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Accounting Teacher's Competencies on Blended Teaching – Learning Methods

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Abstract – Accounting education plays an important role in providing quality graduates that will be the soon to be Certified Public Accountants (CPA). Technological advancement reshapes the delivery of education. This study aimed to assess the accounting teacher competencies on blended teaching and learning methods employed in Batangas. It used descriptive method of research to describe the accounting teacher competencies and its impact on blended teaching and learning methods. 265 Bachelor of Science in Accountancy in the province of Batangas participated this study. Survey questionnaire was used to gather data which was adapted and modified to suit the current study. The instrument was validated by the expert in the field and subjected to reliability test with a Cronbach Alpha of 0.958. All data gathered were tallied, encoded, and interpreted using descriptive statistics. This includes frequency distribution, weighted mean, analysis of coefficient of determination and regression analysis. All data was treated using PASW version 23 to further analyze the result using 0.05 alpha level. The findings showed that accounting teacher's competency were often practiced by the teachers as experienced by the respondents. They generally agreed on the blended teaching and learning methods employed by accounting teachers. Accounting teacher competencies has a great impact in online instruction and delivery of lessons. Also, technical skills affect the course content, materials, and resources, while instructional skills, human skills and technical skills has an impact on assessment and feedback. A proposed plan of action was prepared to improve accounting teacher competencies.

Keywords: *Accounting Teacher, Competency, Teaching, Learning, Methods*

INTRODUCTION

Accounting education plays an important role in providing quality graduates that will be the soon to be Certified Public Accountants (CPA). It prepares and assures the quality of its product – CPA's that is highly marketable as well as in-depth with the current trends and able in technical know-how of every facet of business. There was a decreasing trend of Certified Public Accountant in the CPA licensure examination (CPALE). This was attributed to the exam, examiner, and the takers. These takers are the soon-to-be CPAs are the output of accounting education from various universities and colleges which accounting professors taught off during their college/university years.

Kalalo, et al. [1] correlated the performance of examinee takers of CPALE with the teaching competency of accounting professors. Though not the only reason of passing, accounting professors' methods and techniques in teaching greatly paved the way in achieving the examinees' goal – to be a CPA. Rosales, et. Al [2] supported this correlation of the accounting professors' methodology in delivering the accounting courses. They found out that lecture method among others is the most used and most effective way of delivery and learning mechanism for the students.

Technological advancement reshapes the delivery of education. Educators constantly improve to be adept to become more efficient and relevant in this development. Learning Management System (LMS) was introduced to universities and colleges which aims to facilitate a new way of learning and

development. COVID-19 pandemic caught everyone off-guard and expedite the implementation or utilization of LMS. Education greatly shifts from traditional method to a new and uncharted mode of learning. Wang, et al. [3] contemplated whether LMS, if used, will be an effective system that will help faculty to be engaged in effective teaching practices. Lapitan et al. [4], agreed that COVID 19 presented both faculty and students with a significant concern. New mode of learning was introduced, and the development or training was abruptly done to mitigate and be ready for LMS implementation. Faculties shifted from face-to-face to online teaching. Online teaching is now the new normal. Internet connections became a vital part of every teacher and student's life. Some faculties become used to this new setup while others are greatly struggling. Daumiller, et al. [5] studied the faculty experience, attitude, burnout/engagement and its role in achieving learning goals. Different measures of learnings are also introduced. Assessments are also evaluated and proposed new schemes to be updated and relevance to the new normal.

As the pandemic affects the accounting education and its delivery. From face-to-face set up and board-work computation and presentations, this was shifted to online and excel format delivery. The lecture method that was effective before pandemic may seems to be hard to achieve and utilize with the current and the new normal set up. These observations lead the researcher to conduct this study. It will greatly help the proponent to develop a new way of delivering accounting lessons and how to improve teaching-learning methods for the students. Accounting teachers may also benefit from this study to assess their method of teaching and to be appropriate it in the new setup. It may contribute as well to the preparation of each student in achieving their goals to become CPA. As a result, accounting profession will benefit to this as they will employ competent graduate despite of the new set up which may lead to review on policy and curriculum to provide better teaching and learning experience.

OBJECTIVES OF THE STUDY

This study aimed to assess the accounting teacher competencies and blended teaching and learning methods employed in Batangas. Specifically, to determine the profile of respondents in terms of sex, year level and units of accounting earned; to assess accounting teacher competencies in terms of instructional skills, management skills, human skills, technical skills and conceptual skills; to assess the blended teaching and learning methodologies in terms of online instructions and delivery, course content, materials and resources, and assessment and feedback; and to propose plan of action to improve the accounting teacher competencies.

MATERIALS AND METHODS

Research Design

This study utilized the descriptive method of research that involves adequate and accurate interpretation of findings. It was used in describing the assessment of student on the competencies that accounting teachers exhibited and on the observed blended teaching and learning methods used.

Participants of the Study

This study was participated by 265 (87% retrieval) from the 303-sample size. The sample size was 21% of 1,420 Accountancy students in total in the province of Batangas and was computed using Rao soft. All the students were enrolled for the school year 2020-2021.

Data Gathering Instruments

Information gathering will be done using questionnaire. The first part of the questionnaire is adapted from the study of Del Mundo and Refozar [6] that will guide to answer the accounting teacher competencies. It was assessed by the respondents using the Likert Scale of 4 - ALWAYS - When the specified condition takes place in 91-100% of the situation; 3 - Often- when the specified condition takes

place in 66-90% of the situation; 2 -Rarely - when the specified condition takes place in 21-65% of the situation and 1- Never - when the specified condition takes place in 0 -20% of the situation.

Also, the second part of the questionnaire is adapted from the study of Lapitan et al. [4] and Varthis [7] which sought to assess the effectiveness of blended online teaching and learning strategy and modified to suit the current study. The Likert scale of 4-Strongly Agree; 3- Agree; 2-Disagree 1-Strongly Disagree. It was the checklist questionnaire method wherein the participants could answer a single question with one or more options. The participants put a checkmark on the table that corresponds to their choice. The questionnaire was chosen due to its reliability and feasibility. It was further validated with a Cronbach's Alpha of 0.958.

Data Gathering Procedure

A draft research topic was made and submitted to the adviser for approval. The researcher reviewed related thesis, books, articles and essays from the library and internet to get the information needed. After the approval of the topic, the researcher then formulated the conceptual and theoretical framework of the study that serves as guide to do objective of the study. Appropriate research method is also considered on how to proceed and conduct the study. There researcher convert the questionnaire to Google Forms for the distribution to the respondents. The link was sent to Junior Philippine Institute of Accountant (JPIA) local Chapter's president and/or representative for the coordination to their members.

Data Analysis

All data gathered were tallied, encoded, and interpreted using descriptive statistics. This includes frequency distribution and weighted mean. The needed test will be used according to the objectives of the study. All data was treated using PASW version 23 to further analyze the result using 0.05 alpha level.

Ethical Consideration

Ethics is an essential part of each research study because each respondent reads and understands the consent form and accepts the term of the study before participating. The personal information and answers of the participants were given utmost importance and treated with confidentiality. The researchers forced none of the participants. Also, the permission of the author of the adapted questionnaire were sought and assured of proper citation.

RESULTS AND DISCUSSION

Table 1 presents the assessment of accounting teacher's competence in terms of instructional skills. The composite mean of 3.26 indicates that accounting teachers often showed the abovementioned indicators as perceived by the respondents. This means that accounting teachers are often able to deliver the lessons well. Instructional skills are very important factor for every teacher because it is the command of teaching the theoretical knowledge and bridging it with the experience in the practice of profession.

Table 1
Assessment of Accounting Teacher's Competencies in Instructional Skills

Indicators	WM	VI	R
1. Presents concepts clearly with good diction, clear and modulated voice and has good command of the language instructions	3.26	O	3
2. Has a thorough mastery of the subject matter and updated with the latest development in the field and can relate subjects to other fields in life situations.	3.3	O	1

3.	Welcomes questions pertinent to the subject matter, encourages creative thinking in solving accounting problems and gives tests within the subject matter already discussed.	3.28	O	2
4.	Makes use of various teaching aids (black board, visual aids, tapes, accounting manual, practice sets, syllabi in teaching, books, journals, newspaper, etc.)	3.18	O	5
5.	Presents lessons using the appropriate teaching strategies and methods like recitation, lecture, demonstration, etc. to ensure the students understanding.	3.25	O	4
Composite Mean		**3.26**	O	

Legend: 3.50 – 4.00 = Always (A); 2.50 – 3.49 = Often (O); 1.50 – 2.49 = Sometimes (S); 1.00 – 1.49 = Never (N)

Among the indicators, accounting teacher was often perceived that they have a thorough mastery of the subject matter and updated with the latest development in the field and can relate subjects to other field in life situations rank 1 with a weighted mean of 3.30. This means that accounting teachers are adept with the current developments in the field, master with the topics they discuss and can relate it to actual life scenarios. This competency is highly required with the accounting teachers as accounting world continue to develop. Also, mastery of the topic is also required for it will be very hard for the students to understand the topic that the teacher has ample knowledge. Real-life scenarios and cases are a big help as well for the student to be trained for their future endeavors.

Schiefele [8] affirmed that students cognitive learning process were positively correlated with the mastery of teacher on the lesson and topics the are teaching. Teachers' mastery of the subject enables student to depend, trust and grow in their self-concept and motivation. Mastery of subject matter has a direct impact on teaching and learning process in schools [9]. It is required for every teacher to learn with, to facilitate teaching and learning as it connotes teachers having a better understanding. Learning goals has impliedly shown the relationship between personal and educational growth as well as the great emphasis on academic motivation of the student driven by the mastery-oriented practices of the teacher-facilitator. Daumiller, and Dresel, [10] confirmed this result and indicated in their study that instructor's mastery and objectives were correlated with the learner-focused environment and the teachings skills.

It was observed that accounting teacher makes use of various teaching aids (black board, visual aids, tapes, accounting manual, practice sets, syllabi in teaching, books, journals, newspaper, etc.) ranked last although still interpreted as often (3.18). This means that accounting teachers are still using the traditional teaching aids though might be lessen because of the transitional to digital platform.

Abdullah [11] discussed that ICT growth and development revolutionize not only the education sector but almost all sectors aiming to increase economic productivity and inclusive growth. Digital learning converted the traditional blackboard discussion into a new paradigm of teaching and learning. Teacher-facilitator became the steerer and provider of creative ways to foster positive learning environment. New breed of learners found chalk and talk strategies ineffective. They were observant to grow in self-efficacy and motivation as part of learning to be able to solve true-to-life problem cases and be involved in the process. Contemporary learning system skewed to student-focused processes in the digital environment with the aid of teacher-facilitator. Books, journals, and other teaching aids tends to be replaced by the online lecture materials and the vast available resources on the internet. Traditional teaching aids maybe not observed or practiced by the accounting teachers because of the utilization of LMS and the shift as well of teaching-learning strategies.

On the other hand, Petimani, and Adake, [12] found out that board-work computations were still preferred over the use of PowerPoint presentation. Their study showed that learning pace and suitable learning environment were most cited reasons. Also, it causes the learner to be attentive in the learning session and stimulates learning interests. Further, it revealed that blackboard discussion fosters better interaction among learners and lecturer.

