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THE EFFECT OF PROLONGED ONLINE LEARNING ON STUDENTS' PERFORMANCE POST LOCKED DOWN DURING COVID-19 PANDEMIC

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Abstract

Many Schools, colleges and universities around the world suspended classroom teaching due to the novel Covid-19 Pandemic. Due to this, switching to online teaching has impacted students' performance, motivation and overall SEL skills. The current report was to analyze the impact of the COVID pandemic on Primary school students. By using survey data technique and analysed using quantitative research method, 41 participants whose parents participated and the children are in the range of grades 1-8; 85% -90% of the respondents saw a shift in motivation and performance behavior towards learning caused by online learning. The results showed that there is a significant impact on students motivation due to the differences in virtual learning (internet connection/ noise disruption/ other activity disruption/ gadgets/ people) in virtual learning from the home, resulting in lowering the quality of learning and curriculum covered. Monotonous and prolonged theory-based virtual learning effects on students' participation. Learning performance is decreased due to differences in virtual learning such as internet connection or the not-so-conducive environment for learning. Limitation of practical learning (physical activity) due to prolonged online learning leads to demotivation in learning. Affecting students' performance, the SEL overall development is decreased due to the limitation of physical activity in prolonged online learning. Students' time management and discipline are affected due to the differences in the virtual learning environment. Students become demotivated due to limitations to physical learning resources in prolonged online learning. External motivation are missing in a prolonged virtual environment learning leading to demotivation. As a result, students feel stressed because of online learning, hence, the academic performance of students has been affected negatively, leading to a decline in their grades' Learning performance is decreased due to limitations in learning resources requiring extra work or covering less content in an online environment. In conclusion, is deciphered that all parents and teachers would like their children to receive holistic learning at schools being in school and not from home.

Keywords : *Online Learning, Lockdown, COVID-19.*

Introduction

Class and community are an integral part of the context and setting for character education. Learning itself is nothing but gaining valuable experiences in life, and these experiences can only be found in togetherness and community, then the community that forms the basis of school culture becomes a strategic place for character building. Classrooms, all school members, flora and fauna around the school, local culture, and the virtues of community leaders, become sources of learning and character-building that never stops (Setiyono & Pardede, 2019).

However, due to the locked-down period of the COVID-19 pandemic, the whole world went into a major shift, including the Education Industry (Bujuri et al., 2023). Online learning became a trend until when prolonged brought various challenges, especially to the younger children (learners) (Shahriar et al., 2021). Parents and Teachers are wonderfully working together to face these challenges. Facts show there are visible impacts and consequences that have hit the

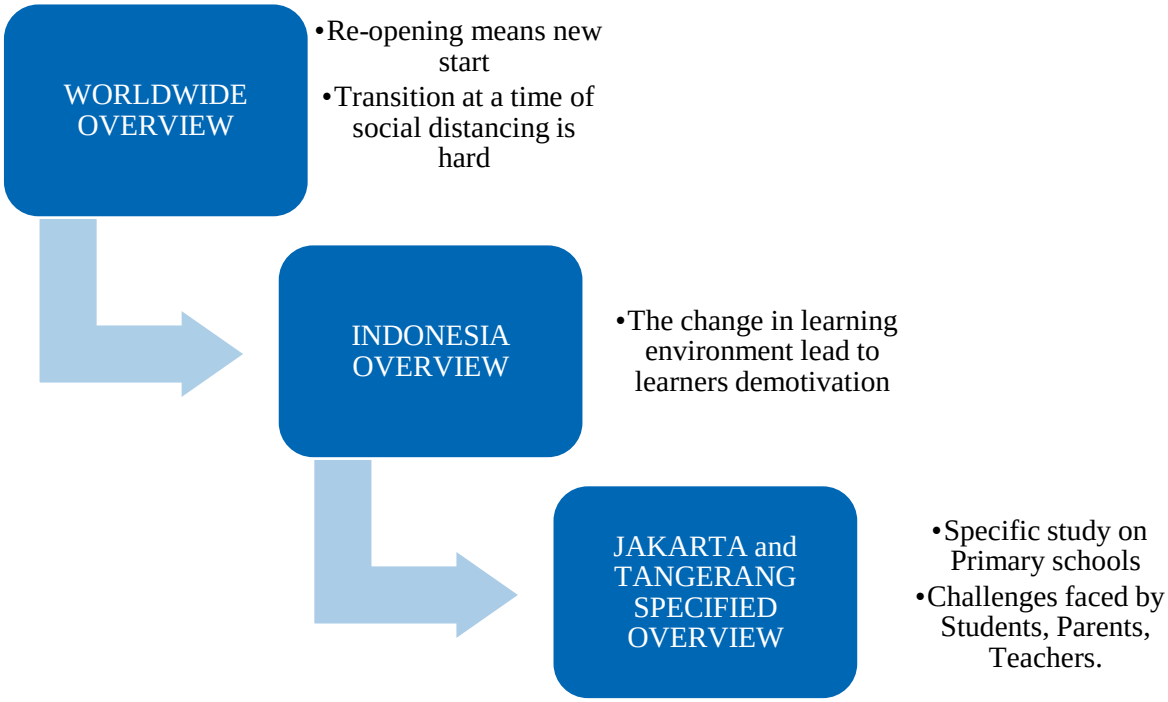
students in their overall learning development, which in turn become the educators' added problems towards teaching and imparting knowledge. Both resulted in a challenging academic year ahead (Meyskens Jr et al., 2016).

Without face-to-face communication and physical classrooms to use as a workshop, implementing practical projects in an online course requires significantly more prior planning than theoretical training (Powell et al., 2015). Therefore it's evident that theoretical lectures are easier to implement than hands-on via online. This results in the decrease of gross motor skills, physical activity in students making them lazy with time. This makes online learning limited to certain disciplines/ subjects (Shelton, 2014). This becomes an issue during the transition period back to traditional face-to-face learning where 80% is hands-on activities resulting in the question of whether the students lack the motivation to do it and are capable to do it. In traditional classrooms, students are constantly pushed towards their learning goals. Face-to-face interaction and communication with peers and teachers, with strict schedules, keep the students motivated and not fall off track during studies. Whereas in an online environment, students are left to look out for themselves during learning activities without anyone constantly urging them towards their learning goals. Especially in the case of those who lack strong self-motivation and time management skills, will find it difficult when they are met with difficult learning materials in a comfortable home setting e-learning environment (LAACHIR et al., 2023).

This research is about identifying the effects of the prolonged online learning towards Primary school students and the consequences faced when returning to face-to-face learning, post locked down COVID-19 pandemic (Tadesse & Muluye, 2020). The study will adopt a quantitative through questionnaires and qualitative method through a focus group with 10 teachers from various schools and backgrounds. Data will be collected narratively (Płaszewski et al., 2022).

2. Background Study Overview

2.1 Worldwide View



According to an article written in Centres of Disease Control and Prevention (CDC), September 23, 2021, about Helping young children and parents transition back to school has

written that re-opening means many new starts. Transitions can be hard for children and families. Young children are often afraid of strangers and want to stay close to their parents and other familiar and trusted caregivers. It takes time for early years children to get used to new people and those with developmental delays may need extra time to adjust, making parents worry about their child making the transition from online learning at home to face-to-face learning in schools.

Transition in a time of physical distancing, masks, and extra stress is extra hard

During the COVID-19 pandemic, it has been very important to keep physical distance between people who don't live together. Early care and education programs and schools have had to limit visitors and changed drop-off and pick-up procedures to limit contact; teachers and children older than age 2 years have had to wear masks. Facial expressions are used to help communicate feelings and provide reassurance, so being around masked faces can add to feelings of uncertainty. For children who return to in-person care, changes to the space and to routines might make everything look and feel different. Further, children may be aware that COVID-19 risk has to do with being around other people and may worry about getting sick. Children are generally flexible and can adapt, but strategies to protect children's health may make transitions to new situations.

Schools and early care and education programs can help children and families by promoting social-emotional learning making the transition from home to school may be harder for children with developmental, behavioral, or emotional problems. Teachers, parents, and programs can help children by planning the transition, making strong connections, and establishing new routines.

Skilled early care and education providers know how to help children adjust. But in a pandemic, and after long periods without being in care, it may be good to put a little extra support into the transitions.

2.2 Indonesia Overview

The change in the learning environment as what happened in the aftermath of COVID 19 pandemic can lead to learners' demotivation. The study aims to analyze how COVID 19 pandemic can affect the differences in demotivation factors of a group of EFL learners Therefore, a set of questionnaires were distributed before and during the COVID19 pandemic. In addition, semi-structured interviews were conducted to gain deeper insights on the matter. The results suggest significant differences in demotivational factors that affect the respondents before and after the COVID19 pandemic.

Before the pandemic, inadequate school facilities were the most demotivating factor. After the pandemic, test scores become the most demotivating factor among the respondents. However, teachers'' related factors and learning materials still relatively affect the respondents after the pandemic. Besides, online learning was found to be one of the demotivational factors among the respondents as they feel deprived of real-life interaction and burdened with a lack of stable internet connection and suitable gadgets for online learning. The results suggest that changing the learning environment can affect learners' demotivation and motivation. Thus, it seems imperative for the teachers to be able to adapt their approach and materials to suit changing conditions, especially during the pandemic. (*Reza Anggriyashati Adara, Onin Najmudin, vol 23, no 2, 2020).*

2.3 Tangerang Area:

A research study done by a group of university students, Pelita Harapan University, Indonesia about the Impact of the COVID-19 Pandemic on online home learning specified on an explorative study of Primary Schools in Tangerang, Indonesia. By mid of March 2020, started by international schools in Jakarta and Tangerang area, more and more schools have begun home learning.

A list of semi-structured interview questions was developed based on the related literature and was used to collect in-depth information from the respondents of 15 teachers and parents of two primary schools in Tangerang, Indonesia. The findings of this research revealed some challenges and constraints experienced by students, teachers, and parents in online learning.

All levels of education from elementary schools, Junior High Schools, and High Schools, to tertiary institutions under the Indonesian Ministry of Education and Culture and those under the Indonesian Ministry of Religion, are impacted.

The challenges related to students were: limited communication and socializing among students, a higher challenge for students with special education needs, and longer screen time.

Parents saw the problem was more related to a lack of learning discipline at home, more time spent to assist their children's learning at home - especially for children below Grade 4 in Primary School, a lack of technology skills, and higher internet bills.

Teachers identified more challenges and constraints, including some restrictions in the choices of teaching methods normally applicable in a regular face-to-face class, less coverage of curriculum content, lack of technology skills that hinder the potential of online learning, the lack of e-resources in the Indonesian language resulting in more time needed to develop e-contents, longer screen time as a result of e-content creating and giving feedback on students' work, more intense and time-consuming communication with parents, the challenge for better coordination with colleague teachers, principals, and a higher internet bill.

3. Problem Statement

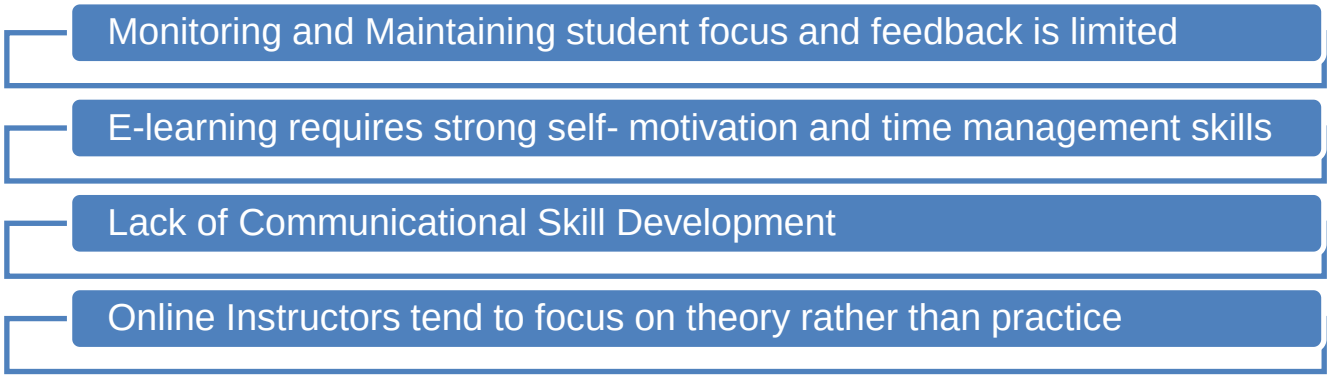


Figure 1: Problem Statement link chart

3.1 Monitoring and maintaining student focus and feedback is Limited: it can be challenging to focus for long periods of time if you're not in the same room as the teacher and are required to give your undivided attention. It's challenging for online educators to monitor their learners and accurately determine who is engaged and fully participating in their class. (David Ciccarelli, 2020). In a traditional classroom, teachers can give immediate feedback to students which can immediately be resolved by both, which makes the learning process easier, richer, more significant, and raises the motivation levels of students. E-learning on the other hand tends to struggle with personalized feedback

3.2 E-Learning Requires Strong Self-Motivation and Time Management Skills in traditional classrooms, students are constantly pushed towards their learning goals. Face-to-face interaction and communication with peers and teachers, with strict schedules, keep the students motivated and on track during studies. Whereas in an online environment, students are left to look out for themselves during learning activities without anyone constantly urging them towards their learning goals. Especially in the case of those who lack strong self-motivation and time management skills, will find it difficult when they are met with difficult learning materials in a comfortable home setting e-learning environment. Thus, when the students go back to face-to-face learning after a long period of online learning, they have to re-build their strong motivation and disciplinary skills and adjust to their new school setting environment. This transition period becomes a new added issue faced by the students, parents, and teachers altogether.

