.2. Age

Age is a significant determinant of learning preferences and outcomes (Bamber & Tett, 2000; O'Donnell & Tobbell, 2007) and is influenced by contemporary technologies and social systems. Those born between 1982 and 2000 (18 - 35 years old) are socialized through new technologies (Barnes, Marateo, & Ferris, 2007). Revell and McCurry (2010) stated that nurse instructors should investigate emerging technologies that are better adapted to the features and learning styles of the millennial generation. Researchers have determined that Millennials are comfortable with technology, prefer interactive classes with personalized feedback and peer participation, are adept at multitasking and collaborative databases, and dislike traditional lecture-style instruction (Corbin, 2017). In contrast, although maintaining the multitasking orientation, Barnes et al. (2007) argued that millennials had a greater tendency toward independence and autonomy.

Moreover, Bamber and Tett (2000) and O'Donnell and Tobell (2007) revealed that age disparities in instruction impact student results. They contradict the findings of Corbin (2017), who found no statistically significant correlation between age and teaching preferences.

2.3. Sex

An increase in the number of online learners with diverse sex demographic origins has accompanied the Covid-19 pandemic. Male and female students may have distinct preferences regarding instructional methods. Understanding a student's preferred learning style is crucial when developing online classroom instruction for efficient online instruction.

Studying sex differences in learning styles is not new, and other researchers have developed their methods. Learning preferences and approaches vary by sex. Park (1997) demonstrated that female students prefer a kinesthetic learning style more than male students, who favor a tactile learning style. In contrast, Lincoln and Rademacher (2006) found that female

students prefer to study through their auditory senses, while male students learn better by taking notes and reading or writing learning styles. According to Kia, Aliapour, and Ghaderi (2009), the majority of male Iranian students choose a verbal learning method followed by a solitary learning style. However, most female students chose voice-based learning, followed by verbal, visual, and logical learning modes. It demonstrates that sex influences learning style preferences and that there are sex-based differences in learning style preferences. This assertion was corroborated by Hlawaty's (2008) study on German students, which found that male and female students had significantly different learning style preferences.

Moreover, Corbin (2017) discovered no association between the sex of students and their preferences for collaborative versus avoidant teaching styles. This suggests that there are no discernible variations between male and female students regarding collaborative teaching preferences or desires. As there are studies indicating that sex differences persist in the use of technologies and related skills (Drabowicz, 2014), it is essential to investigate sex differences in crucial components of digital learning, a stereotypical domain that has become a necessity in the lives of schoolchildren during the Covid-19 pandemic.

2.4. Degree program

Numerous factors influence the virtual learning and teaching style preferences of students. In 2011, Leping Liu of the College of Education at the University of Nevada, Reno examined the impact of seven factors on the desire for virtual instruction. Only five of the studied factors were shown to significantly affect student preferences. These include sex, technological proficiency, previous online courses, employment position, and learning pace (Liu, 2011).

One of the main factors indicated above was prior online courses, which directly impact students' preferences when selecting their preferred teaching method. This research should be able to modify the design of individualized instruction (Grant & Courtoreille, 2007) and establish an online learning environment in which students have greater influence over their learning, resulting in their preferred teaching style (Dinov, Sanchez, & Christou, 2008).

According to a study by Emanuel and Potter (1992), students' preferences for learning and teaching methods and their instructors' communication styles depended on their sex, grade level, and college degree program. However, the rank ordering of preferences was usually consistent across college students, teenagers, and academic disciplines.

Moreover, another study concluded that student preferences for instructor style features are unrelated to their total degree program satisfaction (Harnish & Bridges, 2011).

Therefore, these concepts and pieces of literature provide essential content to address the need to determine students' preferred online teaching style in the context of a private college whose enrollment increased two years after the beginning of the pandemic era. Also, whether or not there is a correlation between the age, Sex, and degree program of students and online teaching styles, can help institutions develop a contextualized strategy to adopt and adapt to their offered learning styles and systems. With the institutionalized initiative of private tertiary schools, which has the complete discretion to either continue or stop implementing distance education through online teaching in these times when vaccines are available and distributed globally, this can serve as a point of reference for private tertiary schools and the tertiary education sector, in general, to adapt to the enormous technological demand.

3. Methodology

3.1. Study design

A correlational-descriptive survey was selected because it provides an accurate portrayal or description of an individual, situation, or group's characteristics, such as behavior, views, skills, beliefs, and knowledge. This method may be utilized when experimental research is not practicable due to the impossibility of manipulating predictor factors. Correlational designs also allow the researcher to examine behavior as it occurs in real life. This methodology was utilized to determine the preferred online teaching style of college students and to explore if there is a correlation between their preference for online teaching style and their sex, age, and degree program.

3.2. Locale of the study

The study was conducted at The College of Maasin, located in Maasin City, Southern Leyte, Philippines.

3.3. Respondent and sampling technique

The researchers utilized Slovin's algorithm to identify the respondents of interest from the whole population of students enrolled in college degree programs at The College of Maasin, Inc. The total enrolment in all college degree programs is 1,225. Proportionate stratified random sampling was used to determine the responders for valid representation. Three hundred three (303) respondents were randomly selected. And respondents were picked according to the following criteria: (a) respondents must be enrolled college students at The College of Maasin, Inc. for the academic year 2021 - 2022; and (b) respondents from each selected institution must have internet access. They were categorized according to their profile, sex, age, and degree program.

3.4. Instrument

The researchers utilized a self-designed questionnaire that underwent face and content validity tests, followed by a reliability test.

Three experts examined the tool for content and face validity. The researchers first designed ten questions for each of the four types of online teaching styles, according to Rodríguez and Fahara (2010), for a total of forty questions. Fifteen items (37.5%) had an I-CVI = 1.00, which can be interpreted as excellent content validity. Three items (7.5%) had an I-CVI = 0.91, which had very good content validity, while two items (0.5%) with good content validity or an I-CVI of 0.81 were retained. Twenty items (50%) with an I-CVI below 0.80 are removed due to poor content validity. Moreover, the experts concluded that the tool's readiness in terms of appearance, presentation, and relevance is quite evident.

A reliability analysis followed with the validity tests. Thirty-five respondents were used for the pilot testing. Cronbach's Alpha showed that the twenty remaining items had reached acceptable reliability of $\alpha = 0.90$. With the test's outcome, all items were retained, and the instrument was ready for use.

The first portion of the questionnaire consisted of the respondents' age, sex, and degree program. The second part consisted of a four-point Likert scale corresponding to the four categories of online teaching styles: Designer-Oriented, Corrector-Oriented, Mediator-Oriented, and Facilitator-Oriented. The researchers used the Likert scale to determine the student's preference level for online teaching style, where 1 - strongly not preferable; 2 - not preferable; 3 - preferable; 4 - strongly preferable.

3.5. Data gathering procedure

A communication letter was sent to the Office of the School President to explain the purpose of the study. When it was approved and relayed to the Vice-President for Academic Affairs, information dissemination about the study was initiated to the Department Deans and Coordinators. The researchers conducted a one-time virtual meeting, via Zoom, with all the randomly selected students was conducted by the researchers to explain the purpose of the study and to entertain questions or clarification before the actual data gathering. After the fifteen-minute conference, the questionnaires were then administered to them through Google Forms. The answers gathered from the survey were treated with strict confidentiality and were used solely for the study.

3.6. Statistical treatment

The data collected throughout this paper were analyzed using SPSS, a program for advanced statistical data analysis.

The researchers employed the following techniques to ascertain the preferred online teaching style of tertiary students:

3.6.1. Frequency Distribution Use the formula $\% = (f / n) \times 100$

n = total amount of items in your data

f = frequency (the number of times the item appears)

3.6.2. Mode

The term “mode” refers to the data point that occurs the most frequently in a dataset. This data is utilized to ascertain the tertiary students’ preferred online teaching style.

3.6.3. Pearson Correlation Coefficient

$$r = \frac{n(\sum xy) - (\sum x)(\sum y)}{\sqrt{[n\sum x^2 - (\sum x)^2][n\sum y^2 - (\sum y)^2]}} \quad (1)$$

r = correlation coefficient

x_i = values of the x-variable in a sample

\bar{x} = mean of the values of the x-variable

y_i = values of the y-variable in a sample

\bar{y} = mean of the values of the y-variable

4. Results and discussion

4.1. Results

4.1.1. Students’ profile

Table 1

Distribution of respondents by age

Age	Frequency	Percentage (%)
18	4	1.3
19	17	5.6
20	45	14.9

Age	Frequency	Percentage (%)
21	76	25.1
22	83	27.4
23	56	18.5
24	14	4.6
25	5	1.7
26	2	0.7
33	1	0.3
TOTAL	303	100

Table 1 presents the distribution of respondents in terms of Age. This shows that most respondents are 22. Twenty-one and 23-year-old students, respectively, follow it. And so on. This concludes that the ages 19 - 24 were most likely to enroll in college. This coincides with the study by Hanson (2022) that 92% of college students are under 24.

Table 2

Distribution of respondents by sex

Sex	Frequency	Percentage (%)
MALE	101	33.3
FEMALE	202	66.7
TOTAL	303	100

The table above indicates the frequency and percentage of males and females who participated in the survey. According to the master list of enrollees in The College of Maasin, Inc. for the academic year 2020 - 2021, more than 70% of these students were female. It can therefore be concluded that there are more females enrolled in college than men.

Table 3

Distribution of respondents by degree program

Degree Program	Frequency	Percentage (%)
<i>Bachelor of Arts in Political Science (BAPS)</i>	9	3.0
<i>Bachelor of Elementary Education (BEED)</i>	12	4.0
<i>Bachelor of Science in Accountancy (BSA)</i>	24	7.9
<i>Bachelor of Science in Business Administration (BSBA)</i>	48	15.8
<i>Bachelor of Secondary Education (BSED)</i>	36	11.9
<i>Bachelor of Science in Information Technology (BSIT)</i>	30	9.9
<i>Bachelor of Science in Nursing (BSN)</i>	135	44.6
<i>Food Preparation and Service Technology (FPST)</i>	9	3.0
TOTAL	303	100

Table 3 presents the distribution of respondents concerning their college degree programs. The result shows that respondents from BSN have the highest frequency of 135 or 44.6% out of the total sample size. This is due to the fact that the Bachelor of Science in Nursing also has the highest number of students enrolled throughout The College of Maasin, Inc. compared to other college courses.

4.1.2. Preferred online teaching style

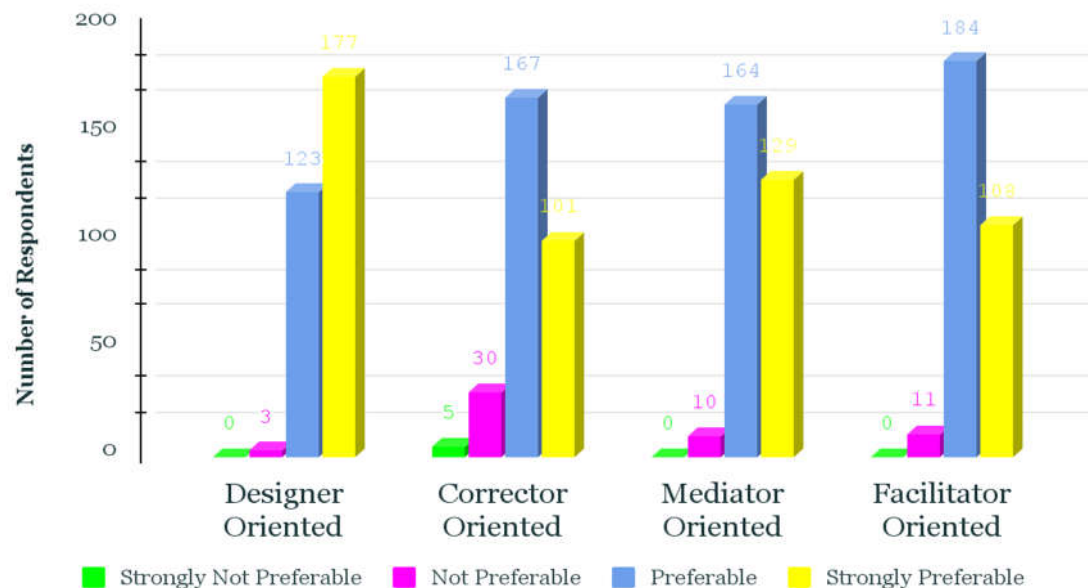


Figure 1. The preferred online teaching style of students

Figure 1 shows that the Designer-Oriented is the most preferred online teaching style among the respondents, with a level preference of “Strongly Preferable”. It shows that the students of The College of Maasin, Inc. favor a more dynamic online teaching style, adaptive and creative towards online tasks and lessons, which is pivotal in lessening the gap of physical absence. According to Stern (2004), students like online facilitators who are personable, animated, and creative. This assertion confirms the study’s conclusion that Designer-Oriented was the favored online training method. Online classes can become monotonous over time without the appropriate activities to keep students engaged. An online instructor must be able to make up for their lack of physical presence using inventive educational resources.

4.1.3. Correlation between students’ profile and online teaching styles

Table 4

Students’ age and online teaching styles correlation

	Designer-Oriented	Corrector-Oriented	Mediator-Oriented	Facilitator-Oriented
Age - Pearson Correlation	.041	.278	.161	.082
Sig. (2-tailed)	.474	.000	.005	.156

The table below shows the results of the significant relationship using Pearson Correlation. Since the Pearson value of Corrector-Oriented and Mediator-Oriented are .278 and .161 and have a p-value of .000 and .005, which are all less than $\alpha = 0.05$, the researchers reject the null hypothesis.

This means that the preferred online teaching style of tertiary education students, particularly the Corrector-Oriented and Mediator-Oriented, depends on age.

The respondents who participated in the study were all college students with dominant ages of 18 - 23 who happened to belong to the same age group.

A study by Simonds and Brock (2014) shows a data analysis showing a statistically significant relationship between students' age and preference for Corrector and Mediator-Oriented style. Differences in these areas among three different age groups were studied.

Table 5

Students' sex and online teaching styles correlation

	Designer-Oriented	Corrector-Oriented	Mediator-Oriented	Facilitator-Oriented
Sex - Pearson Correlation	.054	.034	.148	.186
Sig. (2-tailed)	.345	.550	.010	.001

The table below shows the results of the significant relationship using Pearson Correlation. Since the Pearson value of Mediator-Oriented and Facilitator-Oriented are .148 and .186, having a p-value of .010 and .001, which are both less than $\alpha = 0.05$, the researchers reject the null hypothesis.

This means that tertiary education students' preferred online teaching style, mainly the Mediator-Oriented and Facilitator-Oriented, is dependent on sex.

A study by Bamber and Tett (2000) and O'Donnell and Tobell (2007) found that sex affects teaching preferences among students. Another study by Corbin (2017), adapted from the study of Rodriguez and Fahara (2010) about the four Online Teaching Styles, claims that there are significant differences between the students' sex and their preference for Mediator-Oriented and Facilitator-Oriented teaching Styles.

Table 6

Students' degree program and online teaching styles correlation

	Designer-Oriented	Corrector-Oriented	Mediator-Oriented	Facilitator-Oriented
Degree Program - Pearson Correlation	.064	.008	.86	-.075
Sig. (2-tailed)	.269	.887	.137	.192

The table below shows the results of the significant relationship using Pearson Correlation. Since the Pearson value of all the teaching styles below has a p-value greater than $\alpha = 0.05$, the researchers fail to reject the null hypothesis.

This means that tertiary education students' preferred online teaching style is independent of the degree program.

A study by Emanuel and Potter (1992) showed that students' preferences for learning and teaching styles, as well as their preferences for the communication styles of their instructors, were not relative to major in college. The researcher's rank ordering of preferences in online teaching style was generally stable across the college students from the adolescents and majors.

This claim is supported by another research showing that students' preference for teacher style characteristics is unrelated to their (Widmeyer & Loy, 1988).

4.2. Discussion

4.2.1. Students' profile

Regarding Age, 22 has the highest frequency of 83, or 27.4% of the total sample size. This implied that most of the respondents were 21 - 23 years old.

In terms of Sex, out of 303 respondents, 33.3% are males, and 66.7% are females. This implies that there are more female respondents than males.

Regarding the Degree program, Bachelor of Science in Nursing students composed 44.6% of the sample, dominating the number of respondents.

4.2.2. Online teaching style preference

Most respondents strongly preferred the Designer-Oriented as Online Teaching Style.

4.2.3. Age, sex, and degree program and online teaching styles correlation

The null hypothesis was rejected for Age at $p = .000$ for Corrector-Oriented and $p = .005$ for Mediator-Oriented. Researchers found that the preferred online teaching style of tertiary education students, particularly the Corrector-Oriented and Mediator-Oriented, depends on age.

Sex, at p -value of .010 and .001 for the Mediator-Oriented and Facilitator-Oriented, the researchers reject the null hypothesis. The researchers found out that the preferred online teaching style of tertiary education students, particularly the Mediator-Oriented and Facilitator-Oriented, is dependent on sex.

The degree program, at $p = 0.269$ for Designer-Oriented, $p = 0.887$ for Corrector-Oriented, $p = 0.137$ for Mediator-Oriented, and $p = 0.192$ for Facilitator-Oriented have P -value greater than $\alpha = 0.05$; the researchers fail to reject the null hypothesis. The researchers found that tertiary education students' preferred online teaching style is independent of the degree program.

5. Conclusions & recommendations

5.1. Conclusion

The majority of the respondents of this study are 22-year-old females pursuing a Bachelor's Degree in Nursing. Due to the fact that online classes can be exhausting and monotonous over time, it has been determined that "Designer-Oriented" is the preferred online teaching style among students. With this in mind, an instructor who continuously creates and innovates learning strategies to meet the needs of students' learning can serve as a model for online distance education.

Importantly, in an effort to identify significant relationships between the study variables, the findings revealed correlations between Online Teaching Styles Preference among students and their Age and Sex. However, there is insufficient evidence to reject the null hypothesis on the assumption that there is no significant correlation between Online Teaching Styles Preference and the Degree Program of students.

5.2. Recommendation

School administrators must conduct orientation programs, surveys, and trainings focusing on "designer-oriented" online teaching styles for instructors in order to assess their capacity to provide quality online distance education. In order to meet the diverse learning needs of tertiary students, instructors can investigate the other online teaching styles used in this research. It can help them develop contextualized strategies to address the learning needs of students and online

teaching or instructional methods to sustain quality education regardless of the presence or absence of a pandemic.

Instructors must highly consider age and sex in crafting their syllabi or learning guides or plans. The instruction afforded to students should develop activities that are age-appropriate and sex-sensitive, especially in online distance education.

This study can also be an indispensable resource for case studies for researchers and future researchers. They must investigate and conduct studies related to or expanding the scope of this study, which includes public schools. They should use it for elementary and secondary students, as they are also exposed to online distance education challenges.

Furthermore, future researchers can select proportional respondents based on age and sex. Additionally, the degree programs must be represented in equal numbers. Hence, it is strongly recommended that additional research be conducted to delve deeper into online teaching styles and explore on other possible demographic profiles to determine relationships or differences.

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