Table 2
Assessment of Accounting Teacher's Competencies in Management Skills

Indicators		WM	VI	R
1.	Maintains order, and discipline in the virtual room or LMS	3.39	O	3
2.	Make the virtual room or LMS conducive to learning.	3.28	O	4
3.	Stimulates students' respects to teachers and college officials.	3.48	O	1
4.	Makes rational decisions within the virtual room (LMS)	3.26	O	5
5.	Demonstrates knowledge of teaching as a profession	3.39	O	2
Composite Mean		**3.36**	O	

Legend: 3.50 – 4.00 = Always (A); 2.50 – 3.49 = Often (O); 1.50 – 2.49 = Sometimes (S); 1.00 – 1.49 = Never (N)

Table 2 presents the assessment of accounting teacher's competencies in classroom management skills. The composite mean of 3.36 indicates that the respondents often perceived that their teachers showed competency skills in classroom management. This means that accounting teachers set a positive environment in the classroom conducive to better learning.

Accounting teachers often manage to stimulate students' respects to teachers and college officials which ranked first (3.48). This may be attributed to the authority that teachers have. Also, it may suggest that teacher act as the primary authority inside the classroom not just teaching lessons but also developing learner's good character.

Valente, et al. [13] suggest that facilitating learning requires not only the mental ability but also the formation of emotional intelligence (EI). They agreed that it was significant to understand the relation of EI to better manage the classroom despite its newness. Mindfulness of other's sentiments leads to a better stability of emotions that fosters good attitude and character. Chandra [14] claimed that educators should aim each learner to attain maximum potential and not just to assess and control them. For him, self-control and growth are the ultimate purpose of managing classroom. He suggests that attainment of better classroom management includes both positive and negative reinforcement, timely feedback, and mediations. Some of the notable behaviors were being punctual, respectful, lesson ready, offering knowledge and active inquiry. These behaviors are greatly affected by the learning environment brought by active and effective classroom management.

On the other hand, indicator makes rational decisions within the virtual room (LMS) (e.g., development of instructional plans) ranked fifth although still interpreted as often. This means that students perceived teachers to stick to the course plan and follow it all throughout. It may indicate as well that instructional plan or flow lesson are less observed in the online platform.

Radovan and Kristl [15] pointed out that the instructor's perspective towards utilization of LMS can be improved through the better leadership and support of the institution. Pedagogical activities like course plan are the guide of both the students and teachers. It has an affirmative effect on the quality of delivery and on the utilization of LMS. Although, they found out that blended learning was still in transition so to experience challenges in using LMS and the quality of it. Dumont, and Raggo [16] had the same conclusion in their study. Rational decisions in virtual classrooms and providing instructional plans were correlated with the means of educators and the effectiveness of digital learning for the students. They found out as well that instructional plans followed by instructors as part of pedagogical strategy is needed to be check and updated for better teaching and learning. Also, blended learning pose positive effect as it is done remotely. Although some of the challenges pointed out was the lesser participation among learners. They suggested innovating guidelines, timely feedback and monitoring and more trainings for blended learning.

Table 3
Assessment of Accounting Teacher's Competencies in Human Skills

Indicators	WM	VI	R
1. Shows genuine interest in students.	3.23	O	3
2. Handles class and students' problem(s) with fairness and understanding.	3.26	O	2
3. Inspires students to be self-reliant and disciplined.	3.33	O	1
4. Demonstrates understanding of how students learn.	3.19	O	4
5. Gives rewards to deserving students	2.98	O	5
Composite Mean	**3.2**	O	

Legend: 3.50 – 4.00 = Always (A); 2.50 – 3.49 = Often (O); 1.50 – 2.49 = Sometimes (S); 1.00 – 1.49 = Never (N)

Table 3 revealed that students often sensed accounting teachers to have human skills competency with a composite mean of 3.20. This means that humanistic relationship among teachers and students are observable. Teachers considered the human condition of their students to better facilitate learning.

Accounting teachers often inspires students to be self-reliant and disciplined with a weighted mean of 3.33 rank first. This means that teachers uplift the spirit of the students despite the hardship and obstacles they face. This is also a training for the students to be ready for the workforce that requires discipline and independence.

Emphasizing growth in individual accountability, constructive reasoning, and abilities to rise from adverse encounter are some of characteristics that were manifested by the professors who have above median and high EI trait. This positive trait leads the teacher to establish an encouraging learning atmosphere. Schiefele [8] found out that teacher's interaction with the students and interest foster involvement among learners, monitor progress and reinforce the strengths. It promotes self-efficacy and motivation among students. Teachers are required to grow in inspiring students' to be engage with their emotions, to properly address unruly attitude, creating discussion about the topic and in overcoming from their unpleasant experience [17].

Furthermore, Jung, et al. [18] confirmed prior studies on self-discipline as a facilitator for educational efficiency and the perplexing impact of attribute attentiveness and that it was a distinct facet among other. They found out the significant impact of one's educational efficiency to school performance. Attitude and behavior of the student towards learning process was greatly influenced by teachers who have a high motivating words and action. Motivation among students leads to a better performance in the class and a good foundation for them in the profession.

On the other hand, the indicator gives rewards to deserving students ranks last although still verbally interpreted as often. This may suggest that accounting teacher think that college or university student will not respond to the carrot stick approach.

Bear et al [19] negated this as they discovered that carrot-stick approach increases a good relationship between teachers and learner although not generally related to conduct problems. Their study suggested that there was a positive correlation on regular efficient usage of strategies like retake, suspensions, compliment, and incentives with the management of learner's conduct, improvement of instructor-learner interactions and personal growth.

Furthermore, Serin [20] stated also that both outward and inward inspirations promote learners to be involve in the learning course. They found out that some students expressed that they could develop their own way to learn as they are inwardly determined but certain learners desire extrinsic incentives to be determined as they were not interested. This was critiqued because it lessens the inward motivation as the external determination build positive manners in studying. Instructors were recommended to

employ motivational approaches as it affects learner's accomplishment thru positive learning environment.

Table 4
Assessment of Accounting Teacher's Competencies in Technical Skills

Indicators	WM	VI	R
1. Prepares and plans for each class lesson and has properly balanced theory and practice.	3.24	O	1
2. Uses appropriate teaching methods to achieve desired instructional goals and summarizes at the end of each step in a lesson and gain at the conclusion of the complete presentation.	3.22	O	2
3. Introduces financial statements and financial information from actual companies, to reinforce understanding of assignment material.	3.05	O	5
4. Encourages students' interest by showing them how accounting information can be of use in decision-making incorporating the ethical issues and applications in the accounting practice.	3.22	O	3
5. Uses appropriate assessment strategies to evaluate learning.	3.21	O	4
Composite Mean	**3.19**	O	

Legend: 3.50 – 4.00 = Always (A); 2.50 – 3.49 = Often (O); 1.50 – 2.49 = Sometimes (S); 1.00 – 1.49 = Never (N)

Shown in Table 4, students perceived that often accounting teachers are competent in terms of technical skills with a weighted mean of 3.19. This means that teachers are well equipped in the technical know-how of the accounting lessons they are delivering to the students. The Code of Ethics for Professional Accountants summarized it as professional competence and due care. It means that accounting teachers are mandated to conduct themselves in the practice of profession thru maintaining required level of professional knowledge, skills and carefully obedient to the relevant practical and professional standards.

The indicator prepares and plans for each class lesson and has properly balanced theory and practice been often experienced by the students with a verbal interpretation of 3.24 rank first. This means that accounting teachers plan their lessons to be delivered before the sessions. Also, the theoretical background was presented first then compared it and validate it with the real-world scenarios.

Nkwabi [21] discovered in his study that preparation of lesson plan increases courage and confidence in teaching. Also, in the study of Ali [22] revealed that PE educators prepared their lesson plan appropriately. It is vital and improve professor's confidence to deliver as they plan for their strategy. Iqbal et al [23] equated course preparation and delivery to engine and oil. They studied the dynamism of theoretical design of course guide and its impact to the students. Their result showed that with the use of theoretical constructivism, well-designed and well-prepared lesson plan enable a better delivery of the course. Professors guided by it also balanced the delivery with both theoretical and practical application.

On the other hand, the lowest among the indicators where often that the teacher introduces financial statements and financial information from actual companies, (such as article in business pages of newspapers, magazines, and journals) to reinforce understanding of assignment material (3.05). This indicates that accounting teachers are limited also in presenting the current business affairs because of Data Privacy Act. Another possible reason for this is that not all information provided in the business pages are relevant to the current activities given to the students.

Republic Act 10173 The Data Privacy Act of 2012 imposed startling penalties to those who will violate the breach or improper handling of data or information or due to negligence. This law restricts

the use of information like financial statements and be used without proper procedure. Guay et al [24] studied financial statement readability, complexity, and voluntary disclosure. They discovered that there was an affirmation to the increasing study between financial statements and its impact to the information environment. Their study showed that management twisted different disclosure means to have the greatest advantage among other competitors. This resulted to a misinformation or misdirection in reading and analyzing financial statements. Stakeholders are suggested to be professionally skeptic in scrutinizing the reports. In addition, Eberhartinger et al [25] concluded that the perception on the individualized line-item info matched with grouped line items was the same in the business set up provided the unity among its users. As different users of financial statements have their own way of looking into financial reports, information was explicitly available and that requires proper-base line to get the information needed. The reports were overwhelming and not easy to comprehend as user lacks anchor or fundamental understanding of what information they are looking. They found development indication between management influence over financial statements. Aggregating or disaggregating financial information leads was relevant to stakeholder's decision.

Table 5
Assessment of Accounting Teacher's Competencies in Conceptual Skills

Indicators	WM	VI	R
1. Stresses fundamental concepts rather than trivial procedures.	3.11	O	5
2. Explains the accounting concepts at more complex levels as the students gain sophistication and understanding.	3.13	O	3
3. Utilizes the experience of students in presenting topics or making use of concepts with which they are familiar.	3.12	O	4
4. Provides real-world examples at every stage that illustrate the consistent with the theoretical treatments.	3.26	O	2
5. Cites references to international standards and practices.	3.32	O	1
Composite Mean	**3.19**	**O**	

Legend: 3.50 – 4.00 = Always (A); 2.50 – 3.49 = Often (O); 1.50 – 2.49 = Sometimes (S); 1.00 – 1.49 = Never (N)

Table 5 presents the Assessment of Accounting Teacher's Competencies in Conceptual Skills. Students assessed their accounting teacher often competent in conceptual skills with a composite mean of 3.19 as presented in table 5. It means that accounting teachers can discuss or deliver pertinent concepts to the students as foundations of accounting knowledge.

The indicator cites references to international standards and practices was often observed by the students to their accounting professors rank first with a weighted mean of 3.32. This means that professional accountants are abiding to the set of standards mandated in the practice of profession. Citing the standards or rules regarding specific accounts are necessary to establish its foundation and for the ease of discussion for the students.

The Code of Ethics for professional accountants stated this as professional behavior. It indicates that professional accountant should abide with the appropriate rules and laws which includes proper citation and reference to the necessary standards. The practice of profession is also guided with the International Financial Reporting Standard (IFRS). It also includes the professionalism or conducting oneself that will not discredit the profession. Lay [26] presented in her study the benefits and challenges in adoption of IFRS. She concurred that the financial reporting standard was very important to be understood well and properly discussed as it affects the operation of the business. Understanding well the standard and applying it correctly will benefit not just the business but more importantly the stakeholders. Accounting professor stresses it well so for the students to be more familiar on the

standards and how it is to be used properly and be guided by it in the conduct and preparation of financial statements.