3.3 Lack of Communicational Skill Development in Online Students: online learning is highly effective in improving the academic knowledge of students, however developing their communicational skills is often neglected due to lack of face-to-face communication with peers and teachers. This later affects their teamwork skills. During transition period, students may excel theoretically but to express verbally, they might be below standard than before, which affects their communication skills to others and effectiveness in a team. This causes students to abandon their studies more easily due to the lack of pressure and constant nudging face to face from teachers.

3.4 Online instructors tend to focus on theory rather than practice: implementing practical projects in an online course requires significantly more prior planning than theoretical training without face-to-face communication and physical classrooms. It's evident that theoretical lectures are easier to implement than hands-on online. This results in the decrease of gross motor skills, physical activity in students making them lazy with time. It makes online learning limited to certain disciplines/ subjects and becomes an issue during the transition period back to traditional face-to-face learning where 80% is hands-on activities resulting in the question of whether the students lack in motivation to do it and are capable to do it. (Tamm. S, March 21, 2020)

3.5 Summary of Problem Statement Analysis:

Impacts are known from the various articles and journals, Government Institutions. However, **none mentioned about the consequences/ outcome** derived of these known impacts that could be the cause to a challenging academic year ahead for teachers to cope, when students return to face-to-face learning after a prolonged online learning.

4. Research Objective

4.1 General Objective

The aim is to explore the effect of prolonged online learning on Lower Elementary levels students' performance during transition period, post locked down Covid 19 Pandemic

4.2 Specific Objective

1. Analyse the effects of prolonged learning on students' MOTIVATION
2. Analyse the effects of prolonged learning on students' PERFORMANCE

5. Research Questions

1. what is the effect of prolonged learning on students' MOTIVATION
2. what is the effect of prolonged learning on students' PERFORMANCE

6. Significance Study

This research will benefit Parents, Teachers, Students in reception to face-to-face learning post lockdown Covid pandemic. Each one is interlinked and plays an equally important role in reviving and enhancing students learning goals. Their benefits can be described as follows:

Parents: will know what to expect from their children during the transition period. Able to prepare their children to be ready to face traditional school once again without their supervision. Organize children's daily schedule, meal plans to better physical health, mentally and emotionally. They can have more time at home and can focus on their chores or other work.

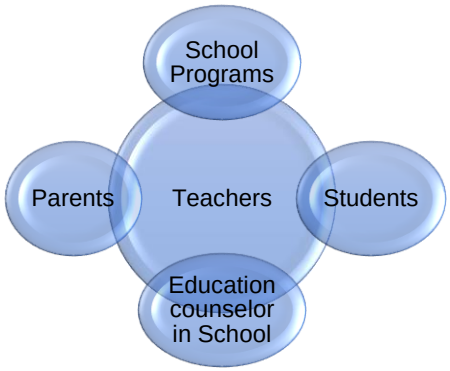


Figure 2: Significance study cycle chart

Teachers: are able to know concerned areas, understand root cause, find ways to minimize the impact on transition period towards children. They will be able to adopt precise methods to their learning approach that suits the phase, pace during the transition time. They will be able to create a conducive learning environment to ease the teaching process peacefully and effectively.

Students: students come to school to get knowledge, psychological, motoric development, proper timely assessment, become a more reliable individual, develop cognitive abilities, getting the real grades that are actually theirs as compared to getting help at home from parents or supervisors. This in turn, helps the teacher to better understand the psychological differences amongst the pupils, find remedial to issues such as providing extra classes to students that need them.

Benefits towards School: will gain a reputation as a student-friendly environment, student-centered learning, that individualizes student experience, able to adopt scientific methods to obtain underlining issue that caused the impact.

Research methods

Research Design: Quantitative- Cross-Sectional Study

Closed-ended questions will be crafted to make the data collection process more efficient and sent out to at least 40 participants with children between 6-9 years of age (Among primary-level students).

The setting of the study: Responses will be from parents and teachers from schools within the Jadetabek (Jakarta, Depok, Tangerang, Bekasi) area only.

Population and Sample

Questionnaires will be distributed using Google Forms.

Data Collection

Data will be calculated through Google Forms based on research questions. Responses are divided by the number of respondents.

Data Collection Instrument

In this regard, the questionnaire will be presented in five sections, using 5-point Likert scale questions based on the number of study variables. (Whereby 1 = strongly disagree, 2 = disagree, 3 = neutral, 4 = agree, and 5 = strongly agree). The first section A will present data

associated with the respondents' demographic information. Section B will present information on the effects of prolonged online learning. Section C will signify information on the effects on students' motivation. Section D entails information on the overall effects of students' performance.

Data Analysis

Analyzed using Google Forms presented through descriptive statistics through histograms and, Likert scale of choosing a particular answer. Data will be transferred to SPSS and will be presented in frequencies, correlation mean, and standard deviation. Figures and tables will be used as a mode of data presentation.

Hypothesis

H1. The prolonged learning significantly affects the students' MOTIVATION
H2. The prolonged learning significantly affects the students' PERFORMANCE

Theoretical Framework

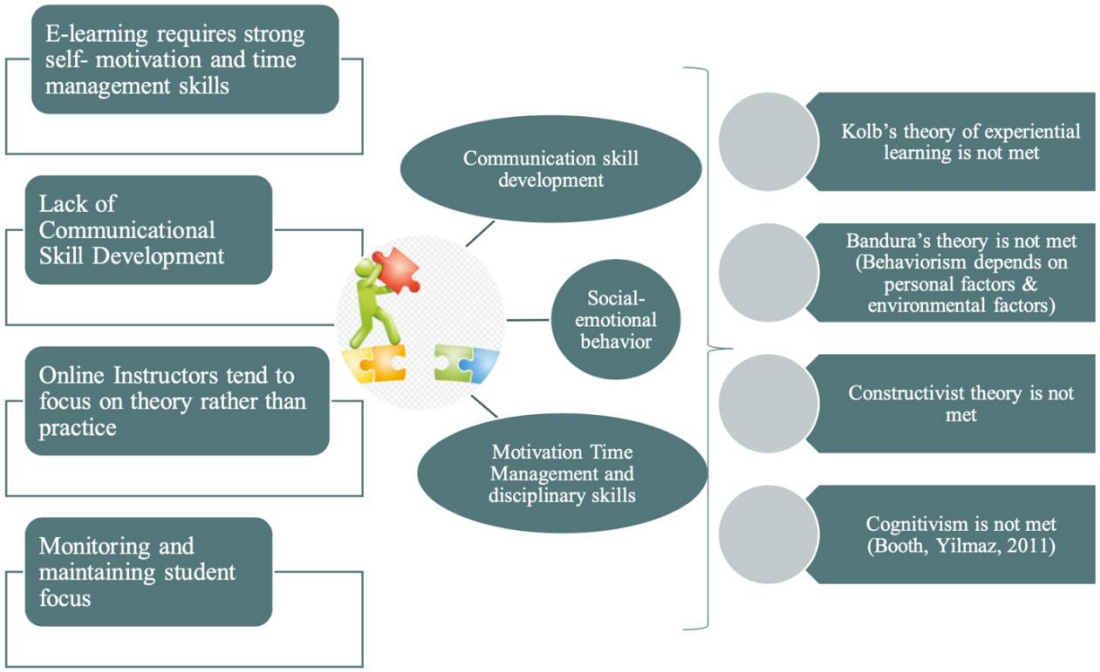


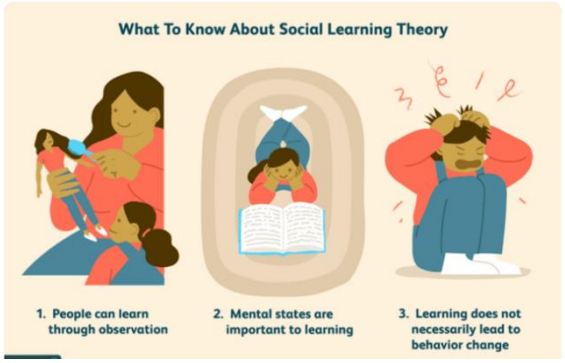
Figure 5: Theoretical Framework Connections

Theory of Bandura:

Albert Bandura a psychologist proposed a social learning theory that suggests observation and modeling play a primary role in this process. His theory suggests that all behaviors are learned through/ result of associations formed by conditioning, and cognitive theories, which take into account psychological influences such as attention and memory.

His social learning theory proposed: learning can also occur simply by observing the actions of others. Example: children and adults often exhibit learning for things which they have no direct experience. Even if you have never swung a baseball bat in your life, you would probably know what to do if someone handed you a bat and told you to try to hit a baseball. This is because you have seen others perform this action either in person or on television.

There are three core concepts of social learning theory. First is the idea that people can learn through observation. Next is the notion that internal mental states are an essential part of this process. Finally, this theory recognizes that just because something has been learned, it does not mean that it will result in a behavior change.



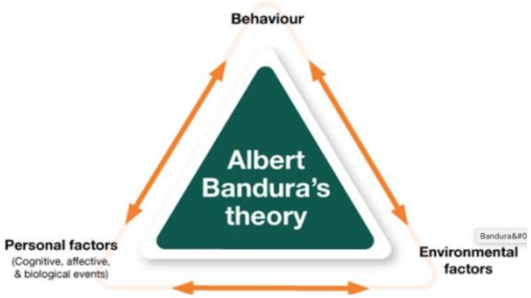


Figure 6: Bandura's social learning theory

One of the best-known experiments in the history of psychology involved a doll named Bobo. It's a demonstration that children learn and imitate behaviors they have observed in other people. The children in Bandura's studies observed an adult acting violently toward a Bobo doll. When the children were later allowed to play in a room with the Bobo doll, they began to imitate the aggressive actions they had previously observed. Three basic models of observational learning:

- A live model, involves an actual individual demonstrating or acting out behaviour.
- A symbolic model, involves real or fictional characters displaying behaviors in books, films, television programs, or online media.
- A verbal instructional model, involves descriptions and explanations of behavior.

Thus, observational learning does not necessarily require watching another person engage in an activity. Hearing verbal instructions, such as listening to a podcast, reading, hearing, or watching the actions of characters in books and films also contribute to learning. For controversy, many worry that kids can learn bad behaviors such as aggression from violent video games, movies, television programs, and online videos.

Mental States Are Important to Learning

External, environmental reinforcement was not the only factor to influence learning and behavior. Own's mental state and motivation play an important role in determining whether a behavior is learned or not. Intrinsic reinforcement is a form of internal rewards, such as pride, satisfaction, and a sense of accomplishment. This emphasis on internal thoughts and cognitions helps connect learning theories to cognitive developmental theories. Bandura describes his approach as a 'social cognitive theory.' Sometimes we can learn things even though that learning might not be immediately obvious. While behaviorists believed that learning led to a permanent change in behavior, observational learning demonstrates that people can learn new information without demonstrating new behaviors.

Real World Applications

It can help researchers understand how aggression and violence might be transmitted through observational learning. By studying media violence, researchers can gain a better understanding of the factors that might lead children to act out the aggressive actions they see portrayed on television and in the movies. Social learning can also be utilized to teach people

positive behaviors. Researchers can use social learning theory can be used to investigate and understand ways that positive role models can be used to encourage desirable behaviors and facilitate social change. (Schneider et al., 2021)

Observational learning could not occur unless cognitive processes were at work. These mental factors intervene in the learning process to determine whether a new response is acquired. Thus, individuals do not automatically observe the behavioral model and imitate it. There is some thought before imitation, and this consideration is called mediational processes. This occurs between observing the behavior (stimulus) and imitating it or not (response).



There are four mediation processes proposed by Badura:

Attention: The individual needs to pay attention to the behaviour and its consequences and form a mental representation of the behavior. For a behaviour to be imitated, it has to grab our attention. We observe many behaviours on a daily basis, and many of these are not noteworthy. Attention is therefore extremely important in whether a behaviour influences others imitating it.

Retention: How well the behavior is remembered. The behavior may be noticed but is it not always remembered which obviously prevents imitation. It is important therefore that a memory of the behavior is formed to be performed later by the observer. Much of social learning is not immediate, so this process is especially vital in those cases. Even if the behavior is reproduced shortly after seeing it, there needs to be a memory to refer to.

Reproduction: This is the ability to perform the behavior that the model has just demonstrated. We see much behavior on a daily basis that we would like to be able to imitate but that this not always possible. We are limited by our physical ability and for that reason, even if we wish to reproduce the behavior, we cannot. This influences our decisions whether to try and imitate it or not. Imagine the scenario of a 90-year-old-lady who struggles to walk watching Dancing on Ice. She may appreciate that the skill is a desirable one, but she will not attempt to imitate it because she physically cannot do it.

Motivation: The will to perform the behavior. The rewards and punishment that follow a behavior will be considered by the observer. If the perceived rewards outweigh the perceived costs (if there are any), then the behavior will be more likely to be imitated by the observer. If the vicarious reinforcement is not seen to be important enough to the observer, then they will not imitate the behavior.

Constructivism and Constructivist Theory

The term refers to the idea that learners construct knowledge for themselves---each learner individually (and socially) constructs meaning--as he or she learns. Constructing meaning is learning; there is no other kind.

Constructivism and Constructionism were born out of the research and life-long work of Seymour Papert, who was a student of the work of Jean Piaget. "Constructivism is a theory of learning based on experience and observation. Through experience, and reflecting on these

experiences, individuals construct their knowledge and understanding of the world (Barrett, 2023)."

Constructionist theory stresses the importance of tools, media, and context in human development, and the processes by which individuals come to make sense of their experience and envision a better world through technology fluency and integration (Ackermann, 2001). Constructivist and its principles, through their emphasis on active educational opportunities, have led to the development of the maker culture and STEAM (science, technology, engineering, arts, and maths) focused approaches to student learning and engagement (Barrett, 2023).

Constructivism is theory that says learners construct knowledge rather than just passively take in information. As people experience the world and reflect upon those experiences, they build their own representations and incorporate new information into their pre-existing knowledge. Constructivism is based on the idea that people actively construct or make their own knowledge, and that reality is determined by your experiences as a learner. Basically, learners use their previous knowledge as a foundation and build on it with new things that they learn. (University of Buffalo website, Office of Curriculum, Assessment and Teaching Transformation Course Development Theory, creating experiences that facilitate the construction of knowledge).

Social constructionist theory is grounded on four key assumptions (Burr, 2003), which form the basis of the difference between postmodernism and traditional psychological perspectives. First, social constructionist theory invites a critical stance toward taken-for-granted knowledge. Social constructionists challenge conventional knowledge that has historically guided our understanding of the world, and they caution us to be suspicious of assumptions of how the world appears to be. Second, they believe the language and concepts we use to generally understand the world are historically and culturally specific. Knowledge is time- and culture-bound, and our ways of understanding are not necessarily better than other ways. Third, social constructionists assert that knowledge is constructed through social processes. What we consider to be "truth" is a product of daily interactions between people in daily life. Thus there is not a single or "right" way to live one's life. Fourth, negotiated understandings (social constructions) are considered to be practices that affect social life rather than being abstractions from it. Therefore, knowledge and social action go together. (Coorey. G, 9th edition, *Theory and Practice of Counseling and Psychotherapy***,** Theory and practise of counselling, pg:398. From: 48033_Theory and Practice of Counseling and Psychotherapy).

Analysis to Implement Social Constructionist Framework towards Students

A social constructionist framework contributes to non-discriminatory multi-cultural practice. The challenge is for teachers to understand and appreciate the cultural factors that shape the lives of the students. They meet, while being self-aware of their own personal cultural identity and how this impacts their behaviour and attitude. Teachers are obliged to be aware of the societal forces and prejudices that may contribute to students problems as well as the specific cultural context. Physical, intellectual, social, moral, political, economic and cultural forces cause individual differences. Thus, creating a conducive environment influence student's personality and attitude to learning. For instance, individuals from different nationalities, caste, religion show differences in personality traits, characters and mental abilities which is actually the result of their geographical, social cultural background and surrounding. Some may be more introverts or extroverts or ambiverts. However, it is the teacher's responsibility to create a united learning environment respecting each other's diversity.

There are five principles that can help guide this process: Empathy, acceptance and genuineness. Respectful curiosity. Problem-free talk. Humour. Self-awareness.

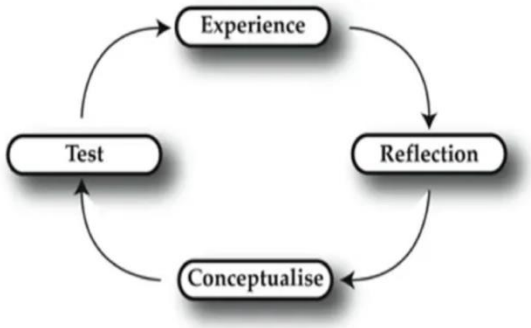
Benefits to Constructivist design: It's active. It promotes student intervention. It develops advanced skills such as critical thinking, analysis, evaluation, and creation. It promotes diverse viewpoints. It encourages students to reflect, evaluate their work, and identify intermediary skills to acquire based on their needs.

Kolb's Theory

"Learning is the process whereby knowledge is created through the transformation of experience" (Kolb, 1984, p. 38).

The Experiential Learning Cycle

The theory is typically represented by a four-stage learning cycle in which the learner 'touches all the bases:

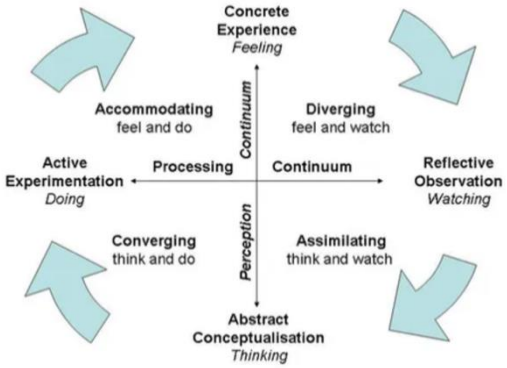


(1) having a concrete experience followed by
(2) observation of and reflection on that experience which leads to
(3) the formation of abstract concepts (analysis) and generalizations (conclusions) which are then
(4) used to test a hypothesis in future situations, resulting in new experiences.

Figure 7: Kolb's experiential learning cycle theory

Kolb views learning as an integrated process with each stage being mutually supportive of and feeding into the next. It is possible to enter the cycle at any stage and follow it through its logical sequence (Kolb, 1984).

A typical presentation of Kolb's two continuums is that the east-west axis is called the **Processing Continuum** (how we approach a task), and the north-south axis is called the **Perception Continuum** (our emotional response, or how we think or feel about it).



Kolb believed that we cannot perform both variables on a single axis at the same time (e.g., think and feel). Our learning style is a product of these two-choice decisions. It's easier to see Kolb's learning styles in terms of a two-by-two matrix. Each learning style represents a combination of two preferred styles. It highlights Kolb's terminology for the four learning styles; diverging, assimilating, and converging, accommodating:

Learning Style Description:

Diverging (feeling and watching - CE/RO) **-** These people are able to look at things from different perspectives. They are sensitive. They are imaginative, like brainstorming sessions, prefer to work in groups, listen with an open mind, and to receive personal feedback.

Assimilating (watching and thinking - AC/RO) –Require a good clear explanation rather than a practical opportunity. More attracted to logically sound theories than practical value approaches. They prefer readings, lectures, exploring analytical models, having time to think things through.

Converging (doing and thinking - AC/AE) - can solve problems, use their learning to find solutions to practical issues. Prefer technical tasks, are less concerned with interpersonal aspects. Experiments with new ideas, simulations, work with practical applications. Enables specialist and technology abilities.

Accommodating (doing and feeling - CE/AE) - 'hands-on,' relies on intuition rather than logic. Tend to rely on others for information than carry out their own analysis. This is common within the general population.

Educational Implications Analysis

Kolb's (1984) learning stages and cycle could be used by teachers to critically evaluate learning provisions typically available to students to develop more appropriate opportunities. Activities and material should be developed in ways that draw on abilities from each stage of the experiential learning cycle and take the students through the processes in sequence. (McLeod, S.A.2017, Oct 24).

Theories on Online Learning

Online learning allows participants to collapse time and space; but, learning has many promises, it takes commitment and resources and must be done right. It means that the materials must be designed properly to engage the learner and promote learning. The delivery methods allow for flexibility of access, from anywhere and anytime, but the learning must use sound instructional design principles. Suggests the same theory as Cole. Initially, many theorists have argued (Herrington & Oliver, 1999) and practitioners have experienced for themselves, online is but a subset of learning in general, thus we can expect issues relevant to how adults learn generally in an online learning context. Bransford, Brown, and Cocking (1999), in a book on the new science of learning, provide evidence that effective learning environments are framed within the convergence of four overlapping lenses. **Effective learning is community-centered, knowledge-centered, learner-centered, and assessment-centered. It's not internet skills alone that determine competency, but users' strong sense of internet efficacy that** enables them to effectively adapt to the requirements of working in this environment.

Theory of online learning interaction

Suggests that various forms of student interaction can be substituted depending upon content, learning objectives, convenience, the technology used, and time availability.

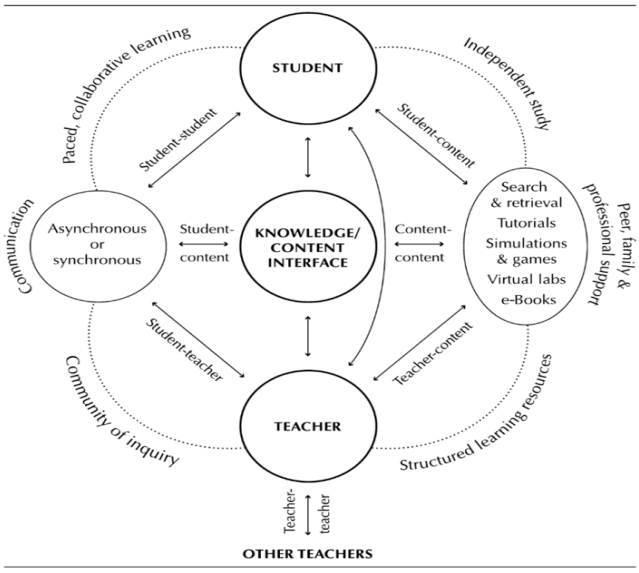


Figure 8: Online learning Interaction

Sufficient levels of deep learning can be achieved as long as the 3 forms of interactions are met properly: student-teacher, student-student, student-content interactions.

The 2 major modes of online learning (collaborative-of-inquiry models, and independent study models) as illustrated above illustrate two major human actors: learners and teachers, and their interactions with each other and the content. Learners can interact directly, spontaneously with any content they find in multiple formats on the Web; however many choose their learning to be directed and credentialed through the assistance of the teacher in a formal education system. The Interaction can take place within a community of inquiry using net-based synchronous or asynchronous (video, audio, virtual world, chat) interactions. These environments allow for the learning of social skills, collaborations, development of personal relationships amongst participants. The community, however, binds in time thus forcing regular sessions and group-paced learning. The second model of learning (the right side) illustrates the structured learning tools associated with independent learning. The challenge for the teachers here is to develop a learning environment that is student, content, community, assessment centered. They must learn to develop their skills and respond to both existing and emergent student and curriculum needs by developing a complete list of online learning activities that are adaptable to diverse student needs. (Anderson. T, Athabasca University. Towards a theory of Online Learning (ch:1-2, pg:16-68), The Theory and Practice of Online Learning).

Benefits and Negative Impact of Online Learning

Benefits of Online Learning	Potential Negative Impact-Online Learning
Asynchronicity: efficient information access, avoid schedule conflicts providing more contact and control. Allows time for research, internal reflection, and space for "collective thinking" (Mc Comb, 1993). The processes of writing and reflecting encourage higher-level learning such as analysis, synthesis, evaluation, promote clearer and more precise thinking. Increased social distance contributes to the democratic feeling of the conference. The text-only format reduces cues regarding appearance, race, gender, education, or social status bestowing a sort of anonymity to participants. Focus is taken off the messenger and placed on the message creating a status-free environment—at least until participants are judged on their contributions. (Anchorage, AK, 1989) In asynchronous online learning time zones, location, distance are not the issues, students can access the online materials any time, while synchronous online learning allows for real-time interaction between students and instructors. Learners can use the internet to access up-to-date and relevant learning materials and can still communicate with the experts in the field in which they are studying. Can complete online courses while working on their job in their own space. For Instructors, tutoring can be done anytime, anywhere. Online materials can be updated and learners can see the changes immediately. If designed properly, online learning systems can be used to determine learners' needs current level of expertise and to assign appropriate materials for learners to select them, to achieve their desired learning outcomes. The quality of the instructional materials needs to be user-friendly, relevant, interactive, and problem-oriented, thereby engaging and motivating the student.	Asynchronous is conducted on multiple levels, speeds due to delayed responses, which makes it difficult for participants to follow. This syncopated communication can affect group dynamics resulting difficulties in performing group tasks in a timely manner (Harasim.1990), (Kiesler 1984). Being text-based makes online education more cumbersome and thus takes more time than face-to-face requiring extra work or covering less content. Another consequence is that online education is less responsive than face-to-face, potentially inhibiting expression and eliminating non-verbal communication (Garrison, 1997). This can result in misunderstandings and lack of socio-emotional communication. Participants may be hesitant to commit their ideas, experiences, and feelings to print.

Traditional learning Theories

In education, there are three primary traditional learning theories: behaviorism, cognitivism, and constructivism. Each of these theories provides us with an answer to the question of how people—and, in particular, how children and teens learn. Behaviorism is focused on observable changes in behavior, which occur as a result of repetition and practice. Cognitivism gives more significance to the mind and is primarily concerned with changes in cognitive

behavior. This theory looks at the thought process behind the actions that students take. Constructivism, the most recently developed theory, examines the construction of knowledge through previous experiences and how students connect these experiences to the knowledge that they acquire. Constructivism acknowledges learning as being a much more personal and social experience than the previous two learning theories. Figure 1, below, summarizes major differences in these three theories and their applications in the public library setting.

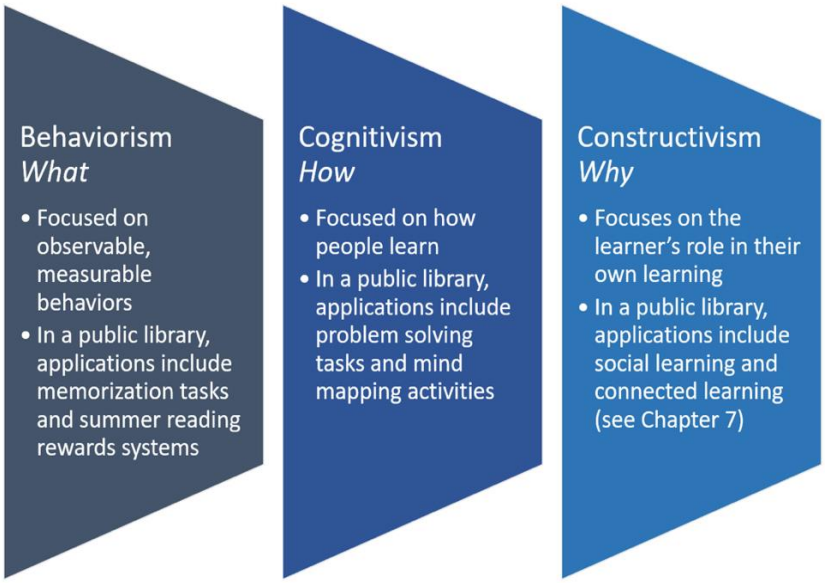


Figure 9: Traditional learning theory

-Behaviorism: explained in Bandura's theory
-Constructivism: explained in 9.2
-Cognitivism: "the primary emphasis is placed on how knowledge is acquired, processed, stored, retrieved, and activated by the learner during the different phases of the learning process" This view places the learner as an "active participant" in an "active process" Cognitivists care more about the knowledge and understanding of learners than their actual behaviors (Yilmaz, 2011). This requires teachers to become more involved in their student's learning process and look at how they are coming to the decisions and actions that they are. Therefore, educators must utilize a variety of learning activities such as "demonstrations, illustrative examples, and constructive feedback so that students can have mental models to embody" as opposed to just rewards and punishments (Yilmaz, 2011, p. 208). Cognitivist theorists pay attention to the "motivational and emotional factors" that go into learning (Booth, 2011, p. 39). Cognitivism stresses the participation of students in their learning development, realizing that they play a much larger role in the entire learning experience; without acknowledging the mental process, we are unable to fully teach students in the way that we should. Ultimately, the most important shift from behaviorism to cognitivism was the shift from viewing behaviours as proof of learning to viewing one's thought process as proof of learning. One way to think about this in education is how many math teachers today will not accept homework with just the right answers; they want their students to "show their work." This isn't done to frustrate students everywhere; it is done so that the teachers can see students' thought processes and examine where they may be making mistakes. Cognitive regulation, emotional competencies, and social skills are fundamentally intertwined in

the learning process, and academic learning can happen most effectively when each one of these three dimensions are well supported (Jones & Kahn, 2017).

Conceptual Framework

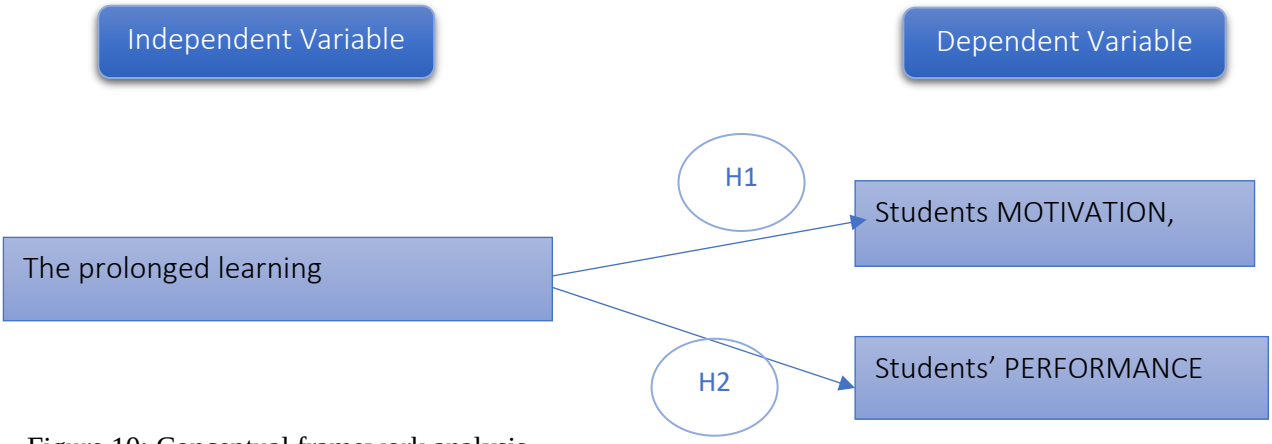


Figure 10: Conceptual framework analysis

Results and Discussion

12.1 Table sections includes in the questionnaire

SECTION	DESCRIPTION	TYPE OF VARIABLE
SECTION-- A	Demographic characteristics of the research respondents.	Demographic variable
SECTION-- B	The prolonged online learning	IV
SECTION--C	Students' motivation	DV
SECTION-- D	Students' performance	DV

The prolonged online learning as the independent variables (stressors) are evaluated to investigate their influence on the dependent variables i. e. on students' motivation and performance. Table – 2.0 contains the sources of the Research Question enclosed.

12.2 Table Arrangement of Questions and Citation related

SECTION	THE QUESTION	THE REFERENCE ADOPTED FROM
Section A Demographic data	Not required	Not required
Section B **Prolonged Online Learning**	1. Differences in virtual learning environment affect overall student SEL development 2. Prolonged virtual learning during covid pandemic environment decreases critical thinking and	**Teaches good social skills:** The idea of being put into a class with people of all different backgrounds and personality types allows for countless social opportunities that you won't necessarily experience in an online format (McHaney, 2023). 1. The students' attention and their levels of involvement in class (with the camera being turned off, they can do whatever they want), the respect for the person with whom they interact (in this case, the teacher), and the

	cognitive behaviour 3. Prolonged and differences in virtual learning demotivates the students 4. Prolonged e-learning resulted in the lack of interaction, particularly the lack of socializing with their peers	online code of etiquette (e.g., decent clothing) (Crane et al., 2019). 2. Especially in the case of those who lack strong self-motivation and time management skills, will find it difficult when they are met with difficult learning materials in a comfortable home setting e-learning environment (LAACHIR et al., 2023). 3. As for the negative aspects, the main shortcoming of e-learning compared to face-to-face learning detected by the students of the present study was the lack of interaction, particularly the lack of socializing with their peers (Gherheș et al., 2021)
Section C **Students Motivation**	1. Differences in virtual learning (internet connection/ noise disruption/ other activity disruption/ gadgets/ people) in virtual learning from the home, resulting in lowering the quality of learning and curriculum covered. 2. Monotonous and prolonged theory-based virtual learning effects on students' participatio 3. Learning performance is decreased due to differences in virtual learning such as internet connection or the not-so-conducive environment for learning.	1. Another disadvantage that emerges from the present study is represented by the technical problems encountered in the connection (Gherheș et al., 2021) 2. Online learning was found to be one of the demotivational factors among the respondents as they feel deprived of real-life interaction and burdened with a lack of stable internet connection and suitable gadgets for online learning. The results suggest that changing the learning environment can affect learners' demotivation and motivation. Thus, it seems imperative for the teachers to be able to adapt their approach and materials to suit changing conditions, especially during the pandemic. (Reza Anggriyashati Adara, Onin Najmudin, vol 23, no 2, 2020) E-Learning Requires Strong Self-Motivation and Time Management Skills (McDonald et al., 2020) 3. Being text-based makes online education more cumbersome and thus takes more time than face-to-face requiring extra work or covering less content. Another consequence is that online education is less responsive than face-to- face, potentially inhibiting expression and eliminating non-verbal communication (Phirangee & Hewitt, 2016) 4. It seems that online students may lose their focus and miss deadlines for different tasks. Over time, both teachers and students may

	4. Limitation of practical learning (physical activity) due to prolonged online learning leads to demotivation in learning.	experience various negative effects from e-leaning, such as sight problems (due to long periods in front of the screen) or back pain, and, at the same time, they may feel the lack of activities in open spaces (Nazarlou, 2013)
Section D Students Performance	1. Students' SEL overall development is decreased due to the limitation of physical activity in prolonged online learning. 2. Students' time management and discipline are affected due to the differences in the virtual learning environment. 3. Students become demotivated due to limitations to physical learning resources in prolonged online learning 4. External motivation are missing in a prolonged virtual environment learning leading to demotivation 5. Students feel stressed because of online learning Hence, the academic performance of students has been affected negatively,	1. Class and community are an integral part of the context and setting for character education. Learning itself is nothing but gaining valuable experiences in life, and these experiences can only be found in togetherness and community, then the community that forms the basis of school culture becomes a strategic place for character building. Classrooms, all school members, flora and fauna around the school, local culture, and the virtues of community leaders, become sources of learning and character-building that never stops (Bujuri et al., 2023). 2. To succeed with distance learning, students must cultivate a strong sense of self-motivation, discipline, and time management. This can be one of the downsides of e-learning because the success of learners depends more on their individual attitudes and psychological characteristics (Takavarasha Jr et al., 2023). 3. In distance learning environments, many of the traditional external motivations are missing (Takavarasha Jr et al., 2023). 4. Recent research indicates that students feel stressed because of online learning and prefer face-to-face learning (Mamat et al., 2022). Hence, the academic performance of students has been affected negatively, leading to a decline in their grades. 5,6. Being text-based makes online education more cumbersome and thus takes more time than face-to-face requiring extra work or covering less content. Another consequence is that online education is less responsive than face-to- face, potentially inhibiting expression and eliminating non-verbal communication. This can result in

	leading to a decline in their grades 6. Learning performance is decreased due to limitations in learning resources requiring extra work or covering less content in an online environment	misunderstandings and lack of socio-emotional communication.

12.3 Results from 41 Responses

12.3.1 Excel data extraction

The data has been converted into tabular data through Excel to be processed into SPSS format. There are 41 responses divided into 3 variables:

Independent Variable X shows	The prolonged online learning
Variable Y shows	Student Motivation
Variable Z shows	Students Performance

12.3.1.1 Data Statistics

		XB1	XB2	XB3	XB4	YC1	YC2	YC3	YC4	ZD1	ZD2	ZD3	ZD4	ZD5	ZD6
N	Valid	41	41	41	41	41	41	41	41	41	41	41	41	41	41
	Missing	0	0	0	0	0	0	0	0	0	0	0	0	0	0

12.3.2 Table- Variable X- The Prolonged Online Learning

		Variable X (Prolonged online learning)				
Respondent	Demographic	Section B. 1.	Section B. 2.	Section B. 3.	Section B. 4	SUM Sec B
di****ung201@gmail.com	P	4	2	3	2	11
vinn****anhadi@gmail.com	P	5	5	5	5	20
s****.a.pa****ng@gmail.com	P	5	3	3	3	14
ro****_mei@yahoo.com	P	5	5	5	5	20
fr****say@gmail.com	P	4	4	4	5	17
ny****hra@gmail.com	P	4	3	4	2	13
val****ap8899@gmail.com	P	5	5	5	5	20
ab****onic05@gmail.com	S	5	5	5	5	20
vande****arwani85@gmail.com	P	4	4	4	5	17
nen****imah707@gmail.com	P	4	4	4	4	16
aj****abi@me.com	P	4	5	5	3	17
20****034@binusian.org	S	4	4	4	4	16
h****19@hotmail.com	P	3	4	3	4	14
lo****pica@gmail.com	P	5	5	5	5	20
aj****abi19@gmail.com	P	4	4	4	4	16
va****a.cakap@gmail.com	P	4	4	4	4	16
Mu****abyland25@gmail.com	S	3	4	3	5	15
la****v@gmail.com	P	3	3	2	3	11
aldo.wi****16.aw@gmail.com	S	4	4	4	4	16
herm****atim@gmail.com	P	4	4	4	5	17
20****0040@binusian.org	S	4	4	4	4	16
ed****isono3@gmail.com	P	4	4	4	3	15

yaya.c****226@gmail.com	P	2	5	5	3	15
pu****harwani@gmail.com	P	4	4	4	3	15
ri****_hartini@yahoo.com	P	4	2	3	5	14
her****pc@gmail.com	P	4	3	4	5	16
janet.ca****gton01@gmail.com	P	5	4	4	5	18
bh****ni889@gmail.com	P	4	4	4	4	16
ra****ca_elvide@yahoo.com	P	4	4	4	4	16
yeni_in****ati@binus.edu	P	4	4	4	4	16
j****d@binus.edu	P	4	4	4	4	16
ad****ne.o****ia@gmail.com	P	4	4	4	4	16
ni****sandra20@gmail.com	P	4	4	4	4	16
m***s@sophos.sch.id	P	4	4	4	4	16
kinan****indardiharyawan@smp.alazhar-bsd.sch.id	S	4	4	4	3	15
an****ra@kumon.co.id	P	4	4	4	4	16
maria.s****stuti@binus.edu	P	4	4	4	4	16
i****riah@gmail.com	S	4	4	4	4	16
a****lle.zaldivar@sis-kg.org	S	5	5	5	5	20
n****a.putri@cikal.co.id	P	4	4	4	4	16
vivi.s****ti@sis-kg.org	P	4	4	4	4	16
						662

12.3.2.1 Frequency table analysis

12.3.2.2 Frequency table XB1= The prolonged online learning (IV)

XB1

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Disagree	1	2.4	2.4	2.4
	Neutral	3	7.3	7.3	9.8
	Agree	29	70.7	70.7	80.5
	Strongly agree	8	19.5	19.5	100.0
	Total	41	100.0	100.0	

Based on question section b 1 variable x The prolonged online learning- Differences in virtual learning environment affect overall student SEL development. From 41 respondents 70.7 % agree and 19.5% strongly agree. Thus, respondents on the positive side to be 80.2%.

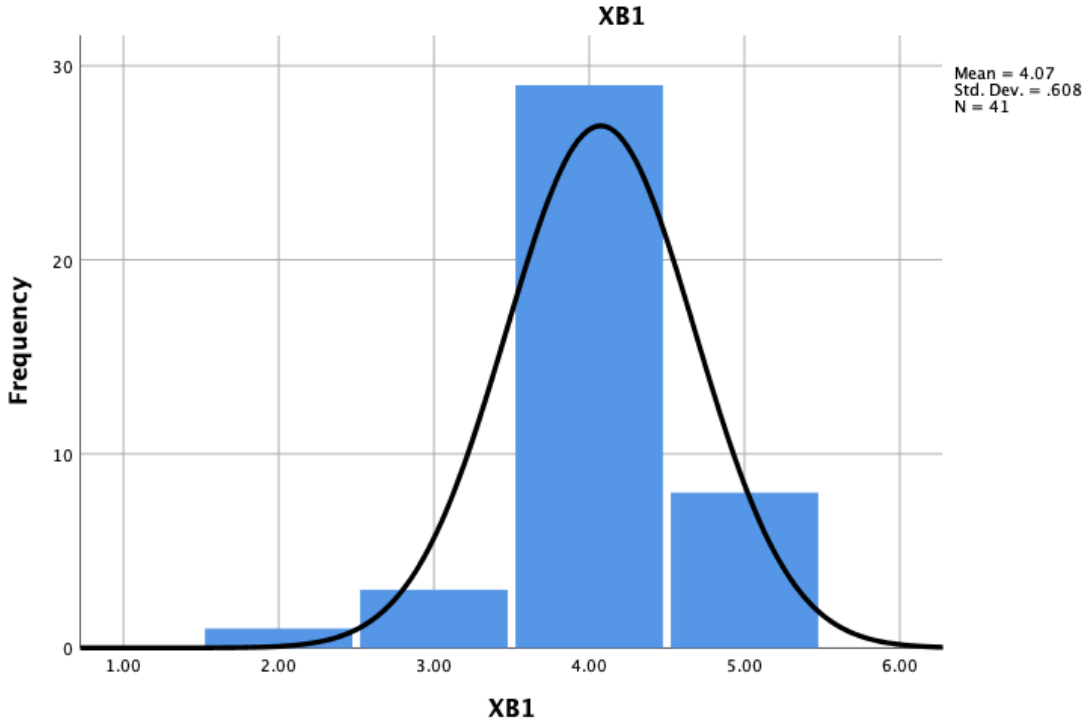


Figure 11: Frequency chart XB1

The mean in the histogram above is 4.07. Standard Deviation is at 0.608.

12.3.2.3 Frequency table XB2= The prolonged online learning (IV)

XB2

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Disagree	2	4.9	4.9	4.9
	Neutral	4	9.8	9.8	14.6
	Agree	27	65.9	65.9	80.5
	Strongly agree	8	19.5	19.5	100.0
	Total	41	100.0	100.0	

Based on question section b 2 variable x The prolonged online learning- From 41 respondents 65.9% agree and 19.5% strongly agree that prolonged virtual learning during covid pandemic environment decreases critical thinking and cognitive behavior. Thus, respondents on the positive side to be at 85.4% Following is the histogram chart.

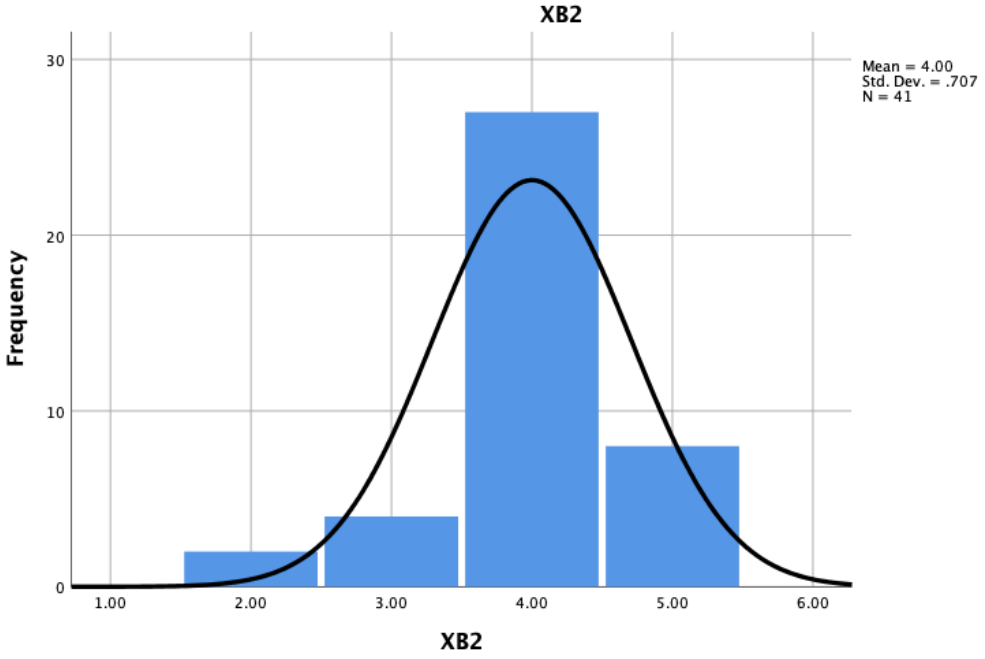


Figure 12: Frequency chart XB2

The mean in the histogram above is 4 and the Standard Deviation is at 0.7.

12.3.2.4 Frequency table XB3= The prolonged online learning (IV)

XB3

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Disagree	1	2.4	2.4	2.4
	Neutral	5	12.2	12.2	14.6
	Agree	27	65.9	65.9	80.5
	Strongly agree	8	19.5	19.5	100.0
	Total	41	100.0	100.0	

Based on question section b 3 variable x The prolonged online learning- From 41 respondents 65.9% agree and 19.5% strongly agree that learning performance is decreased due to differences in virtual learning such as internet connection or the not-so-conducive environment for learning. Thus positive respondents total is 85.4%.

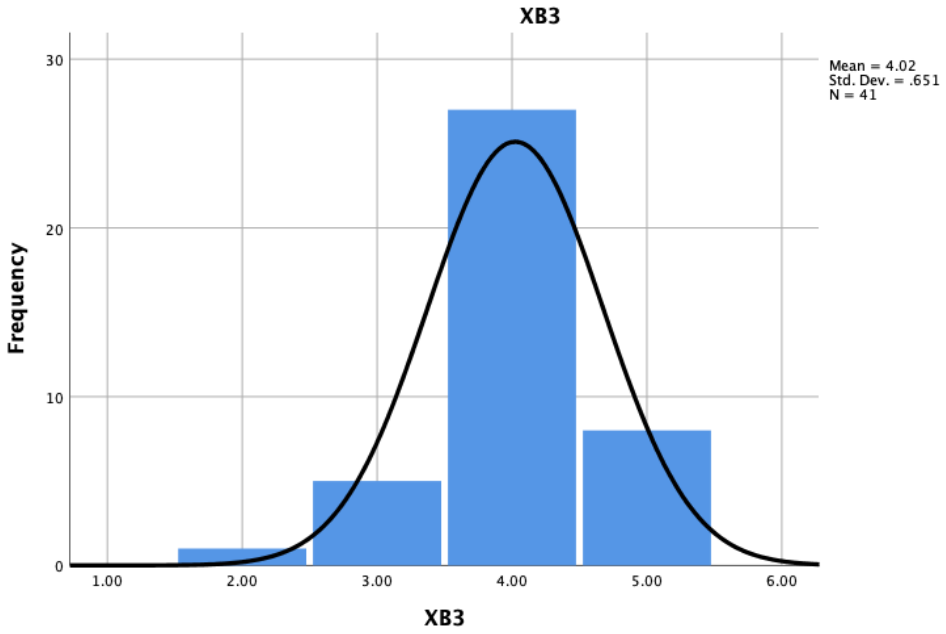


Figure 13: Frequency chart XB3

The mean in the histogram above is 4.02 and the Standard Deviation is 0.651

12.3.2.5 Frequency table XB4= The prolonged online learning (IV)

XB4

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Disagree	2	4.9	4.9	4.9
	Neutral	7	17.1	17.1	22.0
	Agree	19	46.3	46.3	68.3
	Strongly agree	13	31.7	31.7	100.0
	Total	41	100.0	100.0	

Based on question section b 4 variable x The prolonged online learning- From 41 respondents 46.3% agree and 31.7% strongly agree that Prolonged e-learning resulted in the lack of interaction, particularly the lack of socializing with their peers. The positive respondents are at a total of 78%.

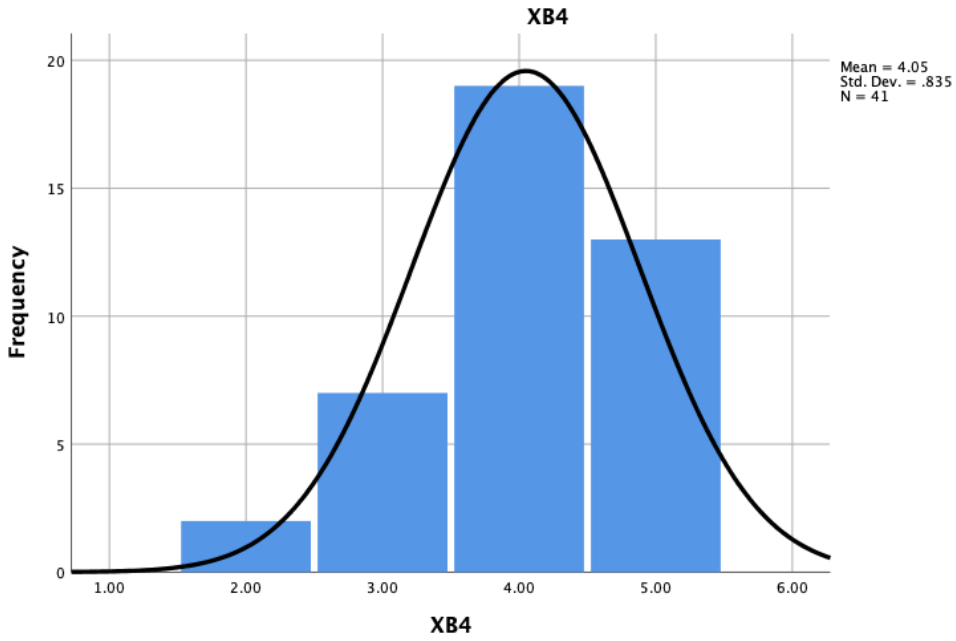


Figure 14: Frequency chart XB4

The mean in the histogram above is 4.05 and the Standard Deviation is 0.835

12.3.3 Table- Variable Y- Students Motivation

		Variable Y (Student Motivation)				
Respondent	Demographic	Section C. 1.	Section C. 2	Section C. 3.	Section C. 4.	Sum Sec C
di****ung201@gmail.com	P	5	4	4	4	17
vinn****anhadi@gmail.com	P	5	5	4	5	19
s****.a.pa****ng@gmail.com	P	2	2	3	3	10
ro****_mei@yahoo.com	P	5	5	5	5	20
fr****say@gmail.com	P	4	5	5	5	19
ny****hra@gmail.com	P	4	5	4	4	17
val****ap8899@gmail.com	P	5	5	5	5	20
ab****onic05@gmail.com	S	5	5	5	5	20
vande****arwani85@gmail.com	P	5	5	5	5	20
nen****imah707@gmail.com	P	4	4	4	4	16
aj****abi@me.com	P	4	4	4	4	16
20****034@binusian.org	S	4	4	4	4	16
h****19@hotmail.com	P	3	3	2	5	13
lo****pica@gmail.com	P	5	5	5	5	20
aj****abi19@gmail.com	P	4	4	4	4	16
va****a.cakap@gmail.com	P	4	4	4	4	16
Mu****abyland25@gmail.com	S	4	4	5	4	17
la****v@gmail.com	P	2	3	4	3	12
aldo.wi****16.aw@gmail.com	S	4	4	4	4	16
herm****atim@gmail.com	P	4	4	3	4	15
20****0040@binusian.org	S	4	4	4	4	16
ed****isono3@gmail.com	P	4	4	4	4	16

yaya.c****226@gmail.com	P	5	5	4	5	19
pu****harwani@gmail.com	P	4	4	3	3	14
ri****_hartini@yahoo.com	P	4	4	4	4	16
her****pc@gmail.com	P	4	4	3	4	15
janet.ca****gton01@gmail.com	P	4	4	5	4	17
bh****ni889@gmail.com	P	4	4	4	4	16
ra****ca_elvide@yahoo.com	P	4	4	4	4	16
yeni_in****ati@binus.edu	P	4	4	4	4	16
j****d@binus.edu	P	4	4	4	4	16
ad****ne.o****ia@gmail.com	P	4	4	4	4	16
ni****sandra20@gmail.com	P	4	4	4	4	16
m***s@sophos.sch.id	P	4	4	4	4	16
kinan****indardiharyawan@smp.alazhar-bsd.sch.id	S	4	4	4	4	16
an****ra@kumon.co.id	P	4	4	4	4	16
maria.s****stuti@binus.edu	P	4	4	4	4	16
i****riah@gmail.com	S	4	4	4	4	16
a****lle.zaldivar@sis-kg.org	S	5	5	5	5	20
n****a.putri@cikal.co.id	P	4	4	4	4	16
vivi.s****ti@sis-kg.org	P	4	4	4	4	16
						676

12.3.3.1 Frequncy table YC1- students Motivation (DV)

YC1

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Disagree	2	4.9	4.9	4.9
	Neutral	1	2.4	2.4	7.3
	Agree	29	70.7	70.7	78.0
	Strongly agree	9	22.0	22.0	100.0
	Total	41	100.0	100.0	

Based on question section c 4 variable y student motivation- 92.7 % are on the positive side of agreement that differences in virtual learning (internet connection/ noise disruption/ other activity disruption/ gadgets/ people) in virtual learning from the home, resulting in lowering the quality of learning and curriculum covered. Histogram as follows.

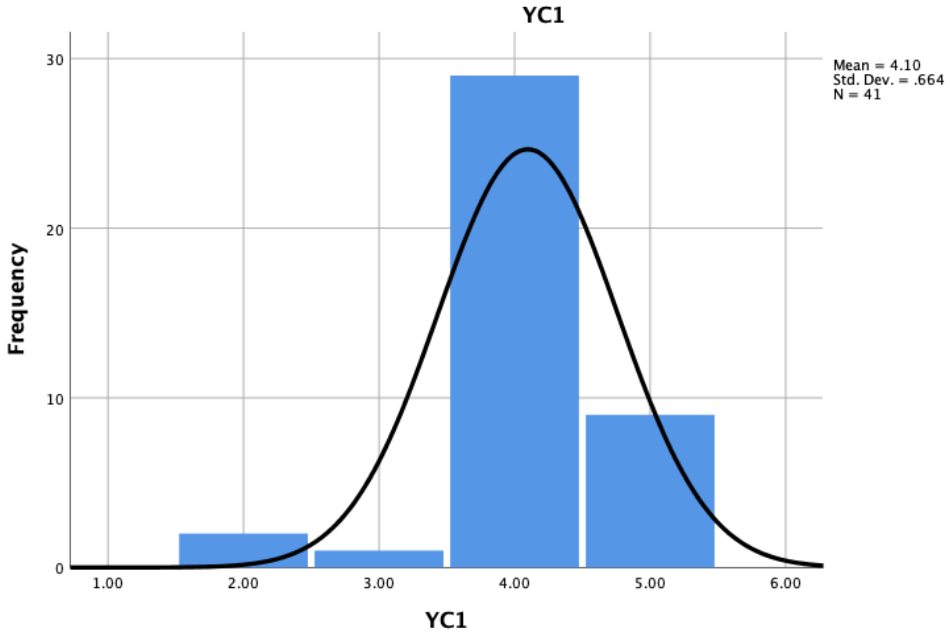


Figure 15: Frequency chart YC1

The mean in the histogram above is 4.10 and the Standard Deviation is 0.664.

12.3.3.2 Frequency table YC2- students Motivation (DV)

YC2

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Disagree	1	2.4	2.4	2.4
	Neutral	2	4.9	4.9	7.3
	Agree	28	68.3	68.3	75.6
	Strongly agree	10	24.4	24.4	100.0
	Total	41	100.0	100.0	

Based on question section c 2 variable y student motivation- 92.7 % are on the positive side of agreement that Monotonous and prolonged theory-based virtual learning effects on students' participation. Histograms shown below.

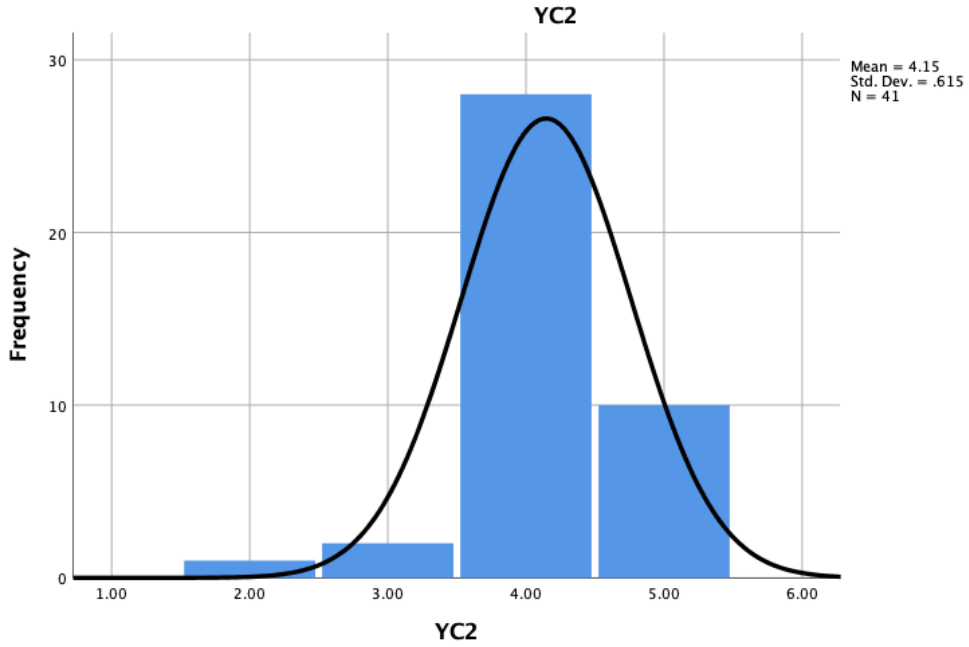


Figure 16- Frequency chart YC2

The mean in the histogram above is 4.15. Standard Deviation is at 0.615.

12.3.3.3 Frequency table YC3- students Motivation (DV)

YC3

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Disagree	1	2.4	2.4	2.4
	Neutral	4	9.8	9.8	12.2
	Agree	27	65.9	65.9	78.0
	Strongly agree	9	22.0	22.0	100.0
	Total	41	100.0	100.0	

Based on question section c 3 variable y student motivation- 87.9 % are on the positive side of agreement that learning performance is decreased due to differences in virtual learning such as internet connection or the not-so-conducive environment for learning. Histograms shown below.

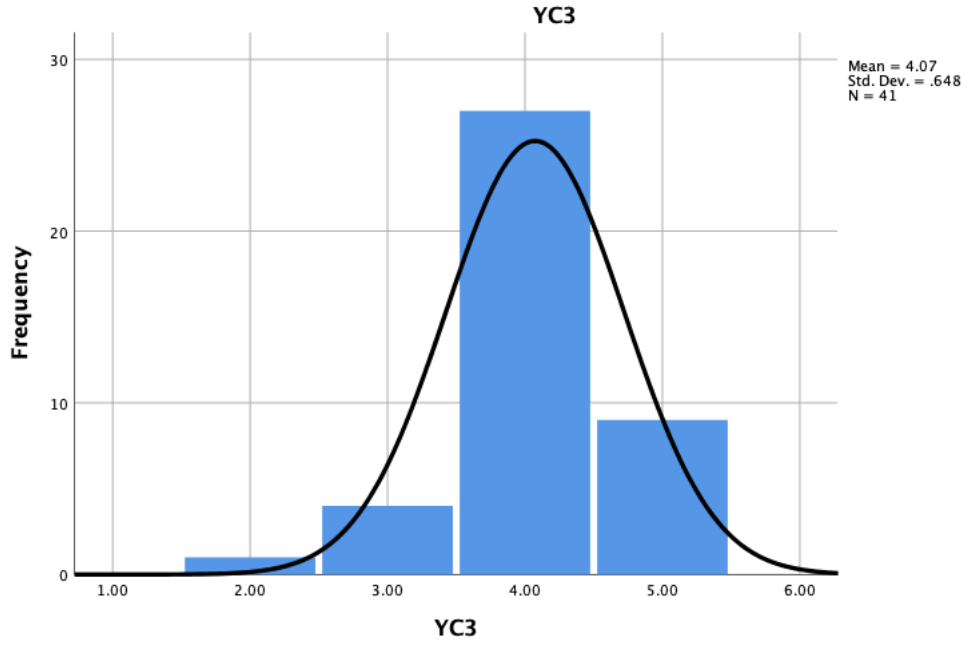


Figure 17- Frequency chart YC3

The mean in the histogram above is 4.07. Standard Deviation is 0.648

12.3.3.4 Frequency table YC4- students Motivation (DV)

YC4

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Neutral	3	7.3	7.3	7.3
	Agree	28	68.3	68.3	75.6
	Strongly agree	10	24.4	24.4	100.0
	Total	41	100.0	100.0	

Based on question section c 4 variable y student motivation- 92.7 % are on the positive side of agreement that limitation of practical learning (physical activity) due to prolonged online learning leads to demotivation in learning. Histograms shown below.

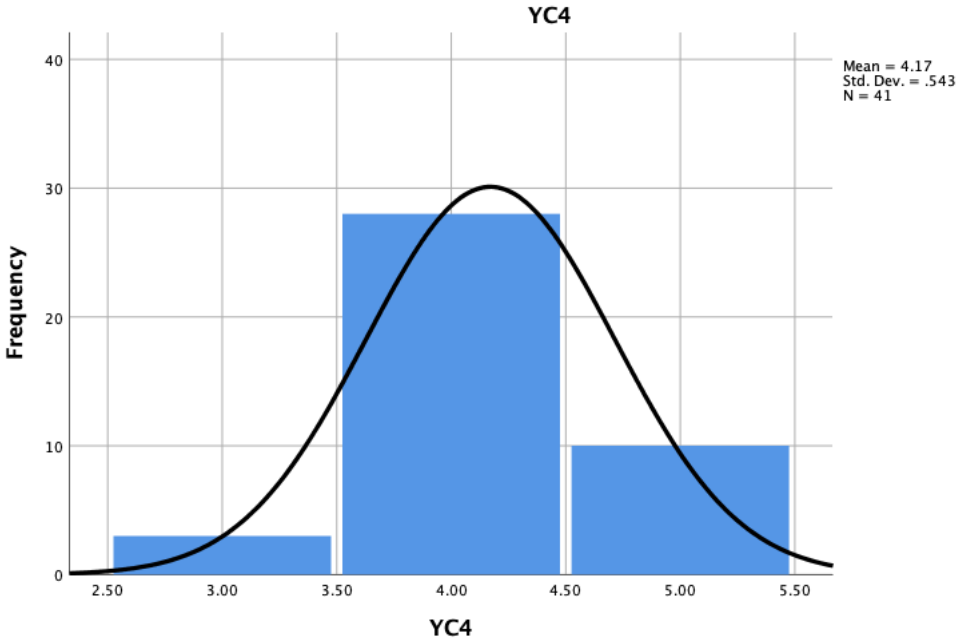


Figure 18- Frequency chart YC4
The mean in the histogram above is 4.17. The standard deviation is 0.543

12.3.4 Table Variable Z- Students Performance

		Variable Z (Student Performance)						
Respondent	Demographic	Section D. 1.	Section D. 2	Section D. 3.	Section D. 4.	Section D. 5.	Section D. 6.	Sum Sec D
di****ung201@gmail.com	P	4	2	4	4	3	3	20
vinn****anhadi@gmail.com	P	5	5	5	5	4	4	28
s****.a.pa****ng@gmail.com	P	3	2	2	2	3	2	14
ro****_mei@yahoo.com	P	5	5	5	5	5	5	30
fr****say@gmail.com	P	5	5	5	5	5	4	29
ny****hra@gmail.com	P	4	4	3	2	3	3	19
val****ap8899@gmail.com	P	5	5	5	5	5	5	30
ab****onic05@gmail.com	S	5	5	5	5	5	5	30
vande****arwani85@gmail.com	P	5	5	5	5	5	5	30
nen****imah707@gmail.com	P	4	4	4	4	4	4	24
aj****abi@me.com	P	4	4	4	4	4	5	25
20****034@binusian.org	S	4	4	4	4	4	4	24
h****19@hotmail.com	P	3	3	3	3	2	3	17
lo****pica@gmail.com	P	5	4	4	4	4	4	25
aj****abi19@gmail.com	P	4	4	4	4	4	4	24
va****a.cakap@gmail.com	P	4	4	4	4	4	4	24
Mu****abyland25@gmail.com	S	3	4	4	5	3	4	23
la****v@gmail.com	P	3	3	3	4	3	2	18
aldo.wi****16.aw@gmail.com	S	4	4	4	4	4	4	24
herm****atim@gmail.com	P	4	5	4	4	4	5	26

20****0040@binusian.org	S	4	4	4	4	4	4	24
ed****isono3@gmail.com	P	4	4	4	4	4	4	24
yaya.c****226@gmail.com	P	5	3	5	5	3	3	24
pu****harwani@gmail.com	P	3	3	3	3	3	3	18
ri****_hartini@yahoo.com	P	4	3	3	4	3	4	21
her****pc@gmail.com	P	3	3	3	4	3	3	19
janet.ca****gton01@gmail.com	P	4	3	3	3	2	3	18
bh****ni889@gmail.com	P	4	4	4	4	4	4	24
ra****ca_elvide@yahoo.com	P	4	4	4	4	4	4	24
yeni_in****ati@binus.edu	P	4	4	4	4	4	4	24
j****d@binus.edu	P	4	4	4	4	4	4	24
ad****ne.o****ia@gmail.com	P	4	4	4	4	4	4	24
ni****sandra20@gmail.com	P	4	4	4	4	4	4	24
m***s@sophos.sch.id	P	4	4	4	4	4	4	24
kinan****indardiharyawan@smp.alazhar-bsd.sch.id	S	4	4	4	4	4	4	24
an****ra@kumon.co.id	P	4	4	4	4	4	4	24
maria.s****stuti@binus.edu	P	4	4	4	4	4	4	24
i****riah@gmail.com	S	4	4	4	4	4	4	24
a****lle.zaldivar@sis-kg.org	S	5	5	5	5	5	5	30
n****a.putri@cikal.co.id	P	4	4	4	4	4	4	24
vivi.s****ti@sis-kg.org	P	4	4	4	4	4	4	24
								974

12.3.4.1 Frequency table ZD1- Students Performance

ZD1

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Neutral	6	14.6	14.6	14.6
	Agree	26	63.4	63.4	78.0
	Strongly agree	9	22.0	22.0	100.0
	Total	41	100.0	100.0	

Based on question section D 1 variable Z student performance- 85.4 % are on the positive side of agreement that Students' SEL overall development is decreased due to the limitation of physical activity in prolonged online learning. Histogram shown below.

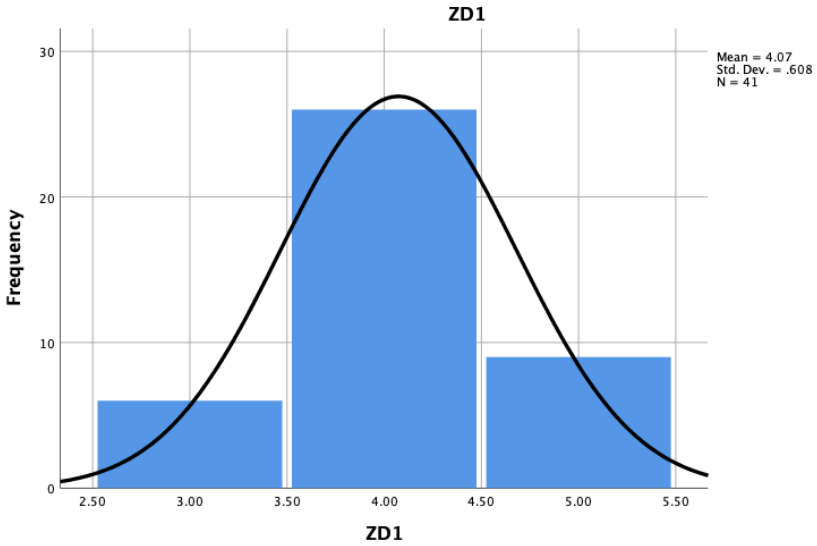


Figure 19- Frequency chart ZD1

The mean in the histogram above is 4.07. The standard deviation is 0.608

12.3.4.2 Frequency table ZD2- Students Performance

ZD2

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Disagree	2	4.9	4.9	4.9
	Neutral	7	17.1	17.1	22.0
	Agree	24	58.5	58.5	80.5
	Strongly agree	8	19.5	19.5	100.0
	Total	41	100.0	100.0	

Based on question section D 2 variable Z student performance- 78 % are on the positive side of agreement that Students' time management and discipline are affected due to the differences in the virtual learning environment.

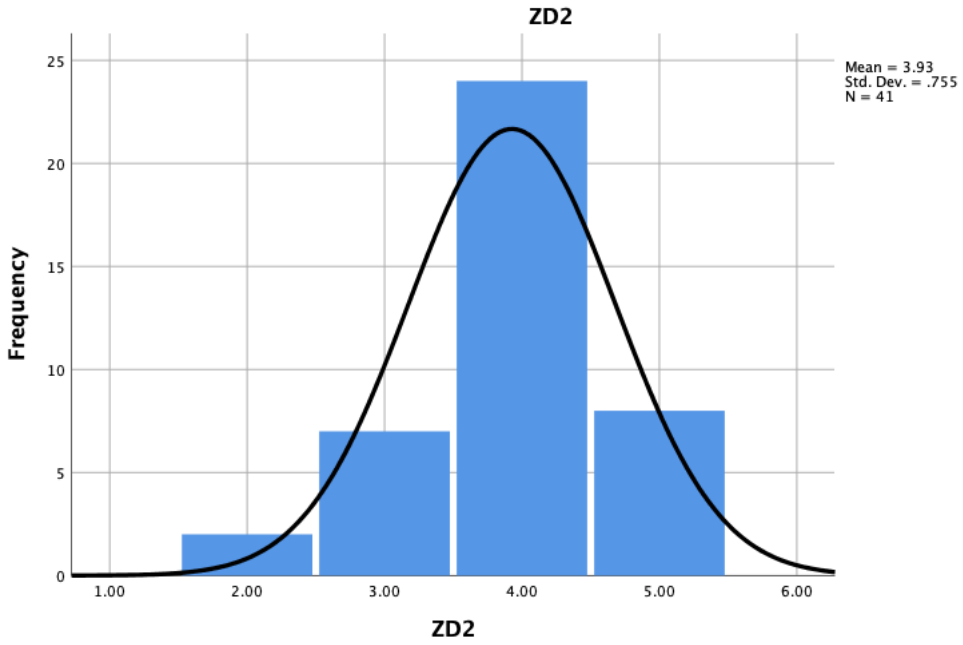


Figure 20- Frequency chart ZD2

The mean in the histogram above, is 3.93. The standard deviation is at 0.755

12.3.4.3 Frequency table ZD3- Students Performance

ZD3

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Disagree	1	2.4	2.4	2.4
	Neutral	7	17.1	17.1	19.5
	Agree	25	61.0	61.0	80.5
	Strongly agree	8	19.5	19.5	100.0
	Total	41	100.0	100.0	

Based on question section D 3 variable Z student performance- 80.5 % are on the positive side of agreement that Students become demotivated due to limitations to physical learning resources in prolonged online learning.

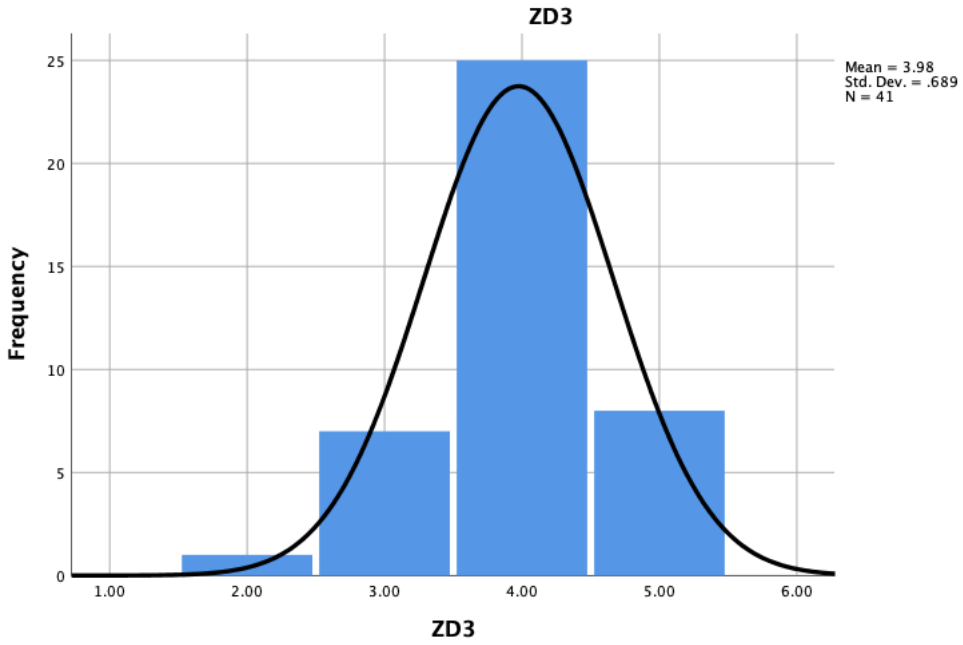


Figure 21- Frequency chart ZD3

The mean in the histogram above is 3.98. The standard deviation is 0.689.

12.3.4.4 Frequency table ZD4- Students Performance (DV)

ZD4

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Disagree	2	4.9	4.9	4.9
	Neutral	3	7.3	7.3	12.2
	Agree	27	65.9	65.9	78.0
	Strongly agree	9	22.0	22.0	100.0
	Total	41	100.0	100.0	

Based on question section D 4 variable Z student performance- 87.9 % are on the positive side of agreement that Students become demotivated due to limitations to physical learning resources in prolonged online learning.

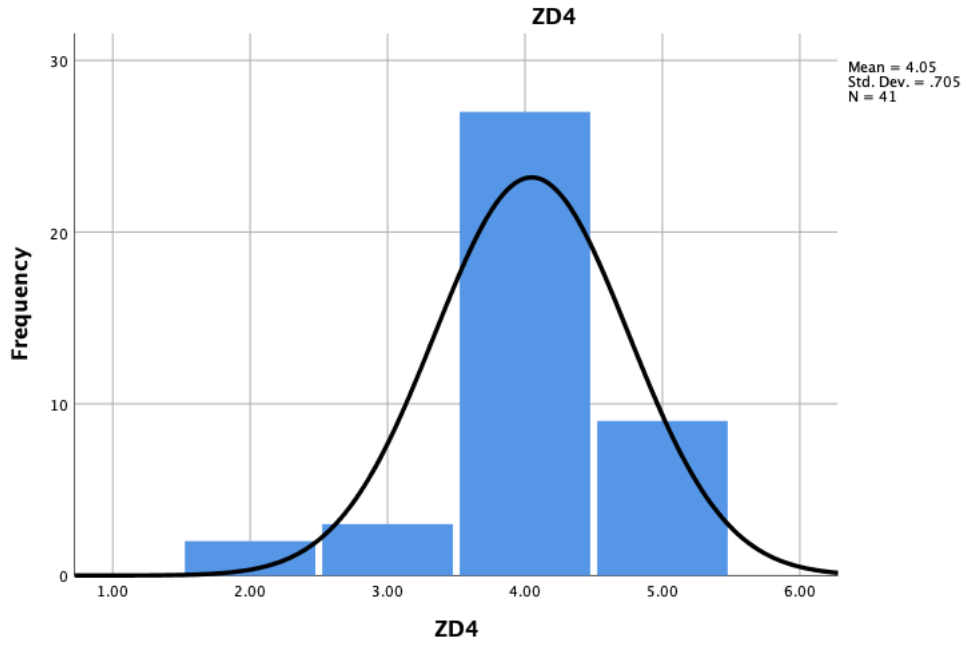


Figure 22- Frequency chart ZD4

The mean in the histogram above, is 4.05. The standard deviation is 0.705.

12.3.4.5 Frequency table ZD5- Students Performance

ZD5

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Disagree	2	4.9	4.9	4.9
	Neutral	9	22.0	22.0	26.8
	Agree	24	58.5	58.5	85.4
	Strongly agree	6	14.6	14.6	100.0
	Total	41	100.0	100.0	

Based on question section D 5 variable Z student performance- 73.1 % are on the positive side of agreement that Students feel stressed because of online learning Hence, the academic performance of students has been affected negatively, leading to a decline in their grades.

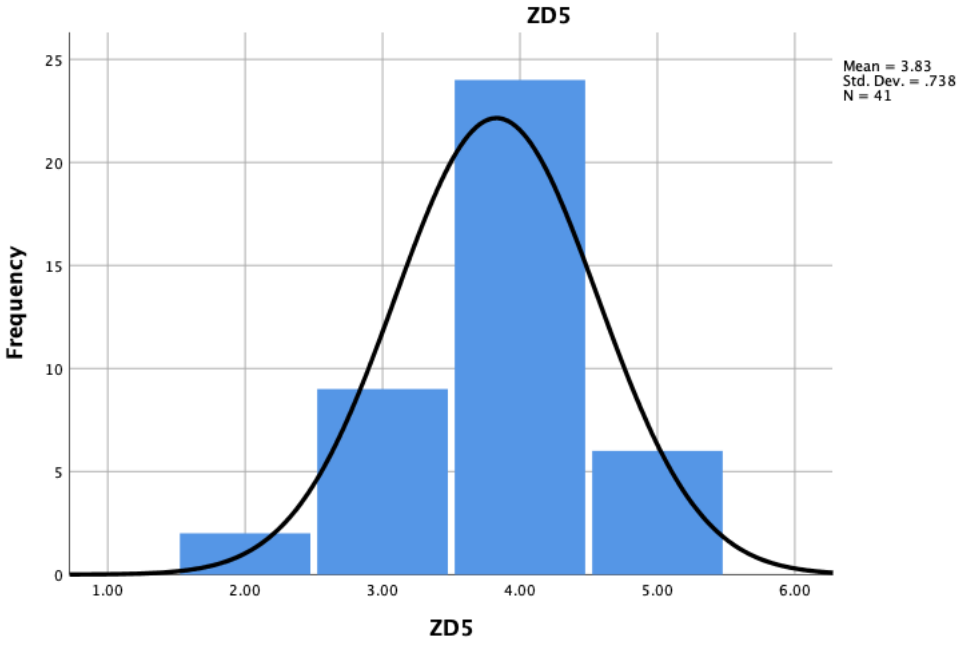


Figure 23- Frequency chart ZD5

The mean in the histogram above is 3.83 The standard deviation is at 0.738.

12.3.4.6 Frequency table ZD6- Students Performance

ZD6

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Disagree	2	4.9	4.9	4.9
	Neutral	7	17.1	17.1	22.0
	Agree	25	61.0	61.0	82.9
	Strongly agree	7	17.1	17.1	100.0
	Total	41	100.0	100.0	

Based on question section D 6 variable Z student performance- 78.1 % are on the positive side of agreement that Learning performance is decreased due to limitations in learning resources requiring extra work or covering less content in an online environment.

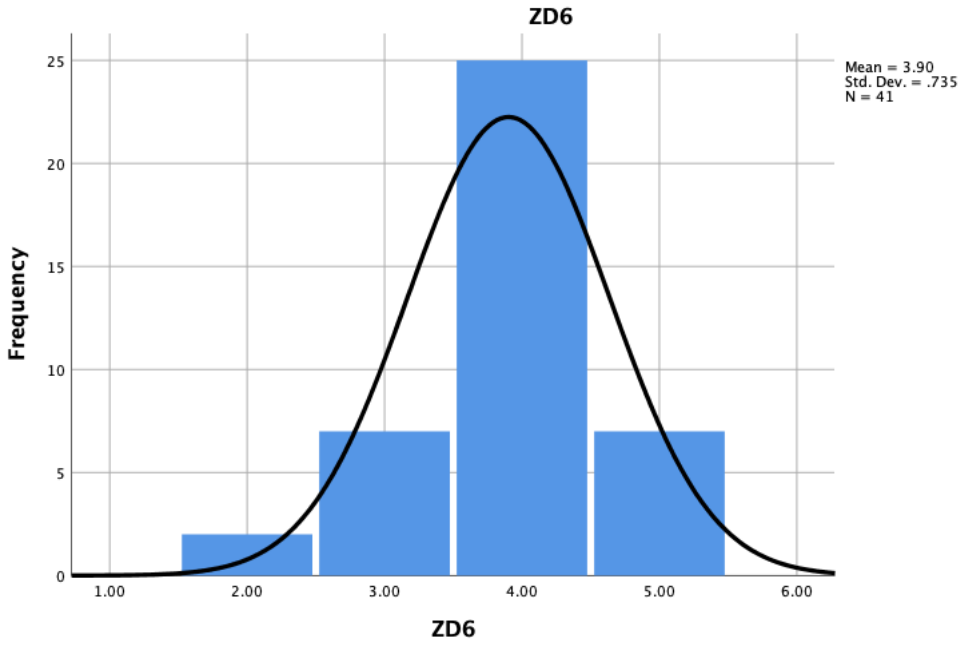


Figure 24- Frequency chart ZD6
The mean in the histogram above is 3.90 The standard deviation is 0.735.

12.4 Correlation analysis through SPSS

CORRELATIONS /VARIABLES=TotalXB TotalYC TotalZD
/PRINT=TWOTAIL NOSIG /MISSING=PAIRWISE.

Basis of Decision making:

1. If the significance value is <0.05 then it's correlated
2. If the significance value is > 0.05 then it's not correlated

Guidelines for degree of relationship

1. Pearson correlation value 0.00 to 0.20= no correlation
2. Pearson correlation value 0.21 to 0.40= weak correlation
3. Pearson correlation value 0.41 to 0.60= moderate correlation
4. Pearson correlation value 0.61 to 0.80= strong correlation
5. Pearson correlation value 0.81 to 1.00= perfect correlation

Correlations

		Prolonge online learning	Student Motivation	Student Performance
Prolonge online learning	Pearson Correlation	1	.688**	.732**
	Sig. (2-tailed)		.000	.000
	N	41	41	41
Student Motivation	Pearson Correlation	.688**	1	.811**
	Sig. (2-tailed)	.000		.000
	N	41	41	41
Student Performance	Pearson Correlation	.732**	.811**	1
	Sig. (2-tailed)	.000	.000	
	N	41	41	41

**. Correlation is significant at the 0.01 level (2-tailed).

Figure 25- Correlations table

Correlation analysis can be defined as a technique that helps to present the connectedness among the variables with each other (Cui *et al.*, 2020). The researcher can utilize multiple correlation techniques, as the most used techniques are Spearman, Kendall, and Pearson's correlation. Pearson correlation is one of the most suitable techniques based on easiness and simplicity of interpretation and analysis. There fore in this study, Pearson's correlation technique is used in the data set to examine and evaluate the relationship between the dependent and independent variables. Makowski *et al*. (2020) stated that Pearson's correlation is considered the most suitable technique based on the easiness and simplicity of the interpretation and analysis. There are three aspects of Pearson correlation analysis: significance, strength, and level. To measure the significance of the value, it is important to examine the P-value.

1. Based on the significant data above, the value of Pearson correlation of prolonged online learning to student motivation is 0.688 with significant value of 0.000 (value <0.05) so it's strongly correlated based on (Pearson correlation value 0.61 to 0.80= strong correlation)
2. Based on the significant data above, the value of Pearson correlation of prolonged online learning to Students performance is 0.732 with significant value of 0.000 (value <0.05) so it's strongly correlated based on (Pearson correlation value 0.61 to 0.80= strong correlation)

3. Based on the significant data above, the value of Pearson correlation of Student's Motivation to Students performance is 0.811 (value <0.05) so, it's perfectly correlated based on. (Pearson correlation value 0.81 to 1.00= perfect correlation)

12.5 Descriptive Statistics

Descriptive Statistics

	Mean	Std. Deviation	N
Prolonge online learning	16.146	2.1161	41
Student Motivation	16.488	2.1462	41
Student Performance	23.756	3.7335	41

Figure 26- Descriptive statistics

The standard deviation is used to measure the spread of values in a sample. The higher the value for the standard deviation, the more spread out the values are in a sample. Conversely, the lower the value for the standard deviation, the more tightly packed together the values. A standard deviation can't be "good" or "bad" because it simply tells us how spread out the values are in a sample.

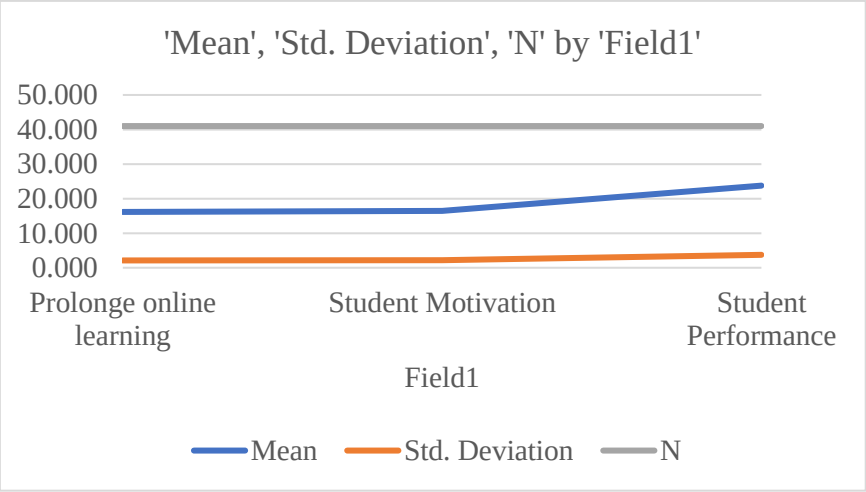


Figure 27- Standard deviation curve

In the curve chart above, out of 41 respondents (N), shows that the standard deviation is moderate on students motivation and is more significant on students' performance which gradually increases to 3.7 from N. Online learning has a big influence on students' performance. Judging from the results, the average value that strongly agrees with the meaning is very influential on the effects on students' performance at 23.7.

12.6 Regression analysis

12.6.1 Regression analysis between Prolonged online learning (IV) and student motivation (DV-H1)

12.6.1.1 Table Model Summary

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.688[a]	.474	.461	1.5764

a. Predictors: (Constant), Prolonge online learning

Figure 28- Model Summary Regression

The above regression analysis model summary shows a positive association between the variables as the value of R is 0.688 which shows a positive strong association; similarly, the adjusted R square is also presented to be 0.474, which also shows a moderate positive association between the variables.

12.6.1.2 ANOVA Table

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	87.333	1	87.333	35.146	.000[b]
	Residual	96.911	39	2.485		
	Total	184.244	40			

a. Dependent Variable: Student Motivation

b. Predictors: (Constant), Prolonge online learning

Figure 29- ANOVA table (Prolonged Online learning- Student Motivation)

The results of the ANOVA are shown in Table above and they are used to determine whether or not the regression model is significant and error-free. According to the data above, the regression model is significant because its sig value is less than the threshold of 0.05. In the above table, the sig value is 0.000, which indicates the regression model is significant.

12.6.1.3 Coefficient

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	5.214	1.918		2.719	.010
	Prolonge online learning	.698	.118	.688	5.928	.000

a. Dependent Variable: Student Motivation

Figure 30- Coefficient Prolonged online learning- student motivation

The relevance of the variable to the dependent variable is shown in the coefficient table. The minimal value for the value of significance is set at 0.05. The table above shows THAT THE PROLONGED ONLINE LEARNING – independent variable whose impact and applicability have been seen on the level of students motivation which is the dependent variable, has a constant sig value of .000 which shows that the prolonged online learning impacts moderately on students motivation.

12.6.2 Regression analysis between The Prolonged online learning (IV) and Students Performance (DV-H2)

12.6.2.1 Model Summary

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.732[a]	.536	.525	2.5743

a. Predictors: (Constant), Prolonge online learning

Figure 31- Model summary predictors constant prolonged online learning

The above regression analysis model summary shows a positive association between the variables as the value of R is 0.732 which shows a positive perfect association; similarly, the adjusted R square is also presented to be 0.525, which also shows a moderate positive association between the variables.

12.6.2.2 Anova Table

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	299.100	1	299.100	45.132	.000[b]
	Residual	258.461	39	6.627		
	Total	557.561	40			

a. Dependent Variable: Student Performance

b. Predictors: (Constant), Prolonge online learning

Figure 32- ANOVA table (Prolonged Online learning- student performance)

The results of the ANOVA are shown in table above, and they are used to determine whether or not the regression model is significant and error-free. According to the data above, the regression model is significant because its sig value is less than the threshold of 0.05. In the above table, the sig value is 0.000, which indicates the regression model is significant.

12.6.2.3 Coefficients

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	2.892	3.132		.923	.362
	Prolonge online learning	1.292	.192	.732	6.718	.000

a. Dependent Variable: Student Performance

Figure 33- Coefficient Prolonged online learning- student performance

The relevance of the variable to the dependent variable is shown in the coefficient table. The minimal value for the value of significance is set at 0.05. The table above shows THAT THE PROLONGED ONLINE LEARNING – independent variable whose impact and applicability have been seen on the level of students' performance, which is the dependent variable, has a sig

value of .0.000 which shows that the prolonged online learning impacts highly on students' performance (perfect correlation with a value of 1.292).

Discussion

Class and community are integral to the context and setting for character education. Classrooms, all school members, flora and fauna around the school, local culture, and the virtues of community leaders, become sources of learning and character-building that never stops. (MOE, 2020)

However, due to the locked-down period of the COVID-19 pandemic, the whole world went into a major shift, including the Education Industry. Online learning became a trend until when prolonged brought various challenges, especially to the younger children (learners). Parents and Teachers are wonderfully working together to face these challenges.

The objectives were to discuss whether Prolonged online learning influences students' motivation and finally show in their performance. Without face-to-face communication and physical classrooms to use as a workshop, implementing practical projects in an online course requires significantly more prior planning than theoretical training. Therefore, it's evident that theoretical lectures are easier to implement than hands-on via online. In an online environment, students are left to look out for themselves during learning activities without anyone constantly urging them towards their learning goals. Especially in the case of those who lack strong self-motivation and time management skills, will find it difficult when they are met with difficult learning materials in a comfortable home setting e-learning environment. (Tamm. S, January 7, 2022) It's challenging for online educators to monitor their learners and accurately determine who is engaged and fully participating in their class. (David Ciccarelli, 2020).

It's evident that theoretical lectures are easier to implement than hands-on online. This results in a decrease of gross motor skills, and physical activity in students making them lazy with time. It makes online learning limited to certain disciplines/ subjects and becomes an issue during the transition period back to traditional face-to-face learning where 80% is hands-on activities resulting in the question of whether the students lack in motivation (M to do it and are capable to do it. (Tamm. S, March 21, 2020)

Motivation is the will to perform the behavior. If the vicarious reinforcement is not seen to be important enough to the o Asynchronous is conducted on multiple levels, speeds due to delayed responses, which makes it difficult for participants to follow. This syncopated communication can affect group dynamics resulting in difficulties in performing group tasks in a timely manner (Harasim.1990), (Kiesler 1984). If the vicarious reinforcement is not seen to be important enough to the observer, then they will not imitate the behavior. (Bandura, 1977)

Online learning was found to be one of the demotivational factors among the respondents as they feel deprived of real-life interaction and burdened with a lack of stable internet connection and suitable gadgets for online learning. The results suggest that changing the learning environment can affect learners' demotivation and motivation. Thus, it seems imperative for the teachers to be able to adapt their approach and materials to suit changing conditions, especially during the pandemic. (*Reza Anggriyashati Adara, Onin Najmudin, vol 23, no 2, 2020)*

Being text-based makes online education more cumbersome and thus takes more time than face-to-face requiring extra work or covering less content. Another consequence is that online education is less responsive than face-to-face, potentially inhibiting expression and eliminating non-verbal communication (Garrison, 1997). This can result in misunderstandings and a lack of socio-emotional communication.

Effective learning is community-centred, knowledge-centred, learner-centred, and assessment-centred. It's not internet skills alone that determine competency, but users' strong

sense of internet efficacy that enables them to effectively adapt to the requirements of working in this environment. (Kirby & Boak 1987). Another disadvantage that emerges from the present study is represented by the technical problems encountered in the connection. (Gherheș, Vasile, Claudia E. Stoian, Marcela Alina Fărcașiu, and Miroslav Stanici. 2021.)

"Learning is the process whereby knowledge is created through the transformation of experience" (Kolb, 1984, p. 38). Recent research indicates that students feel stressed because of online learning and prefer face-to-face learning (Patricia, 2020; Fawaz and Samaha, 2021). Hence, the academic performance of students has been affected negatively, leading to a decline in their grades.

Conclusion

From the quantitative research above, is deciphered that all parents and teachers would like their children to receive holistic learning at schools being in school and not from home. Initially, this is already implemented with the option that if some children fall sick, they can attend classes from home. Thus, the schools have taken very good measures in recording everyday classes live and recorded. So, the students who can't attend due to their health issues can still receive education from their homes. However, now, online live teaching is not recorded anymore by the schools. They encourage the children to attend schools offline. It's back to normal again that, if the children are sick, they can just access the classwork online but they cannot see the recording of the session that they missed. Instead, when the students are back in school there will be given make-up classes to cover the missed curriculums.

As per the research hypothesis is concerned, it has been assessed that most of the hypothesis was accepted. Prolonged online learning gives an adverse effect to students motivation which leads further to decrease overall performance.

Safety measures taken by schools are also excellent in terms of masks, temperature, sending kids home in case they are not well, and for those who are coming back to school after being absent, must present an antigen result when they enter the school. All teachers are required to get antigen tests once in 2 weeks conducted in the clinics of the school.

This is the new normal era we are in now and its amazing how humans adapt to them diligently.

Other than that, the school also conducts health checks on the children once in 2 months with a declaration form sent to the parents in google forms. Periodic schedules of vaccines are conducted in school for those who have not received the Covid vaccines or boosters.

In fact, a lot of improvement is seen amongst the children as schools have begun their face-to-face learning in June 2022. Students feel tired but are adapting well to this change again enthusiastically. Extracurricular activities have also started since September once schools felt that the system is intact and well-adjusted by now.

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