

STUDENTS' VIEWS ON IMPROVING THE QUALITY OF ONLINE LEARNING: AN EXPLORATORY DESIGN

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ABSTRACT

This study explored students' views on improving the quality of online learning using an exploratory sequential mixed-methods design, commencing with a qualitative phase and followed by quantitative data collection and analysis. In the qualitative phase, individual interviews with ten college students and a focus group discussion with seven students revealed nine key themes, including empowering learning opportunities, optimizing access to online resources, enhancing digital skills development and collaboration, fostering engagement through supportive relationships, leveraging multimedia platforms, addressing challenges and inequities, improving communication strategies, and emphasizing continuous educational improvement. These themes informed the construction of a survey instrument for the quantitative phase. In the quantitative phase, responses from 200 college students were analyzed using Exploratory Factor Analysis (EFA). The EFA results identified four underlying dimensions of students' views on enhancing online learning quality: (1) empowered and accessible learning opportunities, (2) digital skills development and collaborative learning, (3) enhanced communication and support systems, and (4) addressing inequities and promoting continuous improvement. These dimensions provide a robust framework for understanding and improving the online learning experience from the students' perspective. The findings highlight the importance of integrating accessible resources, fostering digital competence, enhancing support networks, and addressing structural inequities

to improve online education. Recommendations include implementing student-centered digital pedagogies, expanding technical support services, promoting equitable access to online education, and encouraging continuous feedback mechanisms to ensure dynamic and responsive learning environments.

Keywords: *student views, quality of online learning, online platform, advantages of online learning, exploratory sequential design, Philippines*

UN Sustainable Development Goals (SDGs) Aligned:

SDG 4 (Quality Education), SDG 10 (Reduced Inequalities)

INTRODUCTION

Over 100 nations have enacted national closures, affecting more than half of the global student population, according to UNESCO (2020). Many nations worldwide, including the Philippines, have adopted virtual or online learning to prevent losing Education (Pedroso et al., K. M. E. (2022).

Since that time, higher education institutions all over the world have started to embrace online learning increasingly. During online learning time, views of student learning results and student satisfaction are positively impacted by in-class engagement, student motivation, course structure, instructor expertise, and facilitation (Baber, 2020). Higher Education is in far greater demand than it has ever been. Distant learning courses to address this need, blended programs are offered globally (ALTUN et al., T. E. (2022). Moreover, the use of online Education is highly beneficial because it can teach students to be more self-sufficient in their knowledge acquisition, have great flexibility in accessing learning materials at any time and repeatedly, save educational expenses, and enable the continual revision of learning materials and models in line with the requirements of scientific development that occurred (Kamaruddin, E. (2020).

Recent concerns about online learning platforms have generated a considerable body of Research. Online learning occurs virtually using online learning platforms, made possible by digital devices and internet connections (Pedroso et al., K. M. E. (2022). Researchers have also identified numerous Students' Views of Online Learning. Giray et al. (2022) revealed that many Filipino college students consider online learning to be a convenient option during the COVID-19 pandemic because it offers a variety of

conveniences and eliminates the need for public transportation, among other things, a more significant proportion of respondents hold the opposite opinion.

Despite various challenges and restrictions, students prefer today's blended learning methods (Mali & Lim, 2021). There are also researchers revealed that students' complaints about the drawbacks of online learning included health and psychosocial issues (such as stress, anxiety, diminished motivation, isolation/loneliness, and apathy) and issues with the learning process (such as misunderstandings, a lack of feedback, additional academic requirements, a lack of challenge, and disengagement). However, other recurrent refers to the positive benefits of online learning, including comfort and accessibility, economy (saving time and money), psychological and medical safety, and time and money savings. Curelaru, M., Curelaru, V., & Cristea, M. (2022).

Consequently, it allowed them to thrive despite the challenges they faced. On the other hand, the subjectivity of sentiments was more strongly stressed based on the student's perspective as opposed to views based on facts. These concepts will instruct teachers to assess students' conditions from various perspectives, which may have an immediate impact. Attention and action benefit every participant (Santiago et al., E. L. (2022).

However, these studies have yet to address the issue of some difficulties; students taking classes online developed new learning strategies. Students' views will help educators understand the situation of students from different vantage points and improve methods of teaching online to better meet the needs of the student-clienteles in situations like emergencies and distant or online learning (Santiago et al., E. L. (2022). That ignites the researcher's interest to explore the views of Kidapawan City college students on improving the quality of online learning to convey their vantages for the improvement of online learning because they are the most critical clientele in Online Education to give the best for them.

This study will give accurate data regarding the improvement of online learning from students' views. Their feedback is pivotal guidelines for curriculum development in online learning to give high-quality Education through the Internet. Furthermore, the study's result will give the teachers vital information and help them innovate their strategies and teaching skills to meet the student's needs. However, the Views of students on the quality of online learning platforms from students' perspectives have yet to receive much attention. It is necessary to comprehend how the online platform influences the learning process.

Educators anticipate improving teaching results by combining online teaching techniques with traditional face-to-face classroom instruction. However, more must be understood about the connection between students' views on improving the quality of online learning, engagement experiences, and satisfaction with their blended learning process. As a result, the researcher gained interest in studying and investigating the students' views of Online Learning and how to improve the quality of online learning for most college students in Kidapawan City online instruction.

The study findings will provide data on the students' views of online learning and investigate the students' views on improving the quality of online learning. This study will provide an opportunity to investigate the scope of Online Learning Platforms to better understand students' needs because they are the most crucial element in the teaching-learning process. Audience

METHODS

Research Design

This investigation utilized the exploratory sequential mixed approach. This design starts with qualitative and analyzed data, followed by gathering and analyzing quantitative data (Creswell, 2003). Moreover, the purpose of this design is to explore a phenomenon in which this is commonly useful when developing a questionnaire (Plano Clark, 2005).

Qualitative data is suitable where variables have yet to be identified or a theory has not been built (Morrow, 2007). It includes content analysis, which assumes that people have beliefs or opinions about something, and By analyzing their words, it is possible to accurately determine what someone means to convey (Wilkinson, 2004). Therefore, content analysis aims to identify participants' beliefs about something. Content analysis involves categorizing what people have said into collective and coherent groups of opinions; it can be very systematic. With this design, the initial items of students' views on improving online learning are based on the participants' narratives.

Meanwhile, the quantitative approach includes construct validity to determine the factor structure of the construct or measures. Because it includes several other types of validity (such as content validity, convergent and divergent validity, and criterion validity) that aid in the assessment of such construct validity, construct validity is regarded as an all-encompassing term to evaluate the measurement procedure used to measure a particular construct (Messick, 2004). , 1989). It is for this reason that construct validity is viewed as a process that you go to evaluate the reliability of a measurement method, while several other forms of validity are procedures (or tools) that you use to more practically assess whether the measurement procedure measures a given construct (Wainer & Braun,

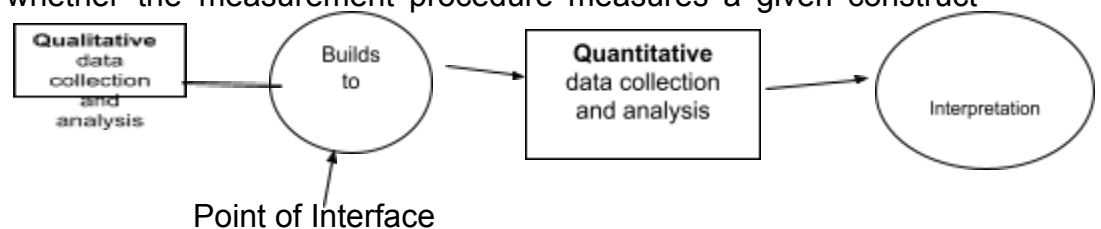


Figure 1: Design diagram of Exploratory Sequential

Source: Creswell, J.W., & Plano Clark, V.L. (2011)

Research Participants

A total of ten (10) college students were invited for in-depth interviews and seven (7) college students for the focus group discussion. The interview results were used to draft the initial items on students' views on improving online learning.