Stresses fundamental concepts rather than trivial procedures are often experienced by the students from their teachers' discussion ranked last with a weighted mean of 3.11. Fundamental concepts are vital to the learning of accounting principles although students seem to look ahead to that complicated process in the computation of business cases. It may mean that students desire to have a balance between basic principles as well as with the trivial procedure so to practice them and enhance their learning.

Zhang [27] supported this as he stated that when accounting teachers discuss more of complicated topics or problems, students tend to adapt with it and increases their capability of comprehending and learning the lessons well. He argued that as learners understand the complex topic, the teacher can assert that they knew the basic principles too. Furthermore, Kwarteng et. Al (2019) affirmed that academic quality was attained by balancing between theories and complicated problem discussion. Lectures are well presented with appropriate accounting principles and standards as springboard and with stress on an advanced level of thinking and learning through business case analysis. This strategy promotes better learning of accounting standards, skills, and ideas in the accountancy profession. They cited Mohanna et. Al (2007) that learning environment that aims involvement to both learners and instructors are successful in establishing superior learning experience.

Table 6 shows that the students generally agree to the blended teaching and learning methodologies in terms of online instructions and delivery of lessons. (3.16). It indicates that students saw that teachers' strategies are also adjusted to need of changing times most especially this time of COVID-19 pandemic. Instructions and delivery of lessons are ever evolving and abruptly converted from traditional way to the new normal strategies.

Atika et. Al (2021) concluded in their study that despite that closure of universities because of COVID-19, blended learning enables student to continue their study even from home. Both students and teachers need to adapt with this current and challenging realities. Professors personalize the old way of teaching to suit the changing needs of the students.

Table 6
Blended Teaching and Learning Methodologies in terms of Online Instruction and Delivery of Lessons

Indicators	WM	VI	R
1. There is a clear plan on how the course will be delivered using an online strategy like a clear set of directions for specific tasks/course/learning activities that are expected to achieve each week	3.32	A	3
2. The instructor created a successful environment that was conducive to learning through presenting materials, skills and techniques needed.	3.24	A	6
3. The asynchronous (watching video lectures, answering SAQs) and synchronous (live online classes via available platform) components of the course are balanced and provided a self-paced learning environment	3.26	A	5
4. Face-to-face sessions are more meaningful if they include discussion following online learning experiences.	3.43	A	1
5. More types of interaction in learning such as face-to-face learning with online videos and in general with online teaching materials increase motivation.	3.31	A	4
6. The combination of online and face-to-face online learning methods would facilitate meaningful and authentic learning.	3.36	A	2
7. I prefer online live discussions as I find online class delivery is more effective than traditional in-class delivery.	2.38	D	10
8. Blended learning enables a student to become more involved in the learning process and increases flexibility in arranging student activities.	3.07	A	9

9. Blended learning promotes self-regulated/paced learning as you can control how fast or slow you move through lessons.	3.12	A	8
10. Using discussion online forums (messenger, google meet etc.) would promote learning after face- to -face online class.	3.14	A	7
Composite Mean	**3.16**	**A**	

Legend: 3.50 – 4.00 = Strongly Agree (SA); 2.50 – 3.49 = Agree (A); 1.50 – 2.49 = Disagree (D); 1.00 – 1.49 = Strongly Disagree (SD)

Instructions and Delivery shift from traditional board discussion to online discourse.They agreed that consciousness and willingness among student and teachers will improve mutual trust and eagerness to embrace flexible education despite pandemic. Furthermore, Hrastinski (2019), stated that instructors adjusted to use blended learning as instructional methods or tools as it includes both facets of face-to-face learning and online learning.

Learners generally agree that face-to-face sessions are more meaningful if they include discussion following online learning experiences ranked first with 3.43 as weighted mean. It means that a face-to-face session in synchronous class provides reinforcement to the lectures uploaded in LMS for asynchronous sessions. It also shows the importance of face-to-face online class as it sets the virtual room to have the feel of classroom set up, validate the learning, and monitor the progress of the learners.

Wolverton (2018) cited Kraft and Dougherty (2013) discovered that face-to-face online classes has influence the learner-teacher interaction which foster greater learner involvement. On the other hand, they noticed that learners tend to step back as they participate in the discussion because of peer pressure and nervousness knowing that classmates and teachers are listening to them. Synchronous class gives the feel of traditional way of classes as students can talk to one another informally before the class starts. This communication among themselves for assignments, lessons and lectures promotes a better student-to-student engagement. In addition, Kauffman (2015) found out that several factors have a positive correlation with the satisfaction and learning experience. One of which was the teacher enabled communication, collaboration and interaction that foster better learning. He suggested that lessons should offer chances for teamwork and communicating of thoughts in developing students learning. Teachers are facilitators of learning specially in the online setup for teaching and collaboration like in the old teaching style. Furthermore, Yang (2019) found out that those professors who meet their students online regularly established a better interaction, coping mechanism, good feedback, and deliver the prospected learning targets. Lastly, Bower et. Al (2015) stated that flexible learning offered a better academic access, inclusive and reasonable learning experiences. As COVID-19 put a limit on the face-to-face meeting, this serves as a facet to continue the learning process.

On the other hand, students generally agree that blended learning enables a student to become more involved in the learning process and increases flexibility in arranging student activities ranked ninth or second to the last with a weighted mean of 3.07. This may indicate that the implementation of blended learning is not yet fully grasp by the accounting teachers. It suggests that still, the online instruction and delivery of lesson still focuses on the teacher-centered approach or the teacher being the main source of information.

COVID-19 prompted the shift of learning system from traditional way to the new normal. Both teachers and students adjust to it and make their best effort to adapt to it. Yet, teachers who used to do the old way of teaching tends to bring the old style into the new normal which create a big challenge for the students. Sailer et al (2021) cited Ertmer et Al (2012) stated that principles, habits, and views of teachers has an effect to their methods. Their study indicates that instructors who have high values towards technology were able to operate the LMS well. Also, those who believed that technological development offers benefits got a positive correlation with the student learning. On the other hand, they discovered also that even though principles were aligned with their methods, certain truths barred them to execute well the technology causing disruption in the student learnings. Daumiller et Al (2021)

concurred these findings as they said that COVID-19 pandemic disrupts greatly the traditional way of learning. Blended learning surely offered lots of benefits yet the transition to it was not stress-free. They unearthed as well that the abrupt shift causes breakdown, lesser engagement, and low student assessment on teaching quality. It causes greater issues, unsuccessful handling, and limited capacity of integrating full potential. Lastly, Al Balushi et Al (2020) agreed that professors principles influence academic habits. Teacher's values affect how they design the classroom ambiance that facilitates learning. Science instructor's conception of various science concepts reveals their strategy in their delivery. Teacher-centered environment barred the application of flexibility of learning, and it tends to demotivate the students in studying. They suggested to implement various learner-focused tasks to increase student involvement, flexibility in learning and provide continuing professional growth for the teachers.

Students generally disagree in the indicator I prefer online live discussions as I find online class delivery is more effective than traditional in-class delivery 2.38 weighted mean. This means that students desire to have the face-to-face traditional way of delivery as they find it easier to cope with and already their comfort zone. It indicates as well that despite of the implementation of blended learning, they are still on the adjusting period on how to cope with the new normal.

Reinhold et Al (2021) supported this with the findings of their study stating that ICT approach has an impact on achievement in online learning, reduce dependence on face-to-face learning and a motivation for electronic learning pro-forma. Their study found out that there was significant relationship between learners' attitude regarding the usage of ICT for learning and their handling with the self-discipline and self-efficacy in learning. Students' inclinations on emotions and motivations found out that there was a greater need for face-to-face meeting. Also, there were reduce fondness for virtual learning as they wanted to go back to traditional way of classes. Their students were excited to return to the old way of education. Although, they concluded that LMS was not the primary cause in returning to old way. They cited that fellowship, friendly conversation, live and actual discussions were the things they were missing in the online set up. They suggested some possible cause why students wanted to go back to the face-to-face learning set up. One was the extent of discussion online is not the same with the face-to-face classes as they were used to. Also, their collaboration with one another that were really limited due to pandemic. They suggested to reevaluate the strategies used in the current online setup to address this concerns like student's involvement and interactions as well as the learning processes using the flexible learning method. Furthermore, Lapitan et al. [4] affirmed that the shift to virtual classes posed a huge challenge to both students and teachers. It was overwhelming to both sides in deciding the most applicable platform, well-prepared lessons, and the mode of delivery to the students. Students resort to go back to face-to-face class to ease out the effect of pandemic through meeting with their teachers and colleagues.

On the other hand, Alabdulkarim (2021) negated this as his study showed that students preferred online team-based learning than face-to-face class. It also presented that blended learning were chosen to be better than traditional as it offers flexibility, accessibility, and control on the learning process. His study along with the previous ones suggested that students learn better in the online learning set up. He suggested that collaborative learning in the online set will produce a better outcome.

Table 7
Blended Teaching and Learning Methodologies in terms of Course Content, Materials and Resources

Indicators	WM	VI	R
1. The lecture was effectively organized, developed my abilities and skills, and appropriate for my level.	3.17	A	8
2. Specific learning goals/objectives for each lecture is presented at the beginning of the lesson and summarize at the end of presentation.	3.31	A	4

3. Lecture materials are provided before class so students can view and be familiar with the topics/lessons.	3.28	A	5
4. Instructional or lecture videos are available online to better understand the material.	3.42	A	1
5. On-line learning material can be accessed more effectively and rapidly than only sitting in virtual class.	3.1	A	9
6. Time allocation per lecture/lesson is enough to understand and to learn it.	2.87	A	)
7. A path of information from virtual classroom lectures through documents in the web, e. g. video and simulation will result in a good understanding of the instructional material.	3.21	A	7
8. Textbooks and online library make it easier to obtain additional information.	3.28	A	6
9. Additional online materials (video lectures) validate the discussions and supports the lesson presented.	3.39	A	2
10. Online resources expand the information already obtained in class.	3.37	A	3
Composite Mean	**3.24**	**A**	

Legend: 3.50 – 4.00 = Strongly Agree (SA); 2.50 – 3.49 = Agree (A); 1.50 – 2.49 = Disagree (D); 1.00 – 1.49 = Strongly Disagree (SD)

Table 7 presents the blended teaching and learning methodologies in terms of course content, materials, and resources. The composite mean 3.24 indicates that the respondents agree on the abovementioned indicators. This means that accounting teacher prepare and adjust the appropriate subject matter, lectures and references that will fit the changing need because of pandemic. Adaptational skills were needed to develop the subject matter well and consistently check updates for the content of the lessons. It is vital for the teachers to have these skills to adjust appropriately with the need of the times.

Students agreed that instructional or lecture videos are available online to better understand the material with 3.42 weighted mean ranked first. This indicates that the shift to online platforms makes accounting teachers to be innovative in delivering the topics like providing the recorded lectures online to support the lecture materials. This means that video lectures are utilized to deliver the lesson and to stimulate student learning.

Lapitan, et al. [4] that there was an encouraging effect of pre-recorded videos in teaching and learning chemistry. Also, supported this claim in analytical and physical chemistry set up where lectures are available online and learners can access it anytime. Active learning and knowledge retention were made better because of this flexibility. Furthermore, Hadie et al [28] concurred that there was positive effect on learner's understanding of challenging anatomy lessons. They validated the previous studies that claimed improvement on student performance after watching the recorded lessons. They found out that it balances the students learning between those who had prior understanding of the lesson and those who are just newbie.

Lastly, Bordes et al [29] concluded that students resort to recorded lessons as the online face-to-face classes bring difficulty and challenges in comprehending the topics. They found that learners were more engage in learning the lesson through video lectures and enriched the lecture materials. They suggested that a pre-planned academic recording that covers significant lessons with lively photos, eye-catching signs and modulated discussion will generate better outcome.

The indicator additional online materials (video lectures) validate the discussions and supports the lesson presented ranked second with 3.39 weighted mean and verbally interpreted as agree. This suggest that due to the limited printed resources, internet offers lots of supporting materials to supplement reinforce the learnings of the students. Video lectures from different well-known authors and reviewers are available in various platforms.

The quick shift of educational system caught majority of universities, teachers, and publishers unprepared. Delivery of tangible books imposes burden due to location and costs. It resulted to greater utilization of different online learning materials like video lectures to augment the different needs. Chen et al [30] stated that several lecture materials are accessible online. Virtual recorded lessons were the new normal way of delivering discussions. Video lectures of well-known authors and reviewer offers supplementary knowledge to the lesson presented by the professors. It improves learning process and have the feel of real-lecture discussion as students participate and watch the lessons. It promotes self-efficacy, flexibility, and variations of learning styles from different sources. Hung et al [31] added online materials enhances the student knowledge and broaden the learning experience. They discovered that supplemental video lecture was far better than lecture materials alone. It helps the learner to better comprehend and learn the topics well.

Students agree that online resources expand the information already obtained in class as it have weighted mean of 3.37 and ranked third. It indicates that exposure to online learning broaden their grasp of knowledge. Also, the learnings that they have in their classes were validated or challenge from the information coming from online sources.

Cyber space offers lots of information that maybe useful for the learners. Reading and comprehending subject widens the knowledge of the students. Bordes et al [29] supplemental reading was assigned to the students to expand their learning and to enrich their knowledge. It confirms and negates the lesson presented in the class and requires an informed decision making which to believed and to take. Their result showed that with this strategy, students did not prepare well before the session. Ford [32] cconcluded that online materials, lectures, and blended learning has significant impact on student's final grade. Also, online sources and materials enhanced the learning knowledge of the students.

Ranked second to the last was online learning material can be accessed more effectively and rapidly than only sitting in virtual class with weighted mean of 3.10 and although still verbally interpreted as agree. This means that even though lectures materials (video lectures) are available online, still, students find it better to have it from the teacher itself. It may indicate that students heavily rely on the information that teachers will provide to them and factoring different causes of challenges in accessing online materials.

Learning has many facets. Teacher centered learning was the traditional way of doing it and in some ways the comfort zone of the students. Pandemic creates various opportunities for both teacher and students. The usage of LMS has a great influence on the cognitive engagement of students in learning. The benefits were highly observable specially as in the time of pandemic. Blended learning though offer lots of advantages like greater flexibility, diversity and self-efficacy, it poses challenges like adaptability, competency, available gadgets and the attitude towards virtual reality. They concluded that without properly solution to the discovered issues would undermine the benefits it offers and hinders the learner in accessing online resources and utilizing it better. Technical issues are experienced in flexible learning system. These observed challenges hinder the students to access and use online resources to further enforce their learnings. Technical issues like gadgets, poor internet connections and the learning environment were the most common problems according to the result of their study [33].

The item time allocation per lecture/lesson is enough to understand and to learn it with ranked last (2.87) though still verbally interpreted agree. This indicates that students experienced challenges regarding coping and learning the lessons with appropriate time frame. This also suggest that pacing is important to understand better the lesson. It may mean as well that students are having hard time to balance well their time as the new normal requires.

Learning process proves that it requires appropriate time for the learners to comprehend and learn. Flexible learning system offers both synchronous and face-to-face online class as well as asynchronous activities. Both methods are beneficial more as it blends. Kim et al [34] offered some of the benefits of asynchronous method in learning the lessons. It enables the students have more flexible

time, to be more committed and reflective on the learnings. Self-paced learning requires well-balanced time allocation and life management. They found out that those students who have high self-efficacy capitalized the appropriate time allocation and flexibility given by asynchronous mode of learning. Sufficiency of time allocated for learning greatly influence student learnings and decisions. Although physical interaction was limited, it requires a higher self-discipline, proper allocation of time and independence from instructor.

You [35] found out that college students were more procrastinators compared to senior high school. He correlated it with the growth of self-paced learning which causes the students to take time for granted by delaying on the assigned task and not doing on time the activities. Students voiced out their challenges in effectively doing life management. Their result showed that those procrastinators had poor participation in class, delayed in activity submissions the leads to poor achievement. Lastly, teachers played important role in the proper allocation of time for each lesson to give time and space for the adjusting student to learn the lesson better. Blended learning, student focused, and outcome-based education were suggested to help the students in the journey of learning.

Table 8
Blended Teaching and Learning Methodologies in terms of Assessment and Feedback

Indicators	WM	VI	R
1. The total item of self-assessment questions (SAQs) after each lecture is sufficient to achieve the learning outcomes for the lecture or topic	3.14	A	3
2. I can easily answer self-assessment questions (SAQs) after watching the pre-recorded video lecture	2.86	A	10
3. There is enough time to work on the self-paced learning materials (e.g., to watch lecture videos and submit SAQs)	3	A	7
4. The total number of quizzes in the course is enough to assess student learning of the course	3.05	A	6
5. The time released of questions during a Quiz is a good training to develop my problem-solving skills.	3.09	A	5
6. The synchronous virtual games (quiz bee) is a good strategy to assess the students understanding of the theories and concepts in a fund and stimulating environment	3.13	A	4
7. I found the learning experience to be enjoyable.	2.91	A	8
8. I prefer a discussion forum that enables a group of people to contribute to the conversation rather than one individual dominating the conversation.	3.24	A	2
9. I would like to get prompt feedback online from the professor regarding my questions, etc.	3.34	A	1
10. I prefer asking questions I have about the material being taught in an online forum than in face-to-face virtual classroom discussion.	2.9	A	9
Composite Mean	**3.07**	**A**	

Legend: 3.50 – 4.00 = Strongly Agree (SA); 2.50 – 3.49 = Agree (A); 1.50 – 2.49 = Disagree (D); 1.00 – 1.49 = Strongly Disagree (SD)

Table 8 presents the blended teaching and learning methodologies employed by accounting teachers in terms of assessment and feedback with a weighted mean of 3.07 and verbally interpreted as agree. This means that accounting professor provided appropriate assessment and feedback to the students to check the learning process. It also suggests that students desire to monitor their progress and hear feedback from the teachers. Student themselves monitor their progress not just from the results of their assessment activities but also on their knowledge development. Feedback for them is necessary so

they can adjust well to the needs of the process. Also, teachers monitoring the performance of their students tend to give more support, increase involvement, and provide adjustment quickly as well as to change strategies as it requires.

The indicator I would like to get prompt feedback online from the professor regarding my questions, etc. ranked first with a verbal interpretation of agree and weighted mean of 3.34. This means that students desire to have quick response from the teachers for their queries, clarifications and even monitoring of their progress.

One of the new realities in COVID-19 learning set up is the delayed in feedback to the students. Unlike during the old way, students can raise their concerns to the teachers regarding the lessons or discussion with just the raised of hands which in online set up tends to be delayed and often neglected. Brooks et al [36] agreed that feedback was a powerful tool to lessen the disparity between learner's and their progress. They found out the significant impact of feedback to the learners' accomplishments. Students were seeking response to their queries and clarifications primarily to monitor their learning progress as well as in developing their self-discipline. They suggested the need for sustainable feedback mechanism to help students to set their goals, progress monitoring, incorporation and developing their own tactics and reflective thinking that leads to self-efficacy. Karimova et al [37] agreed also that feedback bridges the prior knowledge of the lesson to the current discussions. Feedback was sought to comprehend the answers they were seeking, the adjustments they need to make, and the reaction to the lessons discussed. It promotes an ambiance of connection with the professor and students as they exchange ideas for adjustments and innovations.

On the other hand, the indicator I prefer asking questions I have about the material being taught in an online forum than in face-to-face virtual classroom discussion ranked nine with a weighted mean of 2.90 though still verbally interpreted as agree. This may mean that despite the available option for asking, students tend not to ask query for clarification in an online forum/discussion. This may indicate that students still wanted the face-to-face set up wherein they can raise their questions personally to the teacher which in return can answer the question quickly.

Although open forum discussion posted various benefits, still it is limited to the attitude of the students asking the questions. Their openness, initiative, and courage to seek clarification is their contribution to facilitate better learning. Cladera [38] agreed that learner's behavior to the course were significant factor in procuring skills and learning. Lack of interest and displeasure towards the subjects were cited as common concerns. Learner's attitude, initiative and courage are important in facilitating the learning. Alkhateeb et al [39] supported this as he stated that self-efficacy had an impact on learners' motivation. Open forum as a means of feedback is an innovative way to speak out students mind thru LMS.

Lastly, the item I can easily answer self-assessment questions (SAQs) after watching the pre-recorded video lecture ranked last with a weighted mean of 2.86 although still verbally interpreted as agree. This may indicate that the recorded videos are not sufficient to aid the students in answering the assessment. This suggests the balance of pre-recorded video as well and the synchronous session is needed to strengthen and enrich the knowledge of the students.

Lapitan et al. [4] agreed to the need of balance asynchronous and face-to-face session. They found out that asynchronous pre-recorded video enables the students to have a grasp of knowledge. Furthermore, they stated that synchronous session gives the feel of having the classroom set up despite virtual setting. According to them, face-to-face online class reinforce the lesson presented in the pre-recorded video and offers opportunity for the students to have clarification regarding the lessons discussed. They discovered as well that blended learning increases self-confidence of the students to undergo assessments. Lastly, Keskin et al [40] balanced the need for both asynchronous and synchronous mode of learning as the diversity of learners varies. He noted that self-regulated learner experiences a better outcome. Finally, learning environment differs from one another, the learning strategies varies as well and the capacity to assess their learnings.

Table 9
Proposed Plan of Action to Improve Accounting Teachers Competencies

Key Result Area	Strategies/Action Plan	Person Involved
• Utilization of teaching aids	• Prepare syllabus or course plan before the semester starts • Provide accounting manual/lecture to the students • Incorporate the use of whiteboard or presentation application in LMS • Suggest references or other learning resources to the students • Provide online platform for lesson delivery	• Accounting Teachers • Accounting Teachers • Accounting Teachers • Accounting Teachers • School Management
• LMS design using Instructional Plan	• Provide course plan to the students to monitor their progress • Discuss the flow of lessons including the academic calendar	• Accounting Teachers • Accounting Teachers
• Positive reinforcement thru reward system	• Give plus points for exceptional answers during recitations • Uplift the students by encouraging words	• Accounting Teachers
• Case study strategies using financial statements	1. Provide a real-life Financial Statement sample 2. Discuss the key points and considerations	• Accounting Teachers • Accounting Teachers
• Balance presentation of concepts and practical application	• Prepare visual aids that present the concepts and principles and proper scheduling of synchronous classes • Provide real-life examples related to the topics • Repeat and reinforce the conceptual discussions	• Accounting Teachers • Accounting Teachers • Accounting Teachers

CONCLUSION AND RECOMMENDATION

Based on the findings of the study, the following conclusions were drawn. Accounting teacher's competency were often practiced by the teachers as experienced by the respondents. Respondents generally agree on the blended teaching and learning methods employed by accounting teachers. Accounting teacher competencies has a great impact in online instruction and delivery of lessons, technical skills affect the course content, materials, and resources, while instructional skills, human skills and technical skills has an impact on assessment and feedback. A proposed plan of action was prepared to improve accounting teacher competencies.

In the light of the results and findings of this study, the following recommendations were suggested: Accounting teachers may improve their teaching competency by attending relevant symposia, enrolling in teaching education courses, and ensuring an up-to-date knowledge in accounting world. Faculties may collaborate through benchmarking best practices to those top performing teachers. The Human Resource of schools and universities may provide trainings not just for instruction delivery but also in other aspect of the faculties. National Association of Certified Public Accountants for Education may conduct reinforcement webinar on how to facilitate learning through new normal approach. The proposed plan of action may be tabled for discussion and implementation. For future researchers, they may use another statistical technique using additional variable. Also, check the predictive validation of items per variables.

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Challenges Encountered as Correlates of Distant Learning Preference of Accounting Students of State-Run College in an Island Province in the Philippines

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Abstract – Distance learning became more evident during the covid-19 pandemic. It became mandatory in different part of the world just to continue the educational system despite the insufficiency of resources. This paper aimed to determine the challenges encountered by accounting students in distance learning and their preferred learning interaction. The researchers used descriptive-correlational research. The data was gathered from one hundred (100) accounting students in a state-run college of an island province using structured survey questionnaire and simple random sampling technique. The study found out that infrastructural limitation and state of mind were the greatest challenges encountered by the accounting students while the preferred distant preference was learner to learner interaction. The study also found out that challenges encountered in terms of disturbance in execution, gap between people and technological inhibitions have a significant relationship with learner to content interaction learning preference of the students. Significant relationship between challenges encountered in terms of state of mind and learning to instructor interaction learning preference was also observed. The findings of the study can be used in enhancing the learning experience of the students and improvement of the learning management of the institution when implementing distant learning education system.

Keywords: *Flexible learning, accounting education, hiatus between people*

Introduction

Distance learning in the Philippines is not a new thing in colleges and universities (Publico, 2020). It is just that Covid-19 made it more evident. The same with other sectors, the education system is affected because of this pandemic worldwide which leads to near total closures of schools, universities, and colleges (Maslen, 2020). For the students to be able to attend classes even at home, the Commission of Higher Education and Department of Education promoted flexible and blended learning. However, it has been criticized because most students in the country do not have enough resources to support their studies (Magsambol, 2020).

According to Navarosa & Fernando (2020), distance learning today is the "new normal" in the education system not only for colleges and universities but also for elementary and high schools as well. This brought significant challenges for the students since they must now engage in online distance learning which is totally different from their daily routines. They now experience limited physical or in-person affiliation with peers although research suggests that students typically enjoy taking online courses (Seiver & Troja, 2014)

It must also be acknowledged that students differ in their ability to thrive and flourish rather than struggle as a result of online learning (Malik, Fatiman,Hussain, & Sarwar, 2017). Identifying and understanding their learning preferences can make a big difference in how open an individual is to learning about a new topic. People learn in diverse ways, and each has a learning style or preference that aids in the acquisition of new skills and knowledge, as well as the retention of information (Loveless, 2021). Every student has their learning style preference for them to understand lectures and answer activities and assessments. Some learn best through pictures and watching videos and not on reading text and instructions while some prefer to read and understand instructions rather than relying on visuals.

The researchers recognized the challenges brought by the wholesale shift to distant learning as some of these have been documented in other recent works (Besser, Lotem, & Zeigler-Hill, 2020). Given these situations and the many challenges that exist at present, this research had three primary goals. First, we sought to determine the extent of the challenges encountered by the accounting students in Occidental Mindoro, Philippines. The students were asked to rate their experience on the challenges of distant learning. Second, the students were also asked to rate questions which would determine their distant learning interaction preferences. Lastly, the researchers tried to determine if there a significant relationship between the challenges encountered and distant learning interaction.

Objectives of the Study

This study aimed to:

1. Determine the extent of challenges encountered by accounting students in distance learning in terms of disturbance in execution, gap between people, infrastructure limitations, technological inhibitions, and state of mind.
2. Determine the extent of preference of accounting students to distant learning interaction in terms of learner-learner, learner-content, and learner-instructor.
3. Determine the significant relationship between the challenges encountered and the learning preference of accounting students in distance learning.

Conceptual Framework

This study is guided by Moore's Model of Interaction. Moore (1989) came up with the model of interaction to explain how effective teaching and learning at a distance depends upon the nature of interaction and how interaction is facilitated through a technological medium. As indicated in Moore's model there are three types of interactions necessary for effective online education: learner-content, learner-learner, and learner-teacher. Interaction is a crucial element for effective online education that enhances the student learning experience and increases student satisfaction with the course. Also, there is a need to identify the specific challenges that students face while taking online classes, as well as the preferred learning interaction that can address those challenges and increase the likelihood of successful online teaching and learning.

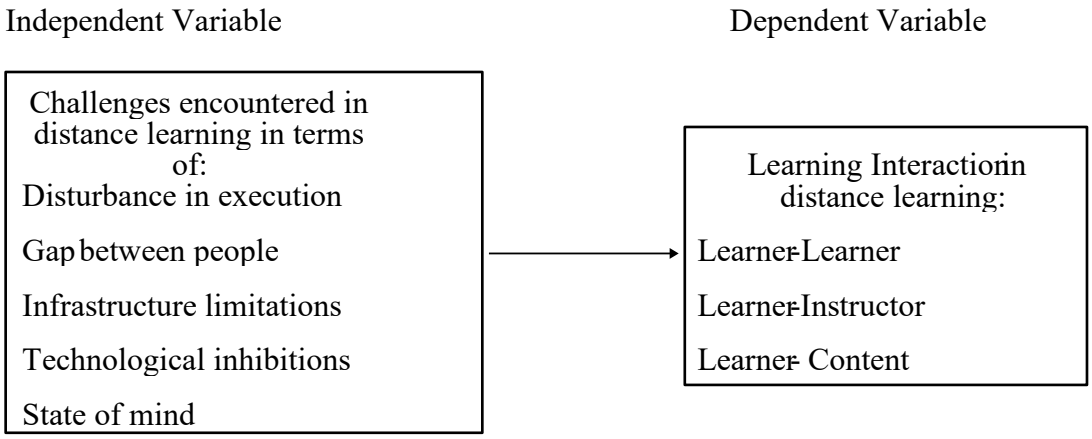

Fig. 1. Research paradigm

Review of Related Literature

According to the study of Duncan, Kenworthy and McNamara (2012), E-learning was introduced in 1995. It was referred to as Internet-based training, Web-based training, online learning, and finally e-learning. E-learning is the use of information and communication technology (ICT) to improve and promote learning as well as the creation of knowledge based on the learner's own experience, practice, and knowledge. Educational institutions have benefited greatly from developments in communication and computing technologies, and there is a constant demand in developing countries to enhance their teaching and learning processes by integrating growing levels of technology into the design and delivery of their curriculum. These new technologies allow for more flexibility in learning and a wider reach for education in many countries worldwide (Salawudeen, 2010).

According to Sinclair College (2020), a course delivered via synchronous means at scheduled times on specific days was described as remote learning at the research site. Using the institution's learning management system to promote tasks, quizzes/exams, and other course materials, an instructor can effectively offer their program on the same schedule as if it were conducted in a traditional face-to-face or blended format. As stated by White (2010) the delivery of synchronous real-time interaction to a large number of students through remote instruction is not new while in the literature, there are few studies on the effects of a rapid transition to remote learning. Nonetheless, education as a structure is not limited to the physical contexts of a typical college campus (Frick,2020).

Learner-Learner Interaction

According to Luciano Beltramo & Beltramo (2017), Learner–learner interaction is communication between students, in pairs or groups, with or without an instructor present. Shackelford et. al (2012) attributed learner-learner interaction to sense of community (SoC). SoC is defined in the literature as "a feeling of belongingness that members have, a feeling that members matter to one another and to the group, and a shared faith that members' needs will be met through their commitment to being together". Via a conversation with other students, online students build community, create understanding, and query and explain content. In a constructivist approach, the instructor participates in these conversations but serves as a facilitator, rather than an authoritarian, who directs the conversation (Wu , Hsieh, & Yang, 2017).They found out that reducing student

isolation and improving collaboration, advocates for learner-centered practices in online learning, such as small group interactions such as discussions, study groups, and cross-group communication. Chen, Li and Huang (2020) added that students who participate in group discussions are able to work together to achieve learning goals and to assist and encourage one another as they progress from passive to active learners.

Moreover, Koehler et. al. (2020) suggests that when students share resources with one another, they become more responsible and accountable for their own learning, their engagement improves, and relationships among members of the learning community are improved. He concluded that enhancing learner-learner interaction helps to focus the student in an active and cognitively complex learning process. Enhancing learner-learner interaction appears to have the greatest impact in terms of improving the overall learning experience in the distance education environment among the forms of interaction.

Learner-Instructor Interaction

According to Chen, et al. (2020) differences in styles of learning have become important considerations at all levels of education over the last several years. Examining accounting students' preferred styles of learning is useful for course design and effective instructional methods. Online class as a learning method in accounting courses faces many challenges. The existence of these barriers, however, does not alter the accounting profession's collective conclusion that perseverance and dedication to learn are a prerequisite for a good accounting career and that accounting educators should assist students in developing these learning objectives. According to Narh (2017), under the learner to instructor, this interaction has been regarded as an important learning factor. Simmons (2020) described the internet as portrayed as an education delivery platform enabling students to engage with teachers and peers in ways that previously may have been impossible. Rutherford (2019) elaborates that learning online is simple to do if you have the appropriate device and are connected to the internet or a network provider. The emphasis is on Internet education and distributed learning; it shifts from a teaching centered to a learning-centered environment; it shifts from students in a classroom to learners; and it shifts from teachers to learning facilitators. E-learning can be self-paced or instructor-led, and it can include text, pictures, animation, and streaming video and audio as well as other media.

According to the study of Tami and Kang (2013) interaction in the online learning environment has been regarded as one of the most critical elements that affect learning outcomes. Since everything would be shown virtually there is no direct interaction between the two parties in the study they examined what factors in learner–instructor interaction can predict the learner's outcomes in the online learning environment. Study has been done under an online learning University participated by its randomly selected students. Tami and Kang (2013) study showed results that factors related to instructional interaction predicted perceived learning achievement and satisfaction better than factors related to social interaction. However, it was revealed that social interaction such as social intimacy could negatively affect perceived learning achievement and satisfaction. It reflects that instruction-based tasks and activities tend to provide more predictability of achieving positive results and that how the factors highly affect every activity of the students. The study has found factors under learner–instructor interaction which predict perceived learning achievement and satisfaction with empirical evidence.

Learner-Content Interaction

For distant learners, interaction with the course content (learner-content interaction) is especially important because it can contribute to successful learning outcomes and course completion. Learner-content interactivity in distant learning is essentially a two-way communication process between a learner and learning materials in various formats through multimedia technology. As claimed by Racheva (2018) E-learning can have a high degree of learner-content interactivity that can inspire learners to participate in their learning with good instructional design strategies and sufficient technical tools. Hasan and Bao (2020) stated that learners who participate in e-learning are actively involved in the development, problem solving, reasoning, and assessment processes. Indeed, the method of learning chosen by students has a significant effect on the progress of information acquisition.

As mentioned by Chew, Jones, & Turner (2008, blended learning which became popular and has been widely accepted in many universities because it enhanced the teaching delivery that requires both face-to-face learning and online learning during the pandemic. With the use of technology, face-to-face learning and online learning were supported by the blended learning tools such as Web 2.0 applications like YouTube, Facebook, Google Meet and Google Classroom (Palacios-Marqués (2013). Holtzblatt & Tschakert (2011) stated that blended learning web tools enabled the educators to upload the videos and other learning materials that were not available or deliberated in the textbooks. It benefits both educators and students because online learning materials can be accessed at any time and from any place. As a consequence, learning will take place outside of the classroom as well. As believed by Turner (2015) the use of blended learning web resources has benefited educators and students, previous research has shown that students would only use it if they believe it is simple to use and useful. Although blended learning web tools are beneficial, it has been discovered that students will only use them if access is simple and the online learning materials are thought to be useful. Researchers tried to find more ways for all to adapt and become the new normal over time. Since some students do not always have access to the internet, some school systems advocate for blended learning.

RESEARCH METHODOLOGY

Research Design

The study is descriptive-correlational. Descriptive method was used to describe the extent of the challenges encountered by accounting students in distant learning and their learning interaction preference. Correlational design was used to describe the relationship between the challenges encountered and the learning preference of accounting students in distance learning.

Respondents of the Study

In this study, simple random sampling technique was used. In 2021, there were 541 students enrolled in three (3) accounting education programs in Occidental Mindoro State College in two (2) campuses- Main and Sablayan. The state-run college offers Bachelor of Science in Accountancy, Bachelor of Science in Management Accounting and Bachelor of Science in Accounting Information Technology. Out of five hundred forty-one (541) students, the researchers randomly selected one hundred (100) students as the respondents of the study.

Research Instrument

The instrument used in the study is a research-made questionnaire which was validated by experts. The questionnaire contains the five (5) parameters of the challenges of distant learning and three (3) parameters of learning interaction which have five indicators per parameter. The students' responses were measured by 5-point Likert Scale

Data Gathering Procedure

The researchers constructed a set of questionnaires to be approved by the Research Adviser. Once the questionnaire has been approved, the researchers conducted the survey. In gathering the needed data, researchers asked permission, explain and inform the randomly selected respondents about the purpose of the study. The questionnaire was distributed online using Google forms after securing the permit. The data gathered was categorized, analyzed, and interpreted by the researchers to know challenges encountered that correlate with distant learning preferences of accounting students in Occidental Mindoro State College.

Data Analysis

The researchers used a descriptive-correlational method to compare and interpret the data collected from one hundred (100) respondents. This study was compiled, classified and tabulated, using the Statistical Package for the Social Science (SPSS) Software. Weighted mean and standard deviation were used to describe the extent of challenges encountered and distant learning preference while Pearson Product-Moment Correlation Analysis was used in measuring the relationship between the challenges encountered and the distant learning preferences of accounting students.

Results And Discussions

The researchers asked the students to rate the challenges they encountered in distant learning in terms of disturbance in execution, hiatus between people, infrastructure limitations, technological inhibitions, and state of mind.

Results indicate that 45 out of 100 students (45%) had a high level of challenges encountered in terms of disturbance in execution which also recorded a weighted mean of 3.49 and standard deviation of 0.67. This result indicates that most students during distance learning are experiencing delays in lecture and disturbance in voice or presentation due to poor internet connectivity and lack of access to resources (e.g., books, PDF or PPT files, video presentation) on moderate extent. Most of the students used for online classes.

The students also moderately experienced problem concerning gap between people as reflected by 3.16 mean score and standard deviation of 0.72. This indicates that majority of respondents somewhat encountered insufficient feedback from instructors and classmates during their distance learning. Mullikin (2020) suggests that when feedback is used as a motivator to encourage students ahead in their learning, the interactions with them shift from retrospective assessments to proactive preparations for future steps. A systematic method should result in immediate, authentic, and consistent feedback during the learning process.

Furthermore, the results obtained shows that 48% (48) of all respondents highly experience challenges in infrastructure limitation, while 28% (28) are extremely affected. This finding implies that the issues in internet access or connectivity, power failures, and inability to engage in an online class due to a lack of infrastructure and increase in workload due to school activities while facing house chores are mostly experienced by the majority of respondents. According to Souter (2017) the ability to connect to the internet is critical to realizing this vision for the future. It has the

potential to increase educational quality in a variety of ways. It provides access to a multitude of information, knowledge, and educational resources, expanding learning opportunities both in and outside of the curriculum.

Moreover, the extent of challenges encountered by the respondents in distance learning in terms of technological inhibitions was 3.07 (SD=0.9.), indicating a moderate level of difficulty. This could mean that most of the respondents have a proper understanding in using and operating different platforms through the use of their mobile phones and laptops during the implementation of online classes. Since technological advancements and infrastructure are improving and supporting distance learning, most of the students are now skilled and experienced in using different platforms for distance learning.

Lastly, forty-two percent of the respondents are highly affected and experiencing challenges in terms of the state of mind in distance learning (mean=3.61). It only shows that most of the respondents are having a high level of difficulty in engaging in distance learning because of procrastination, mental stress due to pandemic, lack of motivation, and being interrupted in online classes (by family, noise, etc.) which brings less confidence to the student. The state of mind of every student has a great impact on their understanding and learning process. The more the student is not mentally fit, the more it is difficult for a student to concentrate on the class and adjust to distance learning.

Table 1. Extent of challenges encountered by the respondents in distance learning

Challenges	**Mean**	**Standard Deviation**	**Qualitative Description**
Disturbance in Execution	3.49	0.67	Moderate
Gap Between People	3.16	0.72	Moderate
Infrastructure Limitations	3.82	.078	High
Technological Inhibitions	3.07	0.90	Moderate
State of Mind	3.61	0.84	High

Legend: VL=1.00-1.50; L=1.51-2.50; M=2.51-3.50; H=3.51-4.50; VH=4.51-5.00

Distant Learning Interaction Preference of the Respondents

This section discusses the extent of distance learning preference of the respondents in terms of learner-learner interaction, learner-content interaction, and learner-instructor interaction.

Table 2 illustrates the extent of preference of the respondents to learner-learner interaction. Among 100 respondents, 73% (73) highly prefer to have a learner-to-learner interaction in distance learning. In this kind of interaction, the person/student involved prefers to have to exchange ideas with one another or in a group. They also choose to facilitate, discuss, and help other learners regarding the lesson.

Furthermore, the overall mean extent of the preference of the respondents to learner-to-learner interaction 4.19 (SD=0.41) represents a high level of extent. This preference of the respondents implies that learner-learner interaction helps them to overcome difficulties and enhance their understanding through their peers in distance learning process.

Table 2 also reveals that the respondents highly prefer to have a learner-to content interaction (mean = 3.56). In this kind of interaction in distance learning, people/ students prefer to learn through learning materials such as PDF and video presentations rather than through Google meet. Most students who prefer this kind of interaction are likely relying on Google search,

downloaded documents, and different learning applications that are relevant to the course. Here, students are more likely to choose a modular method of learning rather than online classes. Relying on content is easier for those who have difficulty in social interaction and lose confidence to interact with others and even with the instructor.

On the other hand, the respondents preference to have a learner to-instructor interaction in distance learning scored a mean value 3.92 (SD=0.51) represents a high extent of preference of the respondents to the learner to instructor interaction. In this kind of interaction, the person/ student prefers to ask the instructors regarding their concerns. Students who choose to have a learner-to-instructor interaction received considerations from the instructor, detailed lessons as well as constructive and timely feedback about his works. In a distance learning context, learner to instructor interaction provides a direct relationship between student and teacher that solves the conflict in understanding person, process, and other matters regarding distance learning (Terzi & Çelic, 2005). For the students, it increases their eagerness to learn because of the guidance they received from the instructor for them to fully understand the lessons.

Table 2. Extent of preference of the respondents.

Learning Interaction	Mean	Standard Deviation	Qualitative Description
Learner-Learner Interaction	4.19	0.41	High
Learner-Content Interaction	3.56	0.59	High
Learner-Instructor	3.92	.051	High

Legend: VL=1.00-1.50; L=1.51-2.50; M=2.51-3.50; H=3.51-4.50; VH=4.51-5.00

Correlation between the Extent Challenges Encountered in Distance Learning and the Extent of Preference of the Respondents to Learner-learner Interaction

As shown in Table 3, results of correlation analysis revealed that all of the indicators of challenges encountered in distance learning which are disturbance in execution (r= -0.082, p=0.415), gap between people (r= -0.031, p=0.760), infrastructure limitations (r= -0.086, p= 0.392), technological inhibitions (r= -0.064, p= 0.525), and state of mind (r= -0.026, p= 0.796) are all not significantly correlated to the learner-learner interaction preference.

This result reflects that challenges encountered by respondents in all parameters did not affect the learner-learner interaction preference by the respondents in distance learning. Kalloff (2001) defined learner-to-learner interaction as the communication, exchange, and support among students about the course content, information, documents, and assignments. Learner-to learner interaction can be done through social media (personal message, group chats, and video calls) and face-to-face settings. This type of interaction proves more effective in terms of organizing their thoughts and ideas. It also reflects on how they understand and share their learnings to their peers. Sharp and Huett (2006) mentioned that enhancing learner-learner contact should have the most significant impact on the overall learning experience in a distance education setting.

In this type of interaction, the indicators of challenges do not affect anymore because students have their direct interaction with one another. Problems like lack of access to resources (books, pdf, ppt files, etc.) and lack of instructions and information may be solved because their chosen peer might have the resources that the one is lacking. Another factor, the level of confidence varies

in terms of the level of interaction a student might have. In learner-to-learner interaction, it is easy for the students to have better and convenient communication with their peers.

According to Merritt (2020), social interactions and opportunities to collaborate with peers impact students' social and emotional well-being as well as their learning. In this time of the pandemic, many students are having difficulty dealing with their studies in a distance learning setting. For students who are prone to procrastination, online learning can be difficult to coordinate and motivation can prove to be hard to find (Eye, 2021). Some students are losing confidence to interact with their instructor online (via Zoom, Google Meet, etc.) so they tend to rely on their co-learner more often. On the other hand, the results in Table 3 can be evidenced that students prefer to have a traditional learning set-up rather than distance learning.

Table 3. Correlation between the extent challenges encountered in distance learning and the extent of preference of the respondents to learner-learner interaction.

Challenges in Distance Learning	**Learner-Learner Interaction**			
	N	**R**	**p-value**	**Interpretation**
Disturbance in Execution	100	-0.082	0.415	Not Significant
Gap between People	100	-0.031	0.760	Not Significant
Infrastructure Limitations	100	-0.086	0.392	Not Significant
Technological Inhibitions	100	-0.064	0.525	Not Significant
State of Mind	100	-0.026	0.796	Not Significant

Correlation between the Extent Challenges Encountered in Distance Learning and the Extent of Preference of the Respondents to Learner-Content Interaction

The results of the correlational analysis conducted are shown in table 4. It shows that all of the indicators of challenges encountered in distance learning which are a disturbance in execution, gap between people, and technological inhibition has a significant effect in learner to content interaction. Learner to content interaction indicates self-study that the respondents experienced a lack of direct connection with the teacher, lack of interaction with peers, lack of interactive group activities, and most especially, lack of quality materials to be used. Learner to content is about learner's engagement and interaction with the subject matter in ways that suit individuals, their styles and approaches to studying, and its time, place, and pace (Naidu, 2017).

The respondents experience more challenges in learning content interaction than to other interactions given. According to Zimmerman (2012), to date, very few empirical studies have attempted to examine the role that learner-content interaction plays in course success outcomes. The result could add to the existing literature on what may affect learner-content interaction.

Table 4. Correlation between the extent challenges encountered in distance learning and the extent of preference of the respondents to learner-content interaction.

Challenges in Distance Learning	Learner-Content Interaction			
	N	r	p-value	Interpretation
Disturbance in Execution	100	0.344	0.001	Significant
Gap between People	100	0.214	0.032	Significant
Infrastructure Limitations	100	0.121	0.231	Not Significant
Technological Inhibitions	100	0.212	0.034	Significant
State of Mind	100	-0.005	0.962	Not Significant

Correlation between the Extent Challenges Encountered in Distance Learning and the Extent of Preference of the Respondents to Learner-Instructor Interaction

The correlation analysis shows that only the correlation between the challenges encountered by the respondents regarding the extent of state of mind to the learner-instructor interaction was statistically significant (<0.05). This implies that among the five challenges mentioned above only the state of mind affects the respondents who preferred to have a learner-instructor interaction throughout distance learning. One study by Jurik, Groschener, and Seidel (2014) emphasizes the importance of teacher-student communication, "Verbal teacher-student interactions and student characteristics are meaningful for student learning and motivation."

In some instances, some students may not anticipate the need to respond to a teacher's communication, and the teacher may not anticipate a response. (Turley & Graham 2019). Another study by Boling et al. (2012) found that the majority of their study participants thought online courses individualized learning and limited interaction with others. Students said they felt isolated from their teachers, the course content, and their classmates. Participants in these classes described their online interactions as consisting of text-based lectures and several reading and writing assignments. This shows that, despite teachers' best efforts to interact with students, there may be times when pupils appear unmotivated or uninterested in the topic or teacher feedback (Turley & Graham .2019). The teaching part is heavily influenced by communication skills and job motivation. In order to create an engaging and educational atmosphere, the teacher's communication style might impact the students' motivation and attitude (Duta, Panisoara & Panisoara, 2015). In addition, providing personalized feedback to accessibility and flexibility, appeared to be a key component in developing a positive student–instructor relationship (Boling et al. 2012).

Table 5. Correlation between the extent challenges encountered in distance learning and the extent of preference of the respondents to learner-instructor interaction.

Challenges in Distance Learning	Learner-Instructor Interaction			
	N	**r**	**p-value**	**Interpretation**
Disturbance in Execution	100	0.009	0.925	Not Significant
Gap between People	100	0.032	0.749	Not Significant
Infrastructure Limitations	100	-0.131	0.194	Not Significant
Technological Inhibitions	100	0.097	0.339	Not Significant
State of Mind	100	-0.279	0.005	Significant

Conclusions

The study found out that most of the students experienced issues in internet access or connectivity, power failures, and inability to engage in an online class due to a lack of infrastructure and increase in workload due to school activities while facing house chores and insufficient feedback from instructors and classmates during their distance learning. Learner-learner interaction scored the highest mean among the preferred distant learning interaction of the students which could mean that the students prefer to have to exchange ideas with one another or in a group, as well as choose to facilitate, discuss, and help other learners regarding the lesson.

The study also found out that learner-content interaction was affected by the extent of the challenges encountered by the students in terms of disturbance of execution, gap between people and technological inhibition.

Recommendations

Based on the results presented and conclusions, the following are recommended:

1. The school administration may consider mental health break for both faculty and students to promote their well-being.
2. Future research may be conducted to cover greater number of respondents.
3. The school administration and faculty may explore on how to improve the learner-learner interaction between the students. Investing to appropriate technologies and understanding the predicaments of students like they preferred learner-learner interaction because they are using the same languages and are open to each other.

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Tracer Study for BS in Management Accounting: The Perspective of UST - AMV Management Accounting Graduates on Skills and Competencies Needed for Career Success

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Abstract – The continuous changes in the market and business environment have forced accounting professionals to adapt and develop the required skills. Education plays a vital role in meeting the expectations and demands of employers in the industry. This study sought to identify the perceived necessary skills and competencies of UST-AMV College of Accountancy Management Accounting graduates that they have developed in their career life. The study used Human Capital Theory to identify the necessary skills and competencies. The survey instrument was based on a previous study and the competency framework of the Institute of Managerial Accountants. Results showed that the perceived skills and competencies of the graduates do not affect their success in their careers. In addition, skills and competencies such as Professional Attitude and Work Ethics, Oral Communication and Interpersonal Skills, Project Management, Ethical Awareness and Values, Reading and Writing Comprehension, and Listening are essential to the BSMA graduates. The study recommends re-evaluating the curriculum to enhance further the courses that aim to develop soft skills and create balance with the technical skills learned by the students.

Keywords: *Competencies, education, Management Accounting, skills, tracer study*

1.0 Introduction

Recognizing the realities of today's academic world, Higher Education Institutions (HEIs) play a role in imparting knowledge and contributing to the maintenance of a competitive economy. Aside from that, HEIs ensure the graduates' dreams of getting jobs and becoming socially recognized and successful in their fields of endeavor (Menez, 2014). Moreover, technology has simplified the process of generating automated financial statements and other tasks. However, it does not eliminate the role of accountants and creates new skills that accountants should possess. Accountants are still responsible for analyzing information and applying data to maintain and grow their customer business (Akhter & Sultana, 2018).

Birrell (2016) suggests that new graduates should maintain a competitive advantage even though many countries face a skills shortage because employers seek a diverse range of skills and attributes. The failure of graduates to fulfill the requisite skills and competencies required by the industry is one of the key causes of underemployment and work difficulty (Menez, 2014). Accounting education has long been criticized because of its inability to develop and improve students' skills, which are essential in their accounting career. The demonstration of their skills,

attributes, and behaviors enables the graduates to establish their professional credibility. It was suggested in the research of Atanasovski & Trpeska (2017) that students should be aware of what is required of them to establish professional credibility. They should also be allowed to develop these abilities during their studies. Furthermore, through being aware of the required skills and competencies, the perennial problem of the skills gap that is often blamed on the education system can be addressed (Cappelli, 2015).

Change is constant, and there is no way to escape it, so adapting to the change is the best way. To prove this, the researchers will conduct surveys to BSMA graduates of UST-AMV College of Accountancy for the past five (5) years. The study aims to identify the perceived skills and competencies needed for the career success of the BSMA graduates of the UST-Alfredo M. Velayo College of Accountancy. Specifically, the study will first describe the BSMA graduates based on the subjective components of career success (number of job promotions, job changes, and salary level). Next is to determine the skills and competencies that the BSMA graduates perceive as needed for career success. Third, find out the extent to which BSMA graduates perceive these skills and competencies developed after graduation and work experience. The fourth is to examine if there is a significant relationship between the perceived skills and competencies to career success. Lastly, to also examine if there is a significant relationship between the developed skills and competencies to career success.

The findings revealed in this study will immensely help graduates of the BSMA program to have an idea about the skills and competencies that can help them achieve a successful career. The universities or colleges that offer BSMA programs can also gain insights on how to improve their curriculum and extracurricular programs. Future researchers will also benefit from this study as they may come up with a more in-depth and updated tracer study of BSMA graduates. It can also serve as a reference to give them a background related to the topic mentioned above. Lastly, the researchers can enhance their communication and socialization skills by building rapport with the respondents. New knowledge and skills can also be developed along the way.

2.0 Theoretical Background

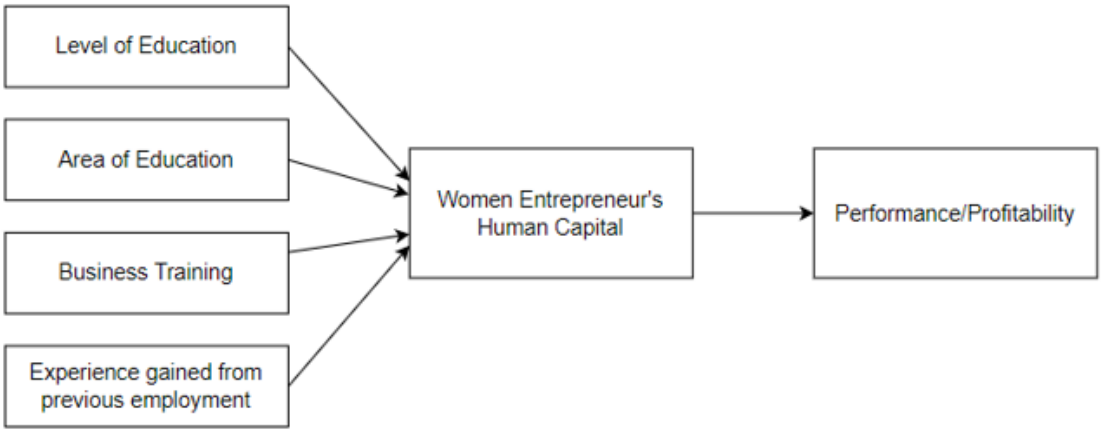
2.1 Theoretical Framework

The study is anchored on the Human Capital Theory. This theory was developed by Gary Becker in 1994 and was modified by Kwame Adom & Irene Tiwaa Asare-Yeboa in 2016 to fit their study. According to this theory, some investments would increase human capital productivity. As Becker (1994) defined, the Human Capital referred here, "are activities that influence future monetary and psychic income by increasing resources in people." The human capital mentioned earlier may include investments such as education and training. An individual's career success is dependent on the human capital they bring to the labor market (Becker, 1964). In other words, the theory states that through investments (education and training), one can develop skills and competencies to be productive in the work field and attain career success.

The competencies used in the study are based on the latest Competency Framework by the Institute of Management Accountants. These competencies are divided into different domains that show the needed core knowledge, skills, and abilities that professionals in the finance and accounting fields should possess. Using the Competency Framework for Management Accounting by the Institute of Management Accountants, perceptions of graduates will be known on what competencies they deem are essential for career success.

Figure 1

Human Capital Framework



Note. From "An evaluation of human capital theory and female entrepreneurship in sub-Sahara Africa: Some evidence from Ghana." by Adom, K., & Asare-Yeboa, I. T. (2016). *International Journal of Gender and Entrepreneurship.*

2.2 Literature Review

Concepts, findings, theories, and conclusions from scholarly research and articles are presented to provide an extensive background of the study and to justify the researchers' objective in undertaking it.

Tracer Study

After finishing their degree program, most graduates' goal is to be hired by a company and apply what they have learned from their degree program in their respective workplaces. However, in the Philippines, it was stated in the Department of Labor and Employment's (DOLE) JobsFit 2022 Labor Market Information (LMI) Report that there is a large number of "educated unemployed" people. In the survey of the said report, in 2007, the unemployment rate for college graduates and higher is at 19.6%. Moreover, it was stated in the report that the completed program or course, as well as higher reservation wages of the college graduates, may have influenced why this happened. Aside from this, we are currently living in the Industry 4.0 era wherein many things are being automated and digitized. Everything is evolving and adapting to the fast-moving technology since these technologies help get things done more efficiently, which is an advantage to every industry (Cotteleer & Sniderman, 2017). Among the evolving things are the skills needed in the job industry (Dadios et al., 2018). To address these problems regarding education unemployment and the changes brought by Industry 4.0, conducting a tracer study will be of big help.

Tracer study, also known as tracker studies or graduate surveys, is used to track what happened to those who graduated from educational institutions (Renny et al., 2013), especially about their employability status or career. Additionally, tracer studies can also be used to evaluate the quality of education that educational institutions offer. It was stated by Ramaditya & Effendi

(2020) that the results of the said evaluation could help these educational institutions know what they can improve in their program or curriculum.

In the Philippines, as stated in the research of Gines (2014), HEIs are required to conduct tracer studies by the Commission on Higher Education (CHEd) and Accrediting Agency of Chartered Colleges and Universities in the Philippines (AACCUP), Inc. This is done so that HEIs can prove themselves as a center of excellence and development (Cuadra et al., 2019).

Skills and Competencies of Graduates

Many studies investigated the role of skills in accounting education and the expected skills in the accounting profession. The continuous changes in the business environment have forced the accounting profession to need continuous professional development to improve their skills in order to advance their careers. In the Philippines, the Core Competency framework for the entry for the Philippine Accountancy Profession was made by the Professional Regulatory Board of Accountancy (PRBoA). Professional accountants are expected to practice their accountancy profession with professional competencies – knowledge, skills, and values. A survey by Rufino (2016) states that most professional accountants consistently applied these competencies, which means that the competency framework in the Philippines is still relevant.

Based on surveys conducted, both accounting graduates and employers believe that communication and problem-solving skills are important in accounting education and profession (Atanasovski & Trpeska 2017). Moreover, several studies have shown that companies have increased their reliance on IT technology and could replace many works and tasks performed by traditionally trained accountants and auditors (Crawford et al., 2011). These advancements in IT technology have made the accounting industry evolve rapidly, inherently requiring accountants to develop broader skills and knowledge of accounting information systems in addition to their knowledge about the role of accounting function within a modern organization.

A study by Uyar and Gungormus (2011) shows that the most important skills that graduates are expected to have are ethics and teamwork. Educational institutions prepare their students for real-world work by providing them with up-to-date information and necessary skills. Traditional accounting is no longer efficient in the modern global models because the accounting industry is rapidly evolving with advancements in technology. This forces the educators to study and learn the business world demands from graduates for the successful performance of future accountants. Moreover, the corporate accounting scandals that happened in the past few years prove that skills and attributes such as ethics, honesty, and awareness of responsibilities are also important in the accounting industry. It has shown that changing conditions such as technological developments affect both the personal and knowledge levels required of accounting graduates. Jones (2014) argues that defining generic skills is important for undergraduate accounting programs, but it does not provide the complete picture of accounting graduates' expectations and requirements.

Based on the study of Klibi & Oussi (2013), employers chose generic skills over technical skills. Generic skills are interpersonal skills, appreciative or intellectual skills, analytic skills, and information technology skills. These skills could be further developed during the internship and operating in the industry (Fouche, 2016). In addition, Parvaiz, Mufti & Wahab (2017) states that generic and professional skills such as appreciative skills, interpersonal skills, functional and technical skills, and personal skills should be possessed by accounting graduates because these skills are more valuable to the company. In line with this, International Education Standards 3, "professional skills," states that technical and functional skills consist of general skills (also skills specific to accountancy) include: (a) numeracy (mathematical and statistical applications) and IT

proficiency; (b) decision modeling and risk analysis; (c) measurement; (d) reporting; and (e) compliance with legislative and regulatory requirements. These are only some of the supporting studies that show the importance of generic skills.

On the other hand, in the study of Ada et al. (2021), it was determined that technical skills is what most employers look for in today's era, and under that technical skills cluster, Project Management skill is the most important criterion. It was also stated by Hefley & Bottion (2021) and Sharma (2021) that Project Management skill is in demand both locally and globally.

Career Success of Graduates

According to the University of Cambridge (2016), a promotion at work is a significant indicator of success for many people despite the fact that it manifests as a theme between academics and non-academics. Workers can acquire these abilities and values in various ways, but college is where many naïve teenagers change into highly desirable college graduates and future employees (Cuadra et al., 2019). Moreover, career success (subjective) is identified through employability, salary, and promotion history (Spurk et al., 2018).

In a study from Visayas State University, more than 75% of the graduates from different academic programs were employed. Some had never been employed, and the rest of the study respondents were not employed. Also, according to the study of Tun (2020), 107 out of 132 respondents from LPU-Laguna BSBA majoring in Management Accounting, Marketing Management, and Operation Management were employed. Seventeen of them managed their own business, six respondents were unemployed, and two pursued further studies. Due to their school's good training ground, they gained enough knowledge and skills to prepare for their jobs in the business world. The majority of the respondents got hired within three months of job hunting after graduation, while two respondents got hired after two years.

Human Capital Theory

The Human Capital Theory is one of the many theories used to measure an individual's competencies and career success. The human capital defined in this theory is the investments made by an individual to develop their skills and competencies (Becker, 1994). Such investments include attaining higher levels of education and completing different kinds of training. Universities aim to deliver knowledge and contribute to society's cultural, social, and economic well-being through education (Stephenson & Yorke, 1998; West, 2000). One of the factors that affect the economic well-being of society is its workforce. Therefore, it is important to encourage the increase in human capital (Becker, 1964). Different HEIs aim to provide education and training to develop the knowledge, skills, and abilities demanded by employers. To continuously adapt to the demands of the competitive corporate world, different standards and frameworks are made and are used by many HEIs to create the ideal employees. One of which is the Competency Framework of the Institute of Managerial Accountants (IMA) that is made for professional accountants worldwide.

The enhanced competency framework of the Institute of Managerial Accountants (IMA) shows the core knowledge, skills, and abilities required to become an effective and competent professional accountant. These competencies are divided into six domains, namely: (1) Strategy, Planning and Performance, (2) Reporting and Control, (3) Technology and Analytics, (4) Business Acumen and Operations, (5) Leadership, and lastly (6) Professional Ethics and Values. Each domain comprises different competencies, which can also be seen in the Certified Management Accountant Exam. Since the framework is accepted internationally, many HEIs use it as a basis to improve their curriculum.

The University of Santo Tomas Alfredo M. Velayo College of Accountancy curriculum has been continuously improving to prepare graduates to enter the demanding corporate world. Having the competency to become a professional is what makes an individual more productive. By comparing the competency framework of IMA and the sets of knowledge, skills, and attitudes that the college deemed important to be developed by students, certain gaps between the academe and the corporate world would be identified.

Academe and Practice gap

The difference between theoretical and practice has been apparent in many fields of education. It is perceived to be present in Management Accounting education which affects the graduates of the degree in terms of transitioning from study into the workforce. In a study by Botes & Sharma (2017), they identified and further investigated the gap between Management Accounting Education (MAE) and practice using the balanced scorecard (BSC) approach developed by Chang & Chow (1999). It identifies how education performs using perspectives regarding customers, internal business processes which focus on quality assurance and a unique curriculum, learning and growth that focuses on curriculum and teaching innovation, and finance that focuses on contributions to universities in terms of finance. Their findings using descriptive statistics revealed that information technology and communication skills had not been effectively incorporated into MAE, which supports the perception of a gap existing between theory and practice. Using the BSC, it is further found out that there is a significant gap in the customer perspective portion of BSC, with the other factors regarding internal business, learning and growth perspective, and financial perspectives having no significance. It is revealed that practitioners considered performance in terms of quality instruction and effective student placement to be inadequate in MAE. This consideration is due to the practitioners' observation that graduate employees are not immediately suited to the business world, and further work is needed for a smoother transition.

According to the Bachelor of Science in Management Accounting program offered by the UST-AMV College of Accountancy, career opportunities for graduates include entry-level positions such as analyst work in terms of budget, cost, investment, and even the role of a junior analyst. Other positions include cost and staff accountant, consulting staff, bookkeeper, and junior instructor. Middle-level positions include managerial positions in terms of consulting, financial advisory, and financial services, as well as jobs such as a controller, a state accounting examiner, a senior loan officer, a senior budget officer, a department chair, a project manager, and a financial analyst.

2.3 Conceptual Framework

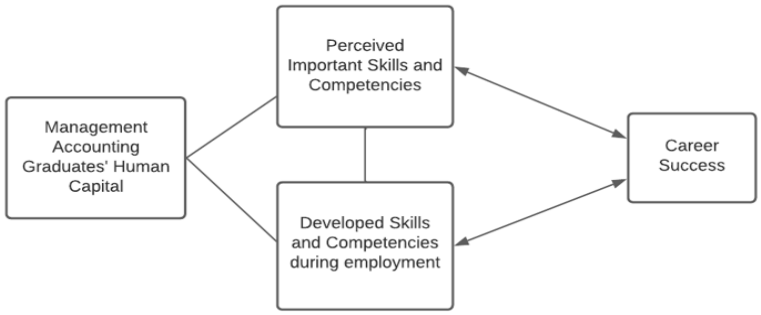
The study is anchored on the Human Capital Theory's concept of usefulness based on attributes of the BSMA graduates. The data is focused on gathering skills and competencies that are important in the perspective of the UST-AMV BSMA graduates and to what extent they can develop these skills during their employment. The graduates' Human Capital, such as employee knowledge, skills, know-how, education, and communication serve as the basis of the skills and competencies that are deemed important.

In figure 2, the perceived important skills and competencies would relate to what the graduates learned during their stay in educational institutions and how these skills and competencies helped them in working toward their career success. As the graduates enter the workforce, these perceived skills and competencies would then be measured on how they

developed them. The conceptual framework also explains the relationship between the developed skills and competencies and the graduates' career success. Career success, in this study, was measured through data gathered from the respondents, which are: (1) status of promotion, (2) job switches, (3) job position, (4) current job level, and (5) job level.

Figure 2

The Conceptual Framework of the Study



2.4 Hypothesis

H1: There is a significant difference between the perceived and developed skill and competencies after graduation and work experience

H2: There is a significant relationship between the perceived skills and competencies to career success

H3: There is a significant relationship between the developed skills and competencies to career success

3.0 Method

The specific methodologies that were chosen and employed in this study is discussed.

3.1 Research Design

The researchers utilized a quantitative descriptive research design wherein data was gathered through constructed survey questionnaires. The study identified the perceived skills and competencies of BSMA graduates needed for their career success. The skills and competencies included in the survey questionnaires were based on a previous study and the competency framework of the Institute of Managerial Accountants.

3.2 Subjects and Study Site

The target respondents for this study are the graduates for the past five years of the program, Bachelor of Science in Management Accounting from the University of Santo Tomas Alfredo M. Velayo College of Accountancy. Stratified sampling is used to determine the sample who will answer the survey questionnaires. The population is divided into different stratum, which is the different batches, then the sample is randomly selected, proportioned to the population of each stratum.

Table 1
Number of Target and Actual Respