

LEARNING STYLE PREFERENCES, ACADEMIC SATISFACTION, AND PERFORMANCE IN ONLINE DISTANCE LEARNING IN TERTIARY EDUCATION UNDER THE NEW NORMAL

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ABSTRACT: This descriptive-correlational study describes students' learning style preferences, academic satisfaction, and performance in online distance learning under education in the new normal. Furthermore, it also investigates the inter-relationship among these variables, Data were obtained from a sample of 1150 college students from different State Universities and Colleges (SUCs) from Central Luzon, Philippines during the second semester of S.Y. 2020-2021. Results revealed that most of the students are visual and read and write learners who learn best when the information is presented with pictures, graphs, tables, or in textual form where they can note important key concepts while learning in the online distance learning approach. Furthermore, findings showed that students' learning style preference is significantly correlated or associated with their academic satisfaction and performance in online distance learning. Thus, students' learning style preferences, academic satisfaction, and performance in online distance learning under education in the new normal are interrelated to each other. It is recommended that the school administrators should check on the flexibility of curriculum content, quality and relevance of online learning resource materials, availability of learning management system and platforms, quality student programs and services, and well-planned program design/schedule since these parameters contribute to students' academic satisfaction and performance. Teachers should upgrade their technological-pedagogical competence particularly their online instructional and assessment strategies since these variables are directly associated with learners' satisfaction and performance in their online class. Understanding the aspects that affected students' performance after the crucial introduction of online learning may be vital for the ruling body and all those involved in the execution in any future new related circumstances.

KEYWORDS: Academic Satisfaction, Learning Style Preferences, Academic Performance, Online Distance Learning, Education in the New Normal

1. INTRODUCTION

The present COVID-19 pandemic has brought huge challenges and a great impact on our educational system. No one knows how this crisis will end. Every country is presently implementing plans and procedures on how to eradicate the virus and flatten the curve of infections (Guo, Cao, Hong, Tan, Chen, Jin, & Yan, 2020) cited in the study of Tria(2020). According to Pastor (2020), COVID-19 Pandemic, as stated by the World Health Organization (WHO), impedes classes around the globe including the Philippines. These disruptions aim to prevent the rapid increase of positive cases in the Philippines, although these disruptions create a huge preventive measure to contain the virus, it cannot be ignored how compromising this decision will be to other sectors especially to the academic sectors. Students would need to engage in an alternative method of learning to continue their education using online education or electronic learning. At least 80% of the course content of the online course is delivered online (Allen & Seaman, 2015, as cited in Baharom, 2018).

Community lockdown and different modes of quarantine protocols of respective countries have driven students and teachers to study and work from home which led to the conveyance of online learning platforms (Crawford et al., 2020). However, the implementation of online learning constituted different risks and disputes to the key elements of the educative process especially in higher education institutions (HEIs) (Bao, 2020). In the Philippines, there are around 130,000 cases as of August 4, 2020, and is still increasing (DOH, 2020) with more than 20 million cases worldwide (Worldometer, 2020). In response to these circumstances, educational experts decided to acquire the new normal in education. At the basic education, the Department of Education (DepEd) will be implementing the Learning Continuity Plan (LCP) and DepEd Commons which will take effect in School Year 2020-2021(DepEd, 2020). In the higher education sector, the Commission on Higher Education, HEIs were given academic freedom and should implement available distance learning, e-learning, and other alternative modes of delivery to students (CHED, 2020).

With the ambitions of the institutions to terminate face-to-face instruction for most of their students, requiring them to switch, nearly overnight, to online teaching and virtual education. In this situation, some students feel inadequate to attend to their assigned readings in their subjects that will conceivably affect their academic fulfillment and accomplishment. Students are used to their lecturers explaining to them in more casual ways the website material. While there are software applications to aid them on these online class sessions, such as virtual compatibility through chats or Zoom or Google classroom, these applications though available, are not always readily accessible because of the unevenness of web availability. This issue has been repeatedly brought out in today's discussions and the media (Lederman, 2020). In any case, other than innovative online exercises, educators from Higher Education ought to consider the academic fulfillment of students for them to assure the effective transfer of learning which has something to do with their academic achievement.

Moreover, Higher educational institutions (HEIs) shoulder critical and crucial responsibilities in finding ways to deliver quality services to its clientele amidst the pandemic. State Universities and Colleges (SUCs) in the country are in charge of educating the professional human workforce and this should be fulfilled whatever it takes. Being an institution, it should act based on regular feedback from its student clients. The initiatives of SUCs in facing the challenge of how to dispense and provide quality education amidst exceptional times like the COVID-19 pandemic has an impact on students' academic satisfaction under the new normal ways of education.

According to Commission on Higher Education, guiding HEIs in the new normal considering students' satisfaction data, evaluating students' satisfaction is a key way for SUCs to identify the priorities of their student population along with the perceptions of how the institution is performing amidst COVID 19. Understanding students' satisfaction with the educational services rendered which considers their diversities, needs, and preferred learning styles is indispensable most especially during the implementation of Online learning during the new normal.

Student satisfaction definitions have diversified widely determined by the research approach and focus. Satisfaction is a well-researched topic not only in non-academic but also in scholastic settings, in academic settings, students' satisfaction data aids colleges and universities make their curriculum more receptive to the needs of a changing establishment (Eyck, Tews&Ballester, 2009; Witowski, 2008). Academic fulfillment is a multifaceted concept. By referring to Oliver and Sarbo's (1989) definition, Rahmatpour, Hamid S., and Hamid P. (2019) describe academic fulfillment as the favorability of a student's subjective judgment of the diverse outcomes and experiences correlated with education. Onditi and Wechuli (2017) specified it as a short-term demeanor that comes from the assessment of student experiences with the education service received," and this attitude influences the motivation of the student, recruitment of new students, and retention of existing students.

Thomas and Galambos (2004) as cited in the study of Gruber et al. (2010) expressed that students are respected as consumers or clients of any higher education institution and thus without the students, SUCs have no esteem. They are the foremost imperative resource for any educational institute that is why their feedback and comments on the services rendered to them should be taken into consideration especially in this type of situation our country is facing. One of the most important factors to consider is the Students' satisfaction, to assess the institutional status in terms of giving quality education services. In addition, universities need to assess their client's satisfaction to check their educational delivery system. Hasan and Ilias (2008) made it clear that students become satisfied with the services of the school when it can provide for their academic needs. However, Petruzellis, Uggento, and Romanazzi (2006) mentioned that satisfaction in a learning institution begins with satisfaction with the services provided to the learners. Therefore, students' academic needs and school services are the areas of focus in terms of student satisfaction. As a result, HEIs should continuously look at how to progress the satisfaction of the students at their institution in the face of the present pandemic and learning under the new normal form of education.

Under the unusual standard or new normal form of education, students get exposed more frequently to the Internet, teachers ought to continuously consider students' privacy, safety, security, and advanced well-being as top priorities for a successful remote or online learning. HEIs should come with a learning continuity plan which will ensure that students' learning will not be postponed even facing disasters like natural calamities, storms, fires, and pandemics. This will be implemented by DepEd for S.Y. 2020- 2021. For higher education, CHED is embracing the implementation of adaptable or flexible learning by all public and private HEIs to guarantee the progression of learning amidst the pandemic and community quarantine guidelines. The academic groundwork for adaptable or flexible learning is underway, be that as it may, preparations for the action of student affairs and services (SAS) have not been given more considerations than necessary, and yet, SAS plays a significant role in providing equitable learning opportunities (CHED, 2020).

The herculean challenge is to pursue teaching and learning, ahead of the usual face-to-face instruction. Hence, it has become an urgently requiring need to probe other ingenious learning modalities that will encourage movement from conventional to flexible teaching and learning alternatives. The students' need for access to quality education would require alternatives that will customize delivery modes. As learners are differently situated in terms of time, pace and place Thus shall also allow students the option to choose the delivery mode most suitable for them (CHED, 2020)

Understanding the underlying dimensions of student satisfaction and the factors that contribute has several potential benefits and applications for institutions, students, and society. Several studies have strengthened the positive value of academic satisfaction, defining this variable as contributing factor in the teaching-learning process and in subsequent academic performance (De Vos&Soens, 2008; Ojeda, Flores & Navarro, 2011; Park, 2011). Furthermore, studies have examined the extent of university student academic satisfaction (Elliott & Healy, 2001; Wang & Liao, 2013). Overall, some fairly consistent factors tend to emerge such as course substance and educating staff, social perspectives and/or opportunities; and facilities and resources of the campus (Gomez & Santos, 2017).

Moreover, in the study of Siming, Niamattullah, Jianying, Dan, and Khurram (2015) on aspects leading to student's satisfaction in the higher learning institution, they consider the teacher-student relationship, teacher's readiness, campus support amenities and expertise provided by the institute. Shirazi (2017,) in his study about factors that contribute to student satisfaction, he analyzed the six dimensions of students' satisfaction using confirmatory factorial analysis such as their course, educator, classmates, academic improvement, assessment of academic achievement, and educational environment. Gruber, Fur, Voss, and Glaser-Zikuda (2010) outlined a student satisfaction tool for a German university that secured fifteen aspects or dimensions such as administrative and student services, student atmosphere, the courses, and teacher's support. Likewise, Butt and urRehman (2010) probed student satisfaction on four education aspects or dimensions: teaching expertise, the offered courses, the learning environment, and classroom facilities. Temizer and Turkyilmaz (2012) on the other hand, developed a Student Satisfaction Index (SSI) model for higher education institutions that scaled student satisfaction from different aspects such as institutional identity, expectations, distinguished quality, distinguished value, and loyalty.

In another study, Alam Malik, Hassan, and ZahidIqbal (2012) probed students' approach and presumptions in an academic school through the assessment of factors such as proficiency in teaching, the courses offered, the educational realm, and the classroom facilities. Generally, dimensions of scales could be categorized into four themes such as syllabus/ curriculum, facilities, campus or the seat of learning, and relationship.

For the relationship of the indicators on students' satisfaction, Wach, Karbach, Ruffing, Brunken, and Spinath (2016) positioned that learning can be strengthened or fortified with education materials of different kinds considering they are used to fetch the interest of the pupils and sustain their attention to a certain degree on teaching and learning process. This denotes that education materials are learning aids and tools through which teaching and learning are done in schools. Self-instructional modules as learning materials for this situation are important particularly to students with poor or no internet connection or even students with some or no available devices at home. The adequacy of these learning modules is one of the variables to consider in this study under students' academic satisfaction

In the article published by Weerasinghe, Fernando, and Lalitha (2017) about the literature review on the factors contributing to students' satisfaction. The following works of literature are cited in their paper. First, is the study conducted by Garcia-Aracil (2009) found out that student satisfaction covering the different European Nations was relatively stable despite the contrasts in education frameworks. The study further realized that communications with fellow students, the content of courses, learning resources, stocking of libraries, teaching excellence, and teaching/learning materials have a notable impact on the students' satisfaction. Another is the study conducted by Wilkins and Balakrishnan (2013) revealed that quality of teaching, excellence, and accessibility of resources, as well as effective use of technology, have a significant influence on students' satisfaction in transnational higher education. Furthermore, Pathmini, Wijewardhena, Gamage, and Gamini (2014) identified the unwavering quality, curriculum, and compassion as a major determining factor of student satisfaction in regional state universities. In the Malaysian higher education setting, twelve (12) underlying variables were identified by McLeay and Woodruffe-Burto (2015) that significantly influence their students' satisfaction. Accordingly, professionals, pleasant environment, student appraisal, and learning experiences, classroom environment, lecture, and coaching facilitating goods, textbooks and tuition fees, student support facilities, business action, friendly association with the teaching staff, knowledgeable and approachable faculty, accommodating staff, feedback, and magnitude of class make a significant impact on students' satisfaction.

In Malaysia, Farahmandian, Minavand, and Afshard (2013) investigated the levels of students' satisfaction and service quality of International Business School, University Teknologi Malaysia. Their findings:

academic counseling, curriculum, teaching excellence, financial assistance, tuition fee, and facilities of the universities have a significant impact on students' satisfaction. Lastly, Hanssen and Solvoll (2015) determined that the esteem or honor of the institution, the appeal of the host university city, and the quality of facilities have a significant impact on students' satisfaction however career opportunities failed to impact significantly on the satisfaction of students in the Norwegian university system. The study determined further that social areas, amphitheatres, and libraries are the physical aspects most strongly influence students' satisfaction.

Hasan, Rahman, Ilias, and Razak (2009) made it clear that satisfaction starts with the feeling of the students toward what they should receive and what they are expecting to receive. When the school can deliver the academic requirements of the students, they also become satisfied with the services of the school thus improving their academic performance. Academic performance is the degree of pass or failure of students over some time. It is described as the ability of the students to acquire the required minimum standard grade to continue in the course (Njoku and Abdulhamid, 2016). Academic performance is influenced by different activities and performances depending on the curriculum and syllabus of an institution. It can be influenced by various variables like age, socio-economic status, disability, and more so learning styles (Njoku&Abdulhamid, 2016). Past researchers have revealed that learning style preferences directly affect academic performance. According to Ilcin, Karadibak, Savci, and Yeşilyaprak (2018), learning techniques have been determined as a precognition of academic performance and guides for curriculum design.

Another important construct of this research is supported by another study which is students' preferred learning styles. Learning style is defined as the desired way wherein a person manages new information for effective learning. Learning can be described as an indefinite behavioral change in life. Based on Experiential Learning Theory, learning is "the procedure by which comprehension is brought about through varying experiences". The process of learning is unique for every person; learning does not come at the same level and quality even in the same learning techniques (Ilcin et al., 2018). Furthermore, the study of Nja et al. (2019), explained that students' learning techniques are affected by ecological, sentiments, and cognitive factors as well as their past experiences. Learning technique is mainly concerned with "in what manner" students learn rather than "what" they learn (Gokalp, 2013; Fardon, 2013 as cited by Nja et al., 2019). This idea was supported by the study of Ling et al., (2017), wherein they believed that the learning technique of a student does not rely on learning tools or equipment but rather on how they understand the learning process.

As mentioned by Rapanta et al. (2020), the learning goal is interrelated to an excellent teaching approach with clear learning objectives, well-controlled content, precise duties or functions for both the educator and students, the use of illustrations or visuals, learning activities, and evaluation to meet the desired outcome (Bates, 2019 as cited by Rapanta et al., 2020). Awareness of personal learning styles can help students in many aspects, as students can be more confident in their strengths and build a diverse method to deal with the challenging circumstances that inevitably arise (Li, et al., 2018).

According to Njoku et al. (2016), implementing a holistic strategy would result in better academic performance. Therefore, it is substantial to assess the preferred learning technique to achieve more effective learning. Previous researches have shown a close relationship between the learning technique and academic achievement (Ilcin et al., 2018). The study of Magulod (2019), concludes that there is a positive connection between learning technique and academic performance in university settings (Moeinikia&Zahed-Babelan, 2010; Williams, Brown & Etherington, 2013, as cited by Magulod, 2019). Hence, the study of Ridwan et al., (2019) specified that great academic performance can be realized based on the students' learning styles. Several new studies have indicated that students' learning techniques affect their academic performance, and many authors claim that understanding their learning techniques is necessary to enhance the academic performance of students (Khalid et al., 2013 as cited by Ridwan et al., 2019). Similarly, the study of Ridwan et al., (2019) specified that great academic performance can be achieved based on the students' learning techniques. The awareness of students about learning strategies is favorable to academic performance, hence learning strategies that are damaging to academic performance increases the retention rate (Neroni, et al., 2019).

According to the study of El-Bishouty et al. (2018), it showed that "Sensing or Intuitive" learners seemed to have more achievements in online courses (Rogers, 2011 as cited by El- Bishouty et al., 2018). The result of this research is similar to the study of Ali et al. (2017) which have specified that no other learning preferences displayed a significant difference to academic performance apart from sensitive, intuitive, sequential, and global learning styles. In contrast, the study of Zagulova et al. (2019) found out that the different performances of students with a moderate and strong activist. Statistically, they are significantly lower than students of mild activist.

Some other studies which deals with students' preferred learning styles are the studies conducted by Kolb, 1984; Felder and Silverman, 1988; Honey and Mumford, 2000). Learning theory is divided into two components according to Kolb (1984). The first is that active exploration, concrete experience, reflective observation, and abstract conceptualization are all stages of learning. Learners, according to Kolb, should

ideally go through the stages to complete a cycle, transforming their experiences into knowledge. Kolb's Theory's second half focused on learning styles, or the cognitive processes that took place in order to gain knowledge. In essence, Kolb felt that people might demonstrate their knowledge, or the learning they had done, by applying abstract concepts to new contexts. The Felder-Silverman model is a model designed to help both students and teachers in which students are able to understand their individual learning styles, which can then help them study more effectively. It can also help teachers deliver material in ways that appeal to the varied styles of learning present in their students (Felderman and Silver, 1988). The learning styles presented by Felderman and Silver were active versus reflective learners and intuitive vs sensing learners. Honey and Mumford (1986) recognized four basic techniques to learning new information: activist, theorist, pragmatist, and reflector, despite the fact that there are many different theories and frameworks underlying learning styles.

A learning style is a way of describing a method or a set of preferences. Any inventory that helps a student to consider how he or she learns is a helpful step toward better understanding and hence learning (Fleming & Baume, 2006). Teachers benefit from the VARK inventory because it allows them to teach more effectively (Marcy, 2001). It serves as the beginning point for a discussion about learning between teachers and students. It can also serve as a springboard for staff development, as thinking about ways for teaching various groups of students can lead to a greater and more appropriate variety of learning and teaching. That sets in motion a process of considering how students prefer to study. This is the reason why the researchers considered this learning style theory.

The researchers have shown how learning style preferences and academic satisfaction directly influence the academic performance of the students. Despite the certain factors that can contribute to academic performance, these remain as contributing factors for it influences the students' way of retrieving, conceptualizing, and summarizing different concepts in their course material. The impact of these constructs on academic performance should be given emphasis especially this time of new normal in education where teachers and students were limited in using technology in education to continue the goal of education.

Lastly, students' satisfaction and learners' preference techniques play a significant role in their academic performance. Thus, when these constructs were taken into consideration, it also contributes to producing the top of the finest graduates who will become a great leader and workforce for the country (Ali et.al, 2009). Students' academic performance appraisal has received substantial attention in a lot of researches. It is now a formidable aspect for educators since the learning mode was conveyed to coincide with the needs and safety of the learners caused by the pandemic. To measure students' academic performance has always been in the best interest of the educators. A performance-based assessment will be utilized with the use of the different assessment tools. Hence it focuses more on the formative form of assessments to measure students' academic success. This will allow them to assess procedures not only students' knowledge levels but also the effectiveness of their own teaching processes, and perhaps, provide a scale of student satisfaction taking into account their learning preferences and standards (Martirosyan, Saxon, &Wanjohi, 2014).

2. CONCEPTUAL FRAMEWORK

The study is mainly anchored in Khale's Social Adaptation Theory which states that people's cognitive life facilitates their functioning in their social environments. This theory states that due to the continuous adaptation through awareness and internal arrangement of data the schemata are developed. Adaptation is what activates change rather than reasoning. Terziev (2019) defines social adaptation as the process of creating compliance with change-induced constraints. Communication, knowledge acquisition, adjustment, inclusion, and other ways are some of the methods that can be used to attain compliance in this process. There is no one-size-fits-all approach to adapting to a new social context, but teachers must be willing to alter and adapt to new systems, particularly in the educational system.

Moreover, according to Bandura (1977) as cited in the study of Zhang (2018) described social adaptation could be regarded as the process in which students learn how to become better in a way suited to their new environment. In other areas, Because of the shift in attitudes and the success of advertising, Neo-Piagetian notions were used in social adaptation theory. The study's prototype is depicted in Figure 1.

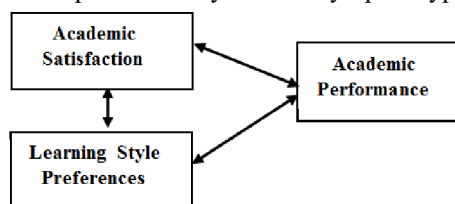


Figure 1. Prototype of the Study

As can be observed in the prototype of the study, it shows that the test of correlation or association is evident wherein the researchers determine the significant relationship among the three variables namely: academic satisfaction, learning techniques or style, preferences, and academic performance or excellence of students in online distance learning situation under education in the new normal.

3. OBJECTIVES

The general goal of this study is (1) to describe the respondents' or students' academic satisfaction, learning techniques or styles preferences, and academic performance in online learning under the new normal (2) to determine the significant relationship between students' academic satisfaction and learning style preferences in online learning under the new normal 3. to identify the significant relationship between students academic performance and learning style preferences in online learning under the new normal,(4) to identify the significant relationship of students' academic satisfaction on their academic performance in online learning under the new normal and (5) to determine the possible actions to be taken into consideration based on the results of the study.

4. METHODOLOGY RESEARCH OUTLINE

The researcher used descriptive correlational design type of research for this study. According to Lappe (2000), the point of the descriptive correlational design is to portray the relationship among factors as opposed to surmise circumstances and logical results connections. Descriptive correlational design examinations are useful for depicting how one wonder is identified with another in a circumstance where the scientists have no power over the free factors, the reliant factors that are accepted to cause or impact the ward or result variable.

Participants

The respondents of the study were 1150 students were gathered from different State Universities and Colleges (SUCs) in Region III. The random sampling was calculated using a control analysis with the acknowledged least level of significance (α) of 0.05, and the anticipated power β of 0.80, which is the accepted least level of power for the test (Polit & Hungler, 1999). The effect size of 0.25 was assessed based on previous related studies. All respondents gave their consent with full knowledge to participate in the study and allow researchers to acquire their final grade for their course. For the selection of respondents in this study, they used simple random sampling. Thomas (2020) defined simple random sampling as a kind of research sampling technique in which several respondents will be selected with equal chances who will represent the whole population.

Research Instruments

a) VARK Learning Styles Questionnaire

This instrument assessed and determined the learning styles of the respondents using the four levels: namely, Visual/Ocular, Aural/Audial, Read/Write, and Kinesthetic/Tactile. These levels were developed by VARK-Learn Limited (2019).

b) Academic Satisfaction Scale

A tool was used to calculate the degree of satisfaction of the respondents toward online education. It is a five (5) point Likert scale ranging from strongly agree (5) to strongly disagree (1). The instrument covers the students' satisfaction on the following dimensions of the implementation of online learning modality in terms of curriculum content; online resources and materials; Learning Management System (LMS) and platforms; online instructional strategies; program design/schedule; student programs/services; and online learning assessment. The scale passed the confirmatory factorial analysis (CFA) considering its item loadings, content validity index (CVI) of 100%, and reliability coefficient of 0.95 greater than the commonly used acceptability threshold of .70.

c) Academic Performance Questionnaire

The instrument was developed through the result of interviews from the participants in which their responses about their performance in their academic in an online class. Items were rated by the respondents from 1 (Strongly Disagree) to 4 (Strongly Agree). The scale passed the confirmatory factorial analysis (CFA) considering its item loadings, content validity index (CVI) of 100%, and reliability coefficient of 0.92 which is higher than the commonly used acceptability threshold of .70.

Procedure

The researcher used three survey questionnaires in gathering first-hand information from the respondents. By doing so, the researcher sought first the permission of the SUC Presidents from different universities through pre-survey letters reflecting the purpose of the study. After being granted permission from the said administrators, the researcher secured a Notice of Non-disclosure agreement and Data Privacy Notice. The

respondents were given the freedom to stop participating if they have personal reasons and they need not worry about the consequences of their decision. Furthermore, the instructions were given to the respondents in answering the questionnaires and the time it would take them to finish answering. After all of these ethical procedures in research, the researcher shared the Google Form link to the respective student regents per university. Quantitative data gathered were tallied, tabulated, refined using Statistical Package for Social Sciences (SPSS) as a tool. Weighted mean, standard deviation, and correlation analysis statistical tools were used.

5. RESULTS AND DISCUSSIONS

Students` Academic Satisfaction in Online Distance Learning under Education in the New Normal

Table 1. Academic Satisfaction of Students in Online Distance Learning

Indicators	M	SD	VD
1. Curriculum Content	3.27	0.74	Satisfied
2. Online Learning Resources and Materials	2.94	0.77	Moderately Satisfied
3. Learning Management System and Platforms	3.28	0.77	Satisfied
4. Online Instructional Strategies	3.05	0.75	Moderately Satisfied
5. Program Design/Schedule	3.04	0.77	Moderately Satisfied
6. Student Programs/Services	3.05	0.77	Moderately Satisfied
7. Assessment of Students` Online Learning	2.99	0.80	Moderately Satisfied
GRAND MEAN	3.09	0.77	Moderately Satisfied

Table 1 shows that the respondents` assessment of their academic satisfaction when they were exposed to online distance learning. Result reveals that the students are satisfied with the curriculum content and learning management system used for their online learning. The results supported the study of Almusaraff and Kharo (2020) about students` satisfaction in online learning during the pandemic. Hence it showed that students were highly satisfied with the learning management system used, the Google Hangouts mostly used for lecture delivery and Google Classroom and LMS (Moodle) for course management respectively. Data also show that they are moderately or somehow satisfied with online learning resources and materials, online instructional strategies, and online learning assessments employed by their teacher. Moreover, they are also moderately satisfied with their program design or schedule in online classes and student program services offered by their school. In general, students have an average level of satisfaction when it comes to online distance learning. In the study of Elshami et al. (2021) regarding the satisfaction of faculty and students in online learning, under the new normal. Results reveal that in online learning, respondents/students have a lower level of satisfaction compared to teachers. The result of the study yielded that 41.3% of the students are satisfied in online distance learning compared to 74.3% for faculty.

Students` Learning Style Preferences in Online Distance Learning under Education in the New Normal

Table 2 . Learning Techniques/Styles Preference of Students in an Online Distance Learning

Learning Styles Preference	N	%
Visual	442	38.43

Aural	174	15.13
Read and Write	346	30.09
Kinesthetic	188	16.35

N = 1150, Learning Styles based on VARK Model

The result on Table 2 showed that 38.40% of the students preferred to be visual learners as their learning styles. These students comprehend well when lessons are presented visually and in writing. Hence, the online environment is specifically applicable for visual/verbal learners since most of the learning materials used by teachers are graphical or pictographic presentations. It is also shown in the table that around 30% of the students are read and write learners who focus on written words and note-takers. They can perform strongly when they can reference written text. Further, the result also showed that there are around 15% of the students are considered as aural or verbal learners and 16% are kinesthetic or tactile learners. Aural or auditory learners learn best when they interact with other students in a listening/speaking activity while tactile or kinesthetic learners preferred learning the information by hands-on activity or actually doing it. Online learning set-up suits as well the learners' styles where group work and activities carried out in collaboration are well-accomplished online.

Students' Level of Academic Performance in an Online Distance Learning under the New Normal

Table 3 .Academic Performance of Students in an Online Distance Learning under the New Normal

Indicators	M	SD	VD
I give the right answers to the questions of my teachers	4.14	0.72	High
I participate actively in our online class	3.92	0.86	High
I am confident enough to do all my class works	4.13	0.80	High
I come to my online class prepared every day	4.00	0.87	High
I get high scores in my exams	3.81	0.78	High
I get good grades in my subjects	4.05	0.76	High
I am doing well in our online class	3.91	0.88	High
I receive good feedback from my teachers regarding my class performance	3.87	0.83	High
I easily answer questions/ solve problems in our exams	3.68	0.85	High
GRAND MEAN	3.94	0.82	High

The perceived academic performance of students in an online class is illustrated in Table 3. Data revealed that students have a high level of academic performance during an online class. Students performed well in their classes as they agreed that they get good grades in their subject and receive good feedbacks from their teachers regarding their class performance. They also agreed that they participate actively in their online class as well as their confidence in giving correct answers and solutions to questions or problems posed by their teachers. Generally, students perceived academic performance in their online class is said to be at a high level. Some studies reveal that online learning has a negative impact on academic performance of students but there are also studies where good things about online learning are highlighted and its effect on students' academic performance. In fact, different comparative studies have been carried out that probed whether face-to-face or

traditional ways of teaching are more productive or could be that online or blended way of teaching is better (Lockman&Schirmer, 2020; Pei & Wu, 2019; González- Gómez et al., 2016; González-Gómez et al., 2016). Results of the studies show that online learning is strongly preferable than traditional learning as a result of the students' performance. Moreover, Gonzales et al. (2020) stated that the limitations of students during the pandemic had a remarkable positive effect on their performance. These results were attributed to students' continuous use of learning strategies from which their learning efficiency improved. Clark, Nong, Zhu, and Zhu (2020) study shows that the academic achievement of students is progressively with the use of computers and smartphones in an online learning scheme during the Covid-19 pandemic situation.

Association between Students` Levels of Academic Satisfaction and Learning Style Preferences in Online Distance Learning under the New Normal

Table 4 .Chi-Square Test for Association between Students Academic Satisfaction and Learning Style Preferences in Online Distance Learning under Education in the New Normal

Learning Styles Preferences	Levels of Academic Satisfaction				
	1	2	3	4	5
Visual	7 (.61%)	43 (3.74%)	226 (19.65%)	159 (13.83%)	7 (.61%)
Aural	0 (0%)	23 (2.00%)	78 (6.78%)	73 (6.35%)	0 (0%)
Read and Write	0 (0%)	14 (1.22%)	224 (19.48%)	101 (8.78%)	7 (.61%)
Kinesthetic	0 (0%)	7 (.61%)	116 (10.09%)	58 (5.04%)	7 (.61%)

$\chi^2 = 7.43$ at $p > .05$ 5- Very High 4 –High 3 –Moderate 2 –Low 1 – Very Low

Results in Table 4 reveal that most of the visual/ocular, aural, read and write, and kinesthetic/tactile students are moderately satisfied with online education. Data also show that there is no significant association between students' learning style preferences and the level of satisfaction ($\chi^2 = 7.43$ at $p > .05$). This only implies that students' learning style preferences are not related to or have nothing to do with their academic satisfaction in online education

This is in support of the result obtained by Al-Azawei et al. (2015) who found out that there is no significant association between students learning style and satisfaction. On the contrary, Baherimoghadam et al. (2021), during online class, the relationship between the different learning styles and the level of satisfaction shows otherwise, it is highly possible that some learning styles may have a significant relationship with the level of satisfaction when it comes to online education. Similarly, in the research of Chen et al. (2018), one of the learning styles or techniques appears to have significance to students' satisfaction, while other covariates do not show any significance to satisfaction. This is also supported by the cohort pilot study of El-Bishouty et al. (2018) in which there is a consistent result of an increased satisfaction if matched with the preferred learning style in an online course.

Association between Students` Levels of Academic Performance and Learning Style Preferences in Online Distance Learning under Education in the New Normal

Table 5 .Chi-Square Test for Association between Students Academic Satisfaction and Learning Style Preferences in Online Distance Learning under Education in the New Normal

Learning Styles Preferences	Levels of Academic Performance				
	1	2	3	4	5
Visual	0 (0%)	87 (7.57%)	212 (18.43%)	136 (11.83%)	7 (.61%)
Aural	0 (0%)	7 (.61%)	87 (7.57%)	80 (6.96%)	0 (0%)
Read and Write	0 (0%)	29 (2.52%)	216 (18.78%)	94 (8.17%)	7 (.61%)
Kinesthetic	14 (1.22%)	14 (1.22%)	124 (10.78%)	22 (1.91%)	14 (1.22%)

$\chi^2 = 25.97$ at $p < .05$ 5- Very High 4 -High 3 -Moderate 2 -Low 1 - Very Low

The result of the Chi-Square statistics test for association between students` academic satisfaction and learning style preferences in the online distance learning environment is shown on Table 5. Data show that the preferences of students regarding learning style in online classes is significantly related to their academic performance ($\chi^2 = 25.97$ at $p < .05$). This only implies that the preferences of learning styles of students can be associated with their performance in their academics. Data also reveal that majority of the read and write and kinesthetic learners have an average level of academic performance. Most of the aural and visual learners have an average to a high level of academic performance. This is in support of the study of Moeinikia and Zahed-Babelan (2010), as cited by Magulod (2019), which stated that the connection between the students` learning style and the academic performance prevails.. In learning and academic achievement, learning styles play a great role and may define the learning process of how students (Felder and Brent, 2007). Moreover, the studies of Ghazivakili et al. and Good and D` Amore (2013) support this result from which, having found out that learning style and academic performance are closely connected. Lastly, the achievement of online learning can be improved by providing instruction in a manner consistent with each student's learning style. However, it is imperative to keep in mind that, even if a specific student learns best in a certain way, he or she should be exposed to a variety of learning experiences to become a more versatile online learner (Zapalska&Brozik, 2006)

Relationship Between Students` Academic Satisfaction and Performance in Online Distance Learning in Education under the New Normal

Table 6. Test of Relationship between Students Academic Satisfaction and Academic Performance in the Online Distance Learning in Education under the New Normal

Levels of Academic Satisfaction	Levels of Academic Performance				
	1	2	3	4	5
Highly Unsatisfied	0 (0%)	0 (0%)	14 (1.22%)	0 (0%)	0 (0%)
Unsatisfied	0 (0%)	22 (1.91%)	94 (8.17%)	22 (1.91%)	0 (0%)
Moderately Satisfied	7 (.61%)	29 (2.52%)	427 (37.13%)	174 (15.13%)	0 (0%)
Satisfied	0 (0%)	29 (2.52%)	108 (9.39%)	181 (15.74%)	15 (1.30%)
Highly Satisfied	0 (0%)	7 (.61%)	0 (0%)	14 (1.22%)	7 (.61%)

$\rho = 0.87$ $p < .05$ 5- Very High 4 -High 3 -Moderate 2 -Low 1 - Very Low

Table 6 presents the test of the significant relationship between academic satisfaction and performance of students in online distance learning in the new normal. Results show that most of the respondents with a moderate level of academic satisfaction also have moderate or average to a high level of perceived academic performance. In short, students who are satisfied academically have an average to a high level of academic performance.

Data also reveal that a significant positive connection between students' academic satisfaction and performance is present in an online learning condition ($\rho = 0.97, p < .05$). It signifies the higher the level of academic satisfaction of students in an online distance learning modality is, the higher the level of academic performance as well. Students who are academically satisfied performs well in terms of their academic achievement. This is in support of the study of Dhaqane and Afrah (2016) have discovered that the connection between student satisfaction and academic performance is significant in contemporary higher education, receiving a great deal of interest from educators and academics, due to a probable outcome of strong synergies regarding the work experience of students. The study of Abuhassna et al. (2020), it showed that there is a constructive and significant correlation between students' satisfaction when comes to online education programs, wherein it shows that students are capable of adapting to online learning programs. This study is supported by Dinh and Nguyen (2020), which state that students are usually fulfilled with online learning. Moreover, Aung and Ye (2016) revealed in their study that a positive connection is present between the students' satisfaction level and their academic performance. Hence, this is in contrast with the study of Na et al. (2020) realized that there is a weak, positive connection between students' satisfaction and academic performance which as of yet insignificant. In a similar study, Dhaqane and Afrah (2016) mentioned that greater student satisfaction and higher academic achievement indicate a good academic program at the institution they study, which also has a competitive advantage in retaining college students (Samak, et al., 2019). Overall, students' satisfaction with curriculum content, online learning resource materials, learning management systems and platforms, online instructional strategies, program design/schedule, student programs and services, and online learning assessment can be associated with students' performance in online education in the new normal. The more the respondents are satisfied with these parameters the more that they will have a better academic performance.

Proposed Actions/Strategies based on the Result of the Study

1. Conduct Capacity Training for Teachers about Online Differentiated Instruction
2. Provide training on Online Instructional Strategies among the tertiary teachers.
3. Conduct capacity training on how to design an online curriculum content and learning resource materials
4. Strengthen the student programs/services through benchmarking activities from different HEIs.
5. Conduct of webinars about upgrading or upskilling of tertiary teachers' competencies in assessing students' learning via online.
6. Quality Learning Resource Management System which will address the satisfaction and preferred learning styles of learners since these are contributory factors for their academic performance

6. CONCLUSION AND RECOMMENDATIONS

The results of the study showed that most students are visual and read and write learners who learn best when the information is presented with pictures, graphs, tables, or in a textual form where they can note important key concepts while learning in the online distance learning approach. The study also provides insight on the significant connection of learning style preference to the academic satisfaction and performance of students in an online distance learning approach under education in the new normal. Students could enhance their learning performance if proper measurements of learning styles could be taken into consideration. Moreover, considering students' learning styles in online education could increase the level of students' academic satisfaction. This study also demonstrated a connection between students' satisfaction with online learning and their academic performance. Therefore, the higher the satisfaction of students in online learning, the higher their academic performance is. Researchers have shown evidence that learning style preferences and satisfaction of students are connected with academic performance in online education. It can be concluded that this information would be useful in helping students to enhance their performance in the online learning environment. It is recommended that the school administrators should check on the flexibility of curriculum content, quality and relevance of online learning resource materials, availability of learning management system and platforms, quality student programs and services, and well-planned program design/schedule since these parameters contribute to students' academic satisfaction and performance. Teachers may upgrade their technological-pedagogical competence particularly their online instructional and assessment strategies since these variables are directly associated with learners' satisfaction and performance in their online class. After the pressing or crucial introduction of online learning, It was realized that such action may be imminent for the ruling bodies and all those concerned in the

implementation of any possible similar circumstances or situations. Thus, the results of our study signify a clear approach or plan of action for education, research, and policy. The development of digital competencies of both students and academic staff requires a good and careful amount of investment, Hence the action /drive to support research and interdisciplinary ingenious collaboration covering the different aspects of higher online education are advocated and should be encouraged /strengthened. To augment these findings, imminent researchers may consider longitudinal studies to substantiate the results.

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