The constructed survey questionnaire from the qualitative interviews was disseminated to 150 college students from different Colleges in Kidapawan. The respondents were selected using the stratified random sampling technique. This necessitates knowing the characteristics of the population members so that the population can be stratified before the sample is chosen (Fowler, 2009). After this, the final tool was distributed to 30 respondents for pilot testing.

Research Materials

In the qualitative phase, the researcher formulated an interview guide that asks questions about the dimensions of views of improving online learning. The interview provided insight into how a group of students thinks about their views and strategies for improving online learning, the range of opinions and ideas about it, and the similarities and variations in their beliefs, experiences, and school practices.

The questionnaire items were constructed based on the frequency of occurrence as a result of interviews and focus group discussions. The construction of the tool from the qualitative phase revealed the dimensions of students' views on improving online learning among students in different colleges in Kidapawan City. This tool is subjected to dimension reduction to examine the factors constituting students' views on improving online learning.

The researcher also invited five experts to assess the content validity of the interview questions and check the suitability of the items that capture the students' views on improving online learning. This is to ensure the readability and comprehensibility of the questionnaire

Data Gathering Procedure

The following are steps in gathering data: First is submitting a permission letter to the Dean of Graduate Studies to conduct the research. Then, the distribution permission letter is sent to the school's president and dean. After the approval is obtained, the researcher, with the help of the representatives, contacts the students of the target schools and requests the dates of data gathering without disrupting classes. It also gives enough time to facilitate instruction in answering the questionnaire.

On the day of data collection, the respondents are requested to sign the letter of consent specified in the instrument for voluntary participation in the study. Only those who signed the consent letter are considered part of this study. Respondents are assured that their responses are kept confidential and that their names did not appear in any part of this study. After the data is retrieved, the data is encoded with proper labels.

Data Analysis

The notes that are obtained from in-depth interviews are analyzed using thematic analysis. This method emphasizes pinpointing, examining, and recording patterns (or "themes") within the data. Patterns in data sets that are significant to describing a phenomenon and are linked to specific research topics are called themes (Boyatzis, 1998).

The exploratory factor analysis is used in the study of quantitative data. It determines empirically how many constructs, latent variables, or factors underlie a set of items. Factor analysis is a multivariate analysis that seeks to explain the relationship between many variables (items) in terms of independent underlying factors. This statistical method can serve as an essential tool for validating the structure of instruments (Nunnally, 1978; Carpenter, 2006) pointed out that factor analysis is not a defined statistical method but a broad category of methods for conceptualizing groupings of variables that includes mathematical procedures for assigning variables to specific groups. As Hare et al. (1998) described, factor analysis is a set of statistical

approaches for analyzing interrelationships among a large number of variables and explaining these variables in terms of their standard underlying dimensions (factors). With minimal information loss, the strategy condenses the information contained in several original variables into smaller dimensions (factors).

The preliminary phase involves testing the data for suitability using KMO (Kaiser-Meyer-Okin measure of sampling adequacy), which signals in advance whether the sample size is large enough to extract factors (Field, 2009) reliably and Barlett's Test, which tests for the overall significance of the correlation within a correlation matrix (Hare, 1998).

The next step involved the determination of dimensions of the unrotated factors of the data by initial extraction using principal axis factoring of Exploratory Factor Analysis (EFA). The first half of the data is utilized in this phase. Only the variables or items appearing on the matrix data with a commonality value of .40 are included. After this, the factors are rotated using Promax rotation. Rotating the factors is used to simplify the factor structure. In this phase, the numbers of dimensions or factors are determined using the Kaiser rule. This method retains only the extracted factors whose eigenvalues are greater than or equal to 1. In addition, Cattell's scree plot criterion will be used to graph the eigenvalue of each dimension or factor.

The scree plot further validates the number of extracted dimensions or factors to be retained. Eigenvalues are defined by factor loading coefficients (factor loading). The correlation coefficients between the items or variables shown in rows and the factors or dimensions presented in columns are denoted as Factor Rotation Matrix factor loadings (Carpenter, 2006). This stage answered the underlying latent factors on the dimensions of the work ethics of Filipino teachers. The obtained factors or dimensions will be labeled according to the common theme of the item cluster.

RESULTS AND DISCUSSION

This section discusses nine main themes from the in-depth interviews and focus group discussions with the participants. Table 1 depicts these themes as the College Students Views on the Advantages of Online Learning: Empowering Learning Opportunities, and Empowering Learning through Online Education, Online Resources: Convenient, Efficient, and Accessible.

Empowering Learning Opportunities. It captures the concept of creating environments where people have access to the tools, encouragement, and support needed to take charge of their education and realize their full potential. It involves designing learning and skill-development routes for a lifetime that are relevant, inclusive, and accessible to a wide range of learners. By focusing on these principles, stakeholders can work together to create empowering learning opportunities that enable individuals to thrive and contribute meaningfully to society.

Online education enables easy access to diverse educational tools and materials by leveraging digital platforms, allowing students to tap into a vast array of resources, simulations, and interactive content that may be logistically challenging to provide in traditional classrooms. (IDI_ P3)

So, for me, online learning provides students with more freedom when it comes to their time because it does not demand students to be actively

sitting in a classroom all day, which allows them to get more work done, especially if they are working students or living in a boarding house. (IDI_P4)

On projector and PPT. Because we need more projector in our school. (FGD_P1)

In online education, we can access the internet and gadgets, while when we are in an actual class, we are not allowed to or do not have access to the internet and our gadgets. (IDI_P2)

These statements represent key principles and strategies for creating empowering learning opportunities that enable individuals to reach their full potential and lead fulfilling lives. Educators, policymakers, and other stakeholders can work together to build a more equitable, inclusive, and effective education system by prioritizing these aspects.

Dr. Ashok Shamrao Patil (2022) supports this insight that using advanced tools in the teaching and learning process can increase the quality of Education. By employing information and communication technology, online learning may carry out systematic learning, meet educational objectives, and enhance the quality of graduates as an alternative to organizing Education through learning

Empowering Learning through Online Education. It involves leveraging digital technologies and online platforms to provide accessible, flexible, and high-quality learning opportunities for individuals of all ages and backgrounds. By harnessing the potential of online education to provide accessible, flexible, and personalized learning experiences, individuals can be empowered to pursue their educational and professional aspirations, regardless of their circumstances or limitations.

So for me, different backgrounds of students do not have an effect or like benefit from online learning apart like face to face but I think that students from different backgrounds can benefit from an online learning environment that is more inclusive and diverse and allows them to be more active because being in face to face setting might be a pressure for them because they are a lot of people looking at them, so being in an online learning environment it allows them to be prepared enough so that can be more hmm, participative and in the class setting. (IDI_P2)

Me personally I think, the improvement in terms of practicality that I can think of of online learning is that, I have the control of my own time, even if I am in another place or I am going somewhere, I can still attend on my online class lesson as long as I have a wifi which is not applicable in a face-to-face class. (IDI_P6)

So, in terms of practicality and expense, students can save more on fares and food trips b because online learning is done at home. (IDI_P1)

On my side somehow subjective because there are students who thought it was much less expensive the Online-based learning but the consideration is only on the fast connection and internet connectivity. So even though they are much less expensive online learning somehow makes duplication on some parts expensive because you will double the load, you will go to the place where you can find a strong internet connection. But it varies the benefits as a base or modalities of learning

cases. Face-to-face for some depends on the position students' adaptivity to learn. (FGD_P1)

Ma'am. I think it is more convenient financially for the students and also for the teachers. Yes, for the teachers to have and to conduct online classes. Because it is very convenient for them, they will not go to school to attend classes, they can save more and less effort. That's it. (FGD_P2)

Many individuals emphasize the importance of empowering learning through online education which holds significant importance in today's digital age. Participants highlight the need for online education can access education, foster inclusivity and personalization, promote lifelong learning, and equip individuals with the skills they need to thrive in a rapidly evolving world.

A study according to Borup and Evmenova (2019), supports this insight that the demand for proficient online educators is highly significant in colleges. On the other hand, the switch from conventional to online schooling has its difficulties. Marshall and Wolanskyj-Spinner (2020) also support that online learning is inferior to classroom instruction regarding interaction and elaboration. Students pursuing careers in the health sciences express frustration with virtual learning activities, resulting in poor academic performance, a rapid shift from traditional schooling to fully online learning, and unfocused planning and instruction for using virtual classes.

Online Resources: Convenient, Efficient, and Accessible. Making them invaluable tools for learning and personal development. It offers unparalleled convenience, flexibility, and accessibility, making them indispensable tools for learning and personal development in today's digital age. Whether it's acquiring new skills, furthering education, or pursuing personal interests, individuals can leverage online resources to enhance their knowledge and capabilities in ways that were previously unimaginable.

It is not exact but it the convenient in terms of requirements they can save because they need it through soft copy or they can take screenshots of the documents, so they can save, so there is no exact amount. Printing materials or hard copies instead, but they send it. The financial student has some requirements from using the printing—the need for my hard copy. Usually requires an online class, a screenshot, the long documents of massive printing, and.(FGD_P1)

With the advent of technology nowadays, I think it is more accessible for students, especially, for example, research assignments. Now to go to online resources. Given your technology is very convenient just ask the resourceful seller nothing to click with comes to the Google and Google Scholar and comes to the library. It's the number used to use a much time effort library. And I know this is a pain point for information relevance. Say more research within online resources and research provided, or especially with the invention. Also, the I so must still bring into the student. Although I'm a negative factor. The most annoying student in the library, it is much easier for us, especially students. Okay, thank you so much. Okay, the program works on using online. (FGD_P2)

Accessing online resources is more convenient than physically going to a library, offering instant and 24/7 availability, eliminating travel time, and providing a vast digital library at one's fingertips. (IDI_P1)

For me, it is much easier to gather and compile resources online instead of actual books and libraries, because one clicks on the internet can give you loads of resources without having trouble scanning hundreds of pages. Also, it's a more accessible medium than going to libraries. (IDI_P2)

It is much easier to access the things we need online because we are directly directed to the articles we need than going to the library where we have to scan the entire book just to look for the specific articles we are looking for. (IDI_P3)

When you use online resources with just one click you can find the information you are trying to find while when you're in a library its a lot more hassle and takes a lot of time. (IDI_P4)

I think that accessing online resources is often more convenient than physically going to a library due to 24/7 availability and the ability to access materials from anywhere. For example, a student can easily research and download academic articles or e-books online at any time, eliminating the need to travel to a library during operating hours and providing flexibility to study according to their schedule. (IDI_P6)

The participants' comments highlight a notable contentment that online resources provide accessibility and flexibility, enabling users to search, access, and find information conveniently anytime and anywhere with an internet connection, saving time and energy.

One study that supports this insight (Yusnilita 2020) is that students can learn in a flexible and real-world setting using online education, which promotes increased creativity and activity. Several benefits come with learning online.

Table 1

College Students Views on the Advantages of Online Learning

Issues Probed	Core Ideas/ Statements	Essential Themes
Enhancing Learning Opportunities through Online Education	<ul style="list-style-type: none"> • Online education provides access to videos, simulations, and interactive content for enhanced learning experiences. • Online learning offers flexibility in time management, benefiting working students and those with commitments. • Online education enables easy online information search, tool access, and gadget utilization for convenient learning. • Online education allows for learning 	Empowering Learning Opportunities

	<p>anytime, anywhere, providing easy access to a wide range of resources.</p> <ul style="list-style-type: none"> ● Personal experiences showcase the variety of resources in online education, such as e-books, simulations, and video learning, enriching the learning experience. ● Students from different backgrounds benefit from exposure to various perspectives, cultures, and learning styles in an inclusive online learning environment. ● An inclusive online learning environment promotes equal access and opportunities for students, regardless of their backgrounds. ● Online classes encourage students to be more active and participative compared to face-to-face settings, fostering a more relaxed learning environment without concerns about dress codes. ● Online learning allows students to have more time for studying and spending with family, enhancing work-life balance in the learning setup. 	
Cost-Effectiveness of Online Education	<ul style="list-style-type: none"> ● Online classes save commuting costs and effort, benefiting students and teachers financially. ● Reliable internet connectivity may increase costs for students despite reducing commuting expenses. ● Online learning offers personalized experiences, flexibility, and accessibility for students to learn at their own pace from anywhere. ● Online learning enhances student commitment through diverse learning strategies and effective learning environments. ● Online classes save time and effort by eliminating commuting, benefiting both students and teachers 	Empowering Learning through Online Education

	<p>financially.</p> <ul style="list-style-type: none"> • Online learning allows students to save on transportation and food costs by studying from home, increasing practicality and reducing expenses. • Online classes boost student engagement through diverse learning strategies and experiential learning opportunities. • Online learning enables students to attend lectures from anywhere, at their own pace, with continuous access to study materials. • Students have control over their time with online learning, attending classes from any location with internet access. 	
Exploring the Convenience and Benefits of Online Resources vs. Physical Libraries	<ul style="list-style-type: none"> • Online resources offer immediate availability, 24/7 accessibility, and a vast digital library, simplifying resource gathering and saving time. • Direct access to specific information with a click streamlines research and eliminates the need to scan physical books, making information retrieval quick and efficient. • Online resources provide specific and relevant knowledge, enabling quick access and efficient gathering of information. • Users can navigate online resources easily, finding targeted information with search functions and direct access, enhancing information retrieval efficiency. • Online resources are more convenient than physical library visits, offering immediate access, 24/7 availability, and a wide range of materials without travel. • Accessing online resources saves time and effort compared to 	Online Resources: Convenient, Efficient, and Accessible

	scanning physical books, allowing focused search queries and seamless information gathering. <ul style="list-style-type: none"> • Online resources provide accessibility and flexibility, enabling users to search, access, and find information conveniently anytime and anywhere with an internet connection, saving time and energy. 	
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Table 2 depicts these themes as College Students' Drawbacks on Online Learning: Enhancing Online Learning through Digital Skill Development and Collaboration, and The Power of Supportive Relationships in Fostering Student Engagement and Motivation

Enhancing Online Learning through Digital Skill Development and Collaboration. By prioritizing digital skill development and fostering collaboration in online learning environments, educators can empower learners to thrive in today's digital world while building essential skills for success in their academic and professional endeavors.

I think considering the other students, not all students are knowledgeable in technological devices used for online classes. So, the institution will assign another program that will give aid where both students and instructors will enhance their collaboration. Then at this moment, emerging platforms like Canvas and Google Forms can make an activity in collaboration or synchronous where they can connect answers together in one file. In that way, they can share ideas in collaboration to develop the teachers' digital skills (FGD_P1).

Educational institutions can help teachers and students on how to balance and manage situations during online classes. It can challenge their ability how become flexible when it comes to the changes that may happen. (IDI_P3)

Teach students how to maneuver online, and do digital activities to assess their skills (IDI_P5)

Educational institutions can facilitate digital skill development by integrating technology into the curriculum. This includes offering courses on programming, data analysis, and digital literacy. (IDI_P6)

Yes. Just like what we commonly use during online classes, Google Meet or Google Classroom is a big help when it comes to effective collaboration between teachers and students. It still enables us to interact, present topics, facilitate discussions, and many more. (IDI_P3)

There are a lot of methods that can be used, such as instructional materials, such as infographics, charts, or diagrams to present complex information visually. For instance, creating a mind map to illustrate the relationships between historical events, and Interactive Platforms: Incorporating interactive elements like quizzes or discussion forums to

engage students actively in the learning process. This encourages participation and reinforces key concepts. (IDI_P4)

The participants' perspectives highlight the importance of engaging teaching methods, the differences between online and face-to-face learning, and the strategies needed to enhance the online learning experience. These insights can inform educators and instructional designers in creating a more effective and engaging online learning environment.

A study of Borup and Evmenova (2019) supports this insight the demand for proficient online educators is highly significant in colleges. (Starkey, 2021) also found that digital technology has been introduced, integrated, and adapted into various aspects of our life teachers' schools. Teaching in the digital age is a dynamic field of Research. Literature has examined how teaching is changing, how the curriculum is evolving, and what teachers need to acquire and learn to be digital teachers

The Power of Supportive Relationships in Fostering Student Engagement and Motivation. Powerful catalysts for fostering student engagement and motivation in educational settings. By cultivating a culture of support, encouragement, and collaboration, educators can create learning environments where students feel valued, empowered, and inspired to achieve their full potential

Educators must establish profound connections with their students while creating an educational climate that fosters confidence, reverence, and participation. By building such connections, instructors can enhance their motivation, engagement, and commitment to participate in and finish the tasks at hand.(IDI_P4)

I think when it comes to the peers and the teachers, especially with learning disabilities and the participation of the students. Here and for example, peers, if I am surrounded by a circle, for example, a student had an eagerness to participate and the courage to keep up. Especially in the recitations, exams, and everything. And if you have a good circle, a support system that will help you throughout. For example, in teachers, if the topic is difficult then the teacher is not effective, So I think the perception of a student is not to participate because the teacher did not give Effort, they don't know how to teach because there are some students who can say ILLITERATE TEACHERS, It make some bitterness . and there are some teachers also their principles in life as well as they are not vibe with the students so learnin g capabilities of students will not boost or giv effort on tht particular subject because teacher is not ideal or maybe their principle will not align with the students.(FGD_P1)

Educators must establish profound connections with their students while creating an educational climate that fosters confidence, reverence, and participation. Instructors can enhance their motivation, engagement, and, ultimately, commitment to participate in and finish the tasks at hand by building such connections. (IDI_P4)

The productivity of the students varies on how approachable the teacher is. (FGD_P2)

Positive relationships may lead to cooperation and willingness to learn while negative relationships lead students' unwillingness to learn and less motivated. (IDI_P6)

It affects student's willingness to participate and finish their work, in the sense that once they like their teachers the more chances that they will finish academic loads earlier and if they belong to a group that puts high regard on acads then they will certainly adapt and acquire that thing.(IDI_P8)

Teachers must put their lives in the shoes of the students. There is a sense of community once the teacher is approachable and they can vibe with their students because it's not all about education but also all about making relationship with the students.(FGD_P2)

The participants underscored the importance of positive teacher-student relationships in fostering student participation, motivation, and academic success. They emphasize the role of educators in creating supportive learning environments that encourage confidence, reverence, and active engagement among students.

One study (Ngoc et al., 2021) highlighted this insight that interactions between teachers and students substantially impact sustained learning, but interactions between students significantly impact sustained learning. Self-efficacy effectively and significantly influences the function of teacher-student interaction and student-student interaction in increasing sustained learning outcomes.

Table 2

College Students' Drawbacks on Online Learning

Issues Probed	Core Ideas/ Statements	Essential Themes
Addressing Technological Disparities in Online Learning	<ul style="list-style-type: none"> Students in rural locations face difficulties accessing online classes due to poor internet connectivity, leading to struggles in connecting and participating in online learning activities. Limited access to reliable internet and frequent brownouts hinder students' ability to engage effectively in online education, impacting their learning outcomes. Educational institutions can support digital skill development by providing workshops and training for both students and teachers on utilizing technology effectively in online learning environments. Integrating technology into the 	Enhancing Online Learning through Digital Skill Development and Collaboration

	<p>curriculum and offering courses on digital literacy can enhance students' and teachers' proficiency in utilizing digital tools for education.</p> <ul style="list-style-type: none"> • Platforms like Google Meet and Google Classroom play a significant role in fostering collaboration and interaction between students and instructors in online learning settings. • Utilizing tools such as Zoom or Microsoft Teams can facilitate real-time virtual meetings and create virtual spaces for discussions, enhancing the overall learning experience for both students and instructors. 	
Exploring the Psychological Effects of Interpersonal Relationships on Online Learning	<ul style="list-style-type: none"> • Peers and teachers play a crucial role in student participation and motivation, with a good support system enhancing eagerness and confidence. • A teacher's ability to effectively teach and connect with students significantly influences their willingness to participate and engage in learning tasks. • In an online setting, students may feel more comfortable participating without fear of judgment, potentially boosting their engagement and productivity. • Lack of peer connections can hinder critical thinking, problem-solving, and collaborative skills development, as students rely more on internet sources rather than interactive discussions. • Educators should establish profound connections with students, foster a sense of community, and create an approachable learning environment to enhance motivation and participation. • Online group work may face 	The Power of Supportive Relationships in Fostering Student Engagement and Motivation

	<p>productivity challenges due to connectivity issues, misunderstandings in communication, and limited opportunities for real-time interaction and idea exchange.</p> <ul style="list-style-type: none"> • Positive relationships lead to cooperation and willingness to learn, while negative relationships can result in student disengagement and lack of motivation. • Approachable teachers who communicate effectively and show genuine interest in students' well-being can significantly impact students' learning experiences and productivity. • Instructors can foster a sense of community by establishing connections with students, engaging in interactive discussions, and creating opportunities for students to voice their thoughts and concerns. • Build connections with students to create a supportive learning environment. • Engage in open communication with students to understand their perspectives and challenges. • Implement collaborative learning activities to enhance student engagement and academic success. • Conduct introductory activities and icebreakers to help students feel comfortable and encouraged to participate in discussions. • Be available for students to seek assistance and support without fear of judgment or sarcasm. 	
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Table 3 depicts these themes as Views of College Students on Online Learning: Leveraging Multimedia Platforms and Online Education for Enhanced Learning and Continuous Growth, and Addressing Challenges and Inequities in Online Education.

Leveraging Multimedia Platforms and Online Education for Enhanced Learning and Continuous Growth. Enhance learning experiences, facilitate

continuous growth, and empower learners to pursue their educational and professional aspirations in a flexible, accessible, and engaging manner. By embracing these innovative approaches to education, individuals can unlock their full potential and thrive in today's rapidly changing world.

I think the reason. When it comes to learning, I think it is very much accessible to the students, especially given a new student, especially if the lesson given and the teacher. We have different moving multimedia platforms now we can use, especially YouTube, especially as very simple research has science-related topics for students. We have the accessibility of YouTube to help us nurture and mold your knowledge, not specific topics. Also, one thing that could interrelate to this one is I think given the positive impact multimedia resources have especially with it comes to me must, must. Let me is like an online platform for testing the simulation active recall. And it helped me to improve my learning process to retain information more. That is why the advent of technology has a big impact on not just me, but as well as every student who is struggling with learning capabilities (FGD_P1)

We were used to traditional learning methods that sometimes hardly understand some topics. But now, with the various multimedia resources, such as providing a power point presentation, putting some videos, and pictures, learners can better understand more into the topics, can engage with the material on a deeper knowledge, and watch or use the resources multiple times. By the multimedia resources, it is a useful tool for enhancing the online learning educational experience (IDI_P1)

Each student has a different learning method. Others are auditory learners while others are visual learner like I am. Having all of the type of learning available in online classes increase the possibility of better understanding. (IDI_P3)

They offer visual, auditory, and interactive elements, enhancing content engagement and accessibility. (IDI_P4)

Visual explanations and demonstrations in video lectures can clarify complex concepts, making the learning experience more dynamic and accessible (IDI_P5)

It can increasingly improve the learning process because in just one click we can now be able to access irrelevant and meaningful information online thus it can make the gathering of information faster. (IDI_P6)

The concept of lifelong learning and ongoing skill development in online learning allows students to continue, to learn more, to grow more, and become more accessible and flexible than ever before. (IDI_P2)

The participants emphasize the importance of multimedia resources in online learning, their role in catering to diverse learning styles, and their contribution to content engagement, accessibility, and lifelong learning. Online learning promotes continuous education beyond traditional settings, and plays crucial role in helping students utilize knowledge effectively in real world scenarios.

A study of (Syauqi et al., M. B. (2020) highlighted this insights student believe that online education can help them learn more effectively and efficiently, but it has yet to improve their experience or productivity in mastering competencies.

Addressing Challenges and Inequities in Online Education. online education is essential to ensure that all learners have equal access to quality learning opportunities. Online education can become more inclusive and equitable, ensuring that all learners have the opportunity to access quality learning opportunities and achieve their full potential.

Yes, academic dishonesty or cheating can be expected to increase as a result of online learning, in my opinion, because some students can think some certain techniques or methods that are only known to them. For example, during an online exam, students can easily access their files to scan the answers. It is a major concern in education because this type of thing can be viewed as a disadvantage, and students may gradually become used to it as time passes. (IDI_P2)

Yes, that is because online learning breeds independence of students to the internet, some may not even try to understand the lesson anymore because of how easy it is to gather answers from the web. (IDI_P3)

Cheating or academic dishonesty is a possibility because online learning relies heavily on technology, and some students may exploit technology to cheat and thus students may be physically separated from instructors and peers, making it easier for them to engage in dishonest behavior without immediate detection (IDI_P6)

Yes, academic dishonesty or cheating can potentially increase in the context of online learning. The lack of direct supervision in online learning environments makes it easier for students to engage in dishonest behaviors without immediate consequences. (IDI_P7)

Not everyone has equal access to reliable internet, devices, or nice learning environment. This difference can widen educational gaps, leaving some students at a disadvantage. (IDI_P1)

The participants emphasize the importance of addressing academic dishonesty in online learning environments and recognizing the challenges associated with technology dependence and inequities in access to resources. These insights underscore the need for proactive measures to promote academic integrity and ensure equitable access to online education.

Dewi, P. R. (2021) supports the insights of the participants the full potential of online learning was impeded by shortcomings such as dwindling social interaction and oral communication, high costs, low technical proficiency, lack of digital tools, sluggish internet access or connection, lack of genuine or direct student input, and the increasing likelihood of plagiarism and cheating.

Table 3

Views of College Students on Online Learning

Issues Probed	Core Ideas/ Statements	Essential Themes
Leveraging Multimedia Resources and Lifelong Learning in Online Education	<ul style="list-style-type: none"> • Multimedia platforms like YouTube provide accessible and interactive resources for students to enhance their understanding of science-related topics through videos and visual aids. • The use of multimedia resources, such as PowerPoint presentations, videos, and pictures, allows students to engage deeply with the material, facilitating better comprehension and retention of information. • Multimedia elements offer visual, auditory, and interactive components that cater to different learning styles, making online classes more engaging and effective. • Visual explanations and demonstrations in video lectures clarify complex concepts, making learning dynamic and accessible for students. • Technology, including multimedia resources, active recall platforms, and online simulations, has a significant impact on improving the learning process and retention of information for students. • The accessibility of online information accelerates the gathering of relevant knowledge, benefiting students in their educational journey. • Lifelong learning and ongoing skill development in online education empower students to adapt, grow, and remain current in their field amidst technological advancements and industry changes. • Online learning promotes continuous education beyond traditional settings, allowing individuals to acquire new knowledge and skills throughout their lives, supporting personal and professional growth. • Emphasizing the importance of retaining information not just for academic success but also for practical application in clinical settings and professional contexts. 	Leveraging Multimedia Platforms and Online Education for Enhanced Learning and Continuous Growth

	<ul style="list-style-type: none"> • Online educational resources play a crucial role in helping students, including student nurses, utilize knowledge effectively in real-world scenarios and contribute to the well-being of others. 	
Examining Concerns and Challenges of Online Learning	<ul style="list-style-type: none"> • Academic dishonesty or cheating may increase in online learning environments due to the ease of accessing and sharing answers during exams. • The lack of in-person supervision and the independence of students to the internet can lead to a higher likelihood of cheating. • Not everyone has equal access to reliable internet, devices, or a conducive learning environment, widening educational gaps and disadvantaging some students. • Online learning may require financial resources for textbooks, course fees, and technology, which can pose barriers for students from lower-income backgrounds. • It is crucial to acknowledge the challenges of academic dishonesty and inequities in online learning to ensure fair and effective education for all students. • Promoting education through online platforms requires addressing issues of access, affordability, and technological literacy to create an inclusive learning environment. 	Addressing Challenges and Inequities in Online Education

Table 4 depicts as themes on Students' Recommendations for Improving Online Learning: Enhancing Communication in Online Education, and Continuous Improvement in Education

Enhancing Communication in Online Education. Enhancing communication in online education is crucial for fostering engagement, collaboration, and learning outcomes. By implementing these strategies, educators can enhance communication in online education and create engaging, collaborative, and effective learning experiences for students

Communication among students and teachers made possible outside the classroom through the variety of tools we can use today to access and stay connected with our students. social media is all around us, however,

as professionals we have to set our boundaries on engaging unethical attitudes towards the use of online communication.(IDI_P2)

By using emails, messages, and messenger to share information and ask questions (IDI_P3)

Dedicated online discussion forums or message boards within the learning platform enable asynchronous communication, fostering peer-to-peer interaction and engagement with the course material. (IDI_P4)

Communication among students and teachers outside class are made possible because of the online application that most of the people use nowadays and through online platforms they can be able to communicate efficiently with the use of AI tools and application(IDI_P5)

The participants highlight the importance of enhancing technology to facilitate communication among students and teachers outside the classroom, while also emphasizing the need for professionalism, ethical conduct, and the utilization of asynchronous communication platforms to foster peer interaction and engagement with course material.

A study from Dr. Ashok Shamrao Patil (2022) supports the highlight of the participants that the higher education industry has realized the importance of the online learning educational sector because the community of students is increasingly seeking a variety of advanced tools for learning and reaping the most rewards from the educational process.

Continuous Improvement in Education. Involves ongoing efforts to enhance teaching practices, learning outcomes, and educational experiences for students, educators, and institutions. By embracing these principles and strategies, educational institutions can foster a culture of continuous improvement that supports the ongoing enhancement of teaching and learning practices, ultimately leading to improved outcomes and opportunities for all stakeholders in the education ecosystem.

They are inspired to pursue these things when they see that lifelong learning has a positive effect on the students.(IDI_P1)

In the field of education, teachers must aim to transform the lives of the students and to foster lifelong learning. today, teachers are flexible enough to meet the demands of the community, especially in computer and media literacy.(IDI_P2)

The Educators may continue to study the latest research, trends, and innovations of their specific classes as it is continually changing as time goes by (IDI_P3)

Educators can be inspired to pursue lifelong learning by offering a range of opportunities for professional growth, such as conferences, webinars, seminars, and workshops. These courses ought to address a variety of subjects that are pertinent to the practices and trends in education today.(IDI_P6)

Schools/institutions should make funding specifically allocating budget in providing the students with gadgets that they'll be using to improve their studies because this is one of the issues that the students are facing that affects their studies.(IDI_P8)

The participants' perspectives underscore the importance of lifelong learning for both educators and students, as well as the need for ongoing professional development and addressing resource challenges to support effective learning outcomes.

One study that supports this insight is from Ibrahim Dagane Sahal, & Mr. Shadrack Bett. (2023) they found that to support and enhance teaching practices, it may be necessary to regularly use up-to-date, accurate data in the educational setting. At the educational level, ongoing efforts to enhance operational techniques and protocols that raise student results, effectiveness, and efficiency can be referred to as continuous improvement.

Table 4

College Students' Recommendations For Improving Online Learning

Exploring recommendations for enhancing college students' online learning experiences	<ul style="list-style-type: none"> • The importance of effective communication between students and teachers outside of class to address concerns and foster understanding. • Utilizing technology and various online platforms, including social media, to facilitate communication and engagement. • Setting boundaries and promoting ethical communication practices in online interactions. • Leveraging tools like emails, messages, and messenger for sharing information and asking questions. • Utilizing dedicated online discussion forums or message boards within the learning platform for asynchronous communication and peer interaction. • Emphasizing the use of online applications and AI tools for efficient communication between students and teachers. 	Enhancing Communication in Online Education
Recommendations for Teachers' Skills	<ul style="list-style-type: none"> • Educators must engage in lifelong learning to stay current in the field of education and enhance student outcomes effectively. • Teachers need to adjust their teaching methods to meet the changing needs of the community, particularly in areas like computer and media literacy, to cater to 	Continuous Improvement in Education

	<p>modern learners effectively.</p> <ul style="list-style-type: none"> • By offering diverse professional development opportunities such as conferences, webinars, seminars, and workshops, educators can continuously improve their teaching skills and stay motivated. • To boost student engagement, educators should maintain regular communication, update students on any changes, and refine their ability to persuade and involve students in the learning process. • Schools should allocate funding to provide students with the necessary technology tools for their studies, tackling issues that may hinder students' learning progress and performance. 	
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Construction of Students' on Improving the Quality of Online Learning

Table 5 exhibits the suggested Checklist Survey Questionnaire to be subjected to EFA which reflected the students' views on improving the quality of online learning scale components which are included in the checklist. The items reflect the college student's views, drawbacks, multimedia, and recommendations for improving online learning. There are 47 items on the survey questionnaires. This instrument is thoughtfully constructed to yield a comprehensive understanding of the multifaceted dimensions inherent in the integration of adaptive technology into the educational landscape for the College students' views on improving the quality of online learning.

Table 5
Students Views on Improving the Quality of Online Learning

Item
Part I College Students' Views on Online Learning
<ol style="list-style-type: none"> 1. Online education provides access to videos, simulations, and interactive content for enhanced learning experiences. 2. Online learning offers flexibility in time management, benefiting working students and those with commitments. 3. Online education enables easy online information search, tool access, and gadget utilization for convenient learning 4. Online education allows for learning anytime, anywhere, providing easy access to a wide range of resources 5. Personal experiences showcase the variety of resources in online education, such as e-books, simulations, and video learning, enriching the learning experience

6. Students from different backgrounds benefit from exposure to various perspectives, cultures, and learning styles in an inclusive online learning environment.
7. An inclusive online learning environment promotes equal access and opportunities for students, regardless of their backgrounds.
8. Online classes encourage students to be more active and participative compared to face-to-face settings, fostering a more relaxed learning environment without concerns about dress codes.
9. Online learning allows students to have more time for studying and spending with family, enhancing work-life balance in the learning setup.
10. Online classes save commuting costs and effort, benefiting students and teachers financially.

Part II Drawbacks on Online Learning

11. Gadgets distract students during online classes, affecting focus and learning
12. Limited signal in rural areas hinders online class participation.
13. The learning environment is crucial for student focus, with peaceful settings enhancing outcomes.
14. Boring teaching methods and lack of interactivity lead to student disengagement in online classes.
15. Online learning lacks supervision, allowing disruptions
16. Lack of social and psychological support in online learning affects student engagement
17. Poor internet connection leads to unclear instructions from instructors.
18. Low attention spans and lack of interactivity in online classes lead to disengagement.
19. . Social media, home interruptions, and lack of interactivity impact student focus in online classes.
20. Structured topics help students grasp essential information

Part III Multimedia on Online Learning

21. Multimedia platforms like YouTube provide accessible and interactive resources for students to enhance their understanding of science-related topics through videos and visual aids
22. The use of multimedia resources, such as PowerPoint presentations, videos, and pictures, allows students to engage deeply with the material, facilitating better comprehension and retention of information
23. Multimedia elements offer visual, auditory, and interactive components that cater to different learning styles, making online classes more engaging and effective
24. Visual explanations and demonstrations in video lectures clarify complex concepts, making learning dynamic and accessible for students
25. Technology, including multimedia resources, active recall platforms, and online simulations, has a significant impact on improving the learning process and retention of information for students
26. The accessibility of online information accelerates the gathering of relevant knowledge, benefiting students in their educational journey
27. Lifelong learning and ongoing skill development in online education empower students to adapt, grow, and remain current in their field amidst technological advancements and industry changes

28. Online learning promotes continuous education beyond traditional settings, allowing individuals to acquire new knowledge and skills throughout their lives, supporting personal and professional growth
29. Emphasizing the importance of retaining information not just for academic success but also for practical application in clinical settings and professional contexts
30. Online educational resources play a crucial role in helping students, including student nurses, utilize knowledge effectively in real-world scenarios and contribute to the well-being of others
31. Academic dishonesty or cheating may increase in online learning environments due to the ease of accessing and sharing answers during exam
32. The lack of in-person supervision and the independence of students to the internet can lead to a higher likelihood of cheating
33. Not everyone has equal access to reliable internet, devices, or a conducive learning environment, widening educational gaps and disadvantaging some students
34. Online learning may require financial resources for textbooks, course fees, and technology, which can pose barriers for students from lower-income backgrounds
35. It is crucial to acknowledge the challenges of academic dishonesty and inequities in online learning to ensure fair and effective education for all students
36. Promoting education through online platforms requires addressing issues of access, affordability, and technological literacy to create an inclusive learning environment

Part IV Recommendations For Improving Online Learning

37. The importance of effective communication between students and teachers outside of class to address concerns and foster understanding
38. Utilizing technology and various online platforms, including social media, to facilitate communication and engagement
39. Setting boundaries and promoting ethical communication practices in online interactions.
40. Leveraging tools like emails, messages, and messenger for sharing information and asking questions.
41. Utilizing dedicated online discussion forums or message boards within the learning platform for asynchronous communication and peer interaction.
42. Emphasizing the use of online applications and AI tools for efficient communication between students and teachers
43. . Educators must engage in lifelong learning to stay current in the field of education and enhance student outcomes effectively
44. Teachers need to adjust their teaching methods to meet the changing needs of the community, particularly in areas like computer and media literacy, to cater to modern learners effectively.
45. By offering diverse professional development opportunities such as conferences, webinars, seminars, and workshops, educators can continuously improve their teaching skills and stay motivated
46. To boost student engagement, educators should maintain regular communication, update students on any changes, and refine their ability to persuade and involve students in the learning process.

47. Schools should allocate funding to provide students with the necessary technology tools for their studies, tackling issues that may hinder students' learning progress and performance.
-

Dimensions of Students' Views on Improving the Quality of Online Learning

Testing of the Propose Questionnaire consisting of 47 item scale on Students Views on Improving the Quality of Online Learning. Before the proposed 47-item scale for Students Views on Improving the Quality of Online Learning undergoing factor analysis, the Kaiser Meyer-Okin Measure (KMO) of Sampling Adequacy and Bartlett's test of sphericity were performed. Table 6 highlights the results.

Table 6

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.969
Approx. Chi-Square		15643.840
Bartlett's Test of Sphericity	Df	1081
	Sig.	.000

Moreover, the results displayed above revealed the KMO test generated a value of .969 which is above .5. This means the sample can be treated with EFA. Also, Bartlett's Test of Sphericity result yields a .000 significant value which tells that the data have patterned relationships, and factorability was assumed. Hence, there was empirical evidence to proceed with the factor analysis.

Derivation of Factors Structures for students' views on improving the quality of online learning. To determine the number of factors, the 47-item scale was tested using an unrotated factor matrix with estimates of eigenvalues, percent of the variance, and cumulative variance. Eigenvalues represent the total amount of variance that can be explained by a given principal component. They can be positive or negative in theory, but in practice, they explain variance which is always positive (UCLA, 2021). Under the Kaiser criterion, all components are dropped with eigenvalues under 1.0, this being the eigenvalue equal to the information accounted for by an average single item (Costello & Osborne, 2005).

Correspondingly, four factors were identified in the model with eigenvalues above 1. The loading factor for each item corresponds to a factor score that was above .40. This means there was a sufficient correlation between factors and variables; hence, the item can be considered as part of the particular factor.

Table 7 shows the pattern matrix using Principal Axis Factoring with a Promax rotation method of Promax with Kaiser Normalization. It can be observed in the results the loadings of items in the two factors are above .4. It can be supported by Field (2005)

that .4 is recommended and necessary to obtain the desired factors. Furthermore, it can be observed that there is no item cross-loading or not loading at all, which means that the items best represent their factors. It is emphasized by Hair et al. (1998) that loadings indicate the degree of correspondence between the variable and the factor, with higher loadings making the variable representative of the factor.

Moreover, the item loadings of each item to their factor indicate a sufficient correlation between factors and variables and thus can be considered as a component of the factor. By using the EFA, the two-factor model of students' views on improving the quality of online learning with 47 items was developed as shown in table 7, namely: college students' views on online learning, drawbacks on online learning, multimedia on online learning, and recommendation for improving online learning

Table 7

Pattern Matrix Two-Factor Model				
Items	1	2	3	4
1. Online education provides access to videos, simulations, and interactive content for enhanced learning experiences.				.66 4
2. Online learning offers flexibility in time management, benefiting working students and those with commitments.				.73 9
3. Online education enables easy online information search, tool access, and gadget utilization for convenient learning				.63 1
4. Online education allows for learning anytime, anywhere, providing easy access to a wide range of resources				.68 7
5. Personal experiences showcase the variety of resources in online education, such as e-books, simulations, and video learning, enriching the learning experience				.74 6
6. Students from different backgrounds benefit from exposure to various perspectives, cultures, and learning styles in an inclusive online learning environment.				.82 6
7. An inclusive online learning environment promotes equal access and opportunities for students, regardless of their backgrounds.				.87 9
8. Online classes encourage students to be more active and participative compared to face-to-face settings, fostering a more relaxed learning environment without concerns about dress codes.				.93 0
9. Online learning allows students to have more time for studying and spending with family, enhancing work-life balance in the learning setup.				.85 1

10. Online classes save commuting costs and effort, benefiting students and teachers financially.	.73 0
11. Gadgets distract students during online classes, affecting focus and learning	.81 9
12. Limited signal in rural areas hinders online class participation.	.79 8
13. The learning environment is crucial for student focus, with peaceful settings enhancing outcomes.	.74 2
14. Boring teaching methods and lack of interactivity lead to student disengagement in online classes.	.84 5
15. Online learning lacks supervision, allowing disruptions	.88 9
16. Lack of social and psychological support in online learning affects student engagement	.96 4
17. Poor internet connection leads to unclear instructions from instructors.	.71 6
18. Low attention spans and lack of interactivity in online classes lead to disengagement.	.93 7
19. Social media, home interruptions, and lack of interactivity impact student focus in online classes.	.82 2
20. Structured topics help students grasp essential information	.65 2
21. Multimedia platforms like YouTube provide accessible and interactive resources for students to enhance their understanding of science-related topics through videos and visual aids	.70 4
22. The use of multimedia resources, such as PowerPoint presentations, videos, and pictures, allows students to engage deeply with the material, facilitating better comprehension and retention of information	.83 9
23. Multimedia elements offer visual, auditory, and interactive components that cater to different learning styles, making online classes more engaging and effective	.82 0
24. Visual explanations and demonstrations in video lectures clarify complex concepts, making learning dynamic and accessible for students	.90 6
25. Technology, including multimedia resources, active recall platforms, and online simulations, has a significant impact on improving the learning process and retention of information for students	.92 1

26. The accessibility of online information accelerates the gathering of relevant knowledge, benefiting students in their educational journey	.86 7
27. Lifelong learning and ongoing skill development in online education empower students to adapt, grow, and remain current in their field amidst technological advancements and industry changes	.90 4
28. Online learning promotes continuous education beyond traditional settings, allowing individuals to acquire new knowledge and skills throughout their lives, supporting personal and professional growth	.85 5
29. Emphasizing the importance of retaining information not just for academic success but also for practical application in clinical settings and professional contexts	.80 2
30. Online educational resources play a crucial role in helping students, including student nurses, utilize knowledge effectively in real-world scenarios and contribute to the well-being of others	.69 7
31. Academic dishonesty or cheating may increase in online learning environments due to the ease of accessing and sharing answers during exam	.79 5
32. The lack of in-person supervision and the independence of students to the internet can lead to a higher likelihood of cheating	.71 5
33. Not everyone has equal access to reliable internet, devices, or a conducive learning environment, widening educational gaps and disadvantaging some students	.72 2
34. Online learning may require financial resources for textbooks, course fees, and technology, which can pose barriers for students from lower-income backgrounds	.77 6
35. It is crucial to acknowledge the challenges of academic dishonesty and inequities in online learning to ensure fair and effective education for all students	.81 4
36. Promoting education through online platforms requires addressing issues of access, affordability, and technological literacy to create an inclusive learning environment	.85 8
37. The importance of effective communication between students and teachers outside of class to address concerns and foster understanding	.81 4

38.Utilizing technology and various online platforms, including social media, to facilitate communication and engagement	.79 9
39.Setting boundaries and promoting ethical communication practices in online interactions.	.82 2
40.Leveraging tools like emails, messages, and messenger for sharing information and asking questions	.84 2
41.Utilizing dedicated online discussion forums or message boards within the learning platform for asynchronous communication and peer interaction	.84 2
42.Emphasizing the use of online applications and AI tools for efficient communication between students and teachers	.89 9
43.Educators must engage in lifelong learning to stay current in the field of education and enhance student outcomes effectively	.88 1
44.Teachers need to adjust their teaching methods to meet the changing needs of the community, particularly in areas like computer and media literacy, to cater to modern learners effectively.	.85 9
45.By offering diverse professional development opportunities such as conferences, webinars, seminars, and workshops, educators can continuously improve their teaching skills and stay motivated	.89 3
46.To boost student engagement, educators should maintain regular communication, update students on any changes, and refine their ability to persuade and involve students in the learning process	.85 8
47.Schools should allocate funding to provide students with the necessary technology tools for their studies, tackling issues that may hinder students' learning progress and performance	.83 5

Extraction Method: Principal Axis Factoring.
Rotation Method: Promax with Kaiser Normalization.
a. Rotation converged in 7 iterations.

Reliability Test of the Scale

The internal consistency of the questionnaire's item was determined and evaluated for its reliability test. It can be seen in Table 8 that the overall reliability score of Students Views on Improving the Quality of Online Learning is high with Cronbach's value of ($\alpha = 0.974$) the subscale or the dimension is also above the criteria reliability above score alpha namely, College students view on online learning ($\alpha = 0.899$),

drawbacks on online learning ($\alpha = 0.951$), Multimedia on Online learning ($\alpha = 0.907$), and recommendations for improving online learning ($\alpha = 0.948$).

Moreover, Diaz (2019) supported the idea of Aquino (2016). He emphasized that implications on educational practices in the Philippines are standards and systematic however another measurement tool should encourage to deepen its standards and foundational course that still exist in the Educational and philosophical foundation in the educational system. It may suggest that the educational system may vary and change and find the best possible curriculum amidst this pandemic.

Table 8

Reliability Test Scale for Students Views on Improving the Quality of Online Learning

Scale	Cronbach's alpha
College Students Views on Online Learning	.899
Drawbacks on Online Learning	.951
Multimedia on Online Learning	.907
Recommendations for Improving Online Learning	.948
Overall Reliability	0.974

Final Version of Students Views on Improving the Quality of Online Learning

The finalized version of the instrument, resulting from this study, is presented in the format outlined in Table 9, wherein the 47 items have been retained. The analysis reveals notable concerns regarding face validity, primarily deduced from the factor loadings associated with each item. Items exhibiting small coefficients, specifically those falling below .40, have been systematically excluded. This decision is substantiated by the guidance of Hair et al. (2010), positing that items with negligible coherence or lacking reflective power may be deemed dispensable within the model. Furthermore, by Hair et al. (2010), loading coefficients may be judiciously set by the researcher to retain only those items that most aptly encapsulate the underlying factor, thereby ensuring the exclusion of items with low coefficients from the final factor structure.

Using the EFA, the students' views on improving the quality of online learning questionnaire was developed. This scale consists of 47 items which comprises four factors such as: College students' views on online learning (10) items, drawbacks on online learning (10 items), Multimedia on Online learning (16 items) and recommendations for improving online learning which also consist of 10 items. Thus, the five-point Likert scale from 5-strongly agree to 1- strongly disagree is shown below.

Table 9

The Factor Structure of the Students' View on Improving the Quality of Online Learning Final Scale

FACTOR 1: College Students' Views on Online Learning	Factor Loading	Decision
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1. Online education provides access to videos, simulations, and interactive content for enhanced learning experiences.	.664	Retained
2. Online learning offers flexibility in time management, benefiting working students and those with commitments.	.739	Retained
3. Online education enables easy online information search, tool access, and gadget utilization for convenient learning	.631	Retained
4. Online education allows for learning anytime, anywhere, providing easy access to a wide range of resources	.687	Retained
5. Personal experiences showcase the variety of resources in online education, such as e-books, simulations, and video learning, enriching the learning experience	.746	Retained
6. Students from different backgrounds benefit from exposure to various perspectives, cultures, and learning styles in an inclusive online learning environment.	.826	Retained
7. An inclusive online learning environment promotes equal access and opportunities for students, regardless of their backgrounds.	.879	Retained
8. Online classes encourage students to be more active and participative compared to face-to-face settings, fostering a more relaxed learning environment without concerns about dress codes.	.930	Retained
9. Online learning allows students to have more time for studying and spending with family, enhancing work-life balance in the learning setup.	.851	Retained
10. Online classes save commuting costs and effort, benefiting students and teachers financially.	.730	Retained

Factor 2: Drawbacks on Online Learning

11. Gadgets distract students during online classes, affecting focus and learning	.819	Retained
12. Limited signal in rural areas hinders online class participation.	.798	Retained
13. The learning environment is crucial for student focus, with peaceful settings enhancing outcomes.	.742	Retained
14. Boring teaching methods and lack of interactivity lead to student disengagement in online classes.	.845	Retained

15. Online learning lacks supervision, allowing disruptions	.889	Retained
16. Lack of social and psychological support in online learning affects student engagement	.964	Retained
17. Poor internet connection leads to unclear instructions from instructors.	.716	Retained
18. Low attention spans and lack of interactivity in online classes lead to disengagement.	.937	Retained
19. Social media, home interruptions, and lack of interactivity impact student focus in online classes.	.822	Retained

Factor 3: Multimedia on Online Learning

20. Structured topics help students grasp essential information	.652	Retained
21. Multimedia platforms like YouTube provide accessible and interactive resources for students to enhance their understanding of science-related topics through videos and visual aids	.704	Retained
22. The use of multimedia resources, such as PowerPoint presentations, videos, and pictures, allows students to engage deeply with the material, facilitating better comprehension and retention of information	.839	Retained
23. Multimedia elements offer visual, auditory, and interactive components that cater to different learning styles, making online classes more engaging and effective	.820	Retained
24. Visual explanations and demonstrations in video lectures clarify complex concepts, making learning dynamic and accessible for students	.906	Retained
25. Technology, including multimedia resources, active recall platforms, and online simulations, has a significant impact on improving the learning process and retention of information for students	.921	Retained
26. The accessibility of online information accelerates the gathering of relevant knowledge, benefiting students in their educational journey	.867	Retained
27. Lifelong learning and ongoing skill development in online education empower students to adapt, grow, and remain current in their field amidst technological advancements and industry changes	.904	Retained

28. Online learning promotes continuous education beyond traditional settings, allowing individuals to acquire new knowledge and skills throughout their lives, supporting personal and professional growth	.855	Retained
29. Emphasizing the importance of retaining information not just for academic success but also for practical application in clinical settings and professional contexts	.802	Retained
30. Online educational resources play a crucial role in helping students, including student nurses, utilize knowledge effectively in real-world scenarios and contribute to the well-being of others	.697	Retained
31. Academic dishonesty or cheating may increase in online learning environments due to the ease of accessing and sharing answers during exam	.795	Retained
32. The lack of in-person supervision and the independence of students to the internet can lead to a higher likelihood of cheating	.715	Retained
33. Not everyone has equal access to reliable internet, devices, or a conducive learning environment, widening educational gaps and disadvantaging some students	.722	Retained
34. Online learning may require financial resources for textbooks, course fees, and technology, which can pose barriers for students from lower-income backgrounds	.776	Retained
35. It is crucial to acknowledge the challenges of academic dishonesty and inequities in online learning to ensure fair and effective education for all students	.814	Retained
36. Promoting education through online platforms requires addressing issues of access, affordability, and technological literacy to create an inclusive learning environment	.858	Retained

Factor 4: Recommendations for Improving Online Learning

37. The importance of effective communication between students and teachers outside of class to address concerns and foster understanding	.814	Retained
38. Utilizing technology and various online platforms, including social media, to facilitate communication and engagement	.799	Retained
39. Setting boundaries and promoting ethical communication practices in online interactions.	.822	Retained

40. Leveraging tools like emails, messages, and messenger for sharing information and asking questions.	.842	Retained
41. Utilizing dedicated online discussion forums or message boards within the learning platform for asynchronous communication and peer interaction.	.842	Retained
42. Emphasizing the use of online applications and AI tools for efficient communication between students and teachers	.899	Retained
43. Educators must engage in lifelong learning to stay current in the field of education and enhance student outcomes effectively	.881	Retained
44. Teachers need to adjust their teaching methods to meet the changing needs of the community, particularly in areas like computer and media literacy, to cater to modern learners effectively.	.859	Retained
45. By offering diverse professional development opportunities such as conferences, webinars, seminars, and workshops, educators can continuously improve their teaching skills and stay motivated	.893	Retained
46. To boost student engagement, educators should maintain regular communication, update students on any changes, and refine their ability to persuade and involve students in the learning process.	.858	Retained
47. Schools should allocate funding to provide students with the necessary technology tools for their studies, tackling issues that may hinder students' learning progress and performance	.835	Retained

Implication for Educational Practice

The study on Students' Views on Improving the quality of online learning carries significant implications for educational practice in the region. Understanding the factors influencing the online learning among college students provides valuable insights for educational institutions to create variety of sources in online education. By recognizing the specific needs and challenges faced by the students, institutions can tailor their policies and programs to enhance job satisfaction, work-life balance, and overall well-being. This may involve implementing targeted professional development opportunities, fostering a positive work culture, and addressing any systemic issues that impact the quality of work life.

Furthermore, the findings can guide the educational practice should prioritize student-centered approaches that prioritize engagement, accessibility, quality instruction, technological support, personalization, fair assessment, community building,

and continuous improvement in online learning environments. By aligning with students' views and needs, educational institutions can enhance the quality and effectiveness of online learning experiences.. This, in turn, has the potential to positively impact the quality of education provided to students, as satisfied and well-supported educators are likely to be more engaged and effective in their teaching roles.

CONCLUSION

The following conclusions are enumerated

1. Nine (9) distinctive themes emerged from the Student's views on improving the quality of online learning. These themes include Empowering Learning Opportunities, Empowering Learning through Online Education, Online Resources: Convenient, Efficient, and Accessible, Enhancing Online Learning through Digital Skill Development and Collaboration, The power of Supportive relationships in fostering student engagement and motivation, Leveraging multimedia platforms and online education for enhanced learning and continuous growth, Addressing challenges and Inequalities in Online Education, Enhancing Communication in Online Education and Continuous Improvement in Education. The results offer valuable insights into the nuanced factors shaping the quality of online learning, providing a comprehensive understanding of future improvements in college students.
2. The exploratory factor analysis yielded four underlying factors within from the students' views on improving the quality of online learning: Students' views on the quality of online learning, College Students' Views on Online Learning, Drawbacks on Online Learning, Multimedia on Online Learning, and Recommendations for Improving Online learning. This means highlighting the importance of online learning and utilizing technology for college students.
3. Similarly, the reliability test for the final scale of the questionnaire derived from the Student's views on improving the quality of online learning was very high, with an overall Cronbach's alpha value of ($\alpha = 0.974$). The subscale or the dimension is also above the criteria reliability above score alpha, namely College Students' Views on Online Learning ($\alpha = 0.899$), Drawbacks on Online Learning ($\alpha = 0.951$), Multimedia on Online Learning ($\alpha = 0.907$) and Recommendations for Improving Online learning ($\alpha = 0.948$). This indicates that the tool has good internal consistency.
4. Conclusively, the final instrument, which can be used to measure the Student's views on improving the quality of online learning, contains four (4) dimensions with a total of 47 items. This means that these items are appropriate and pass the study's face validity for measuring tools.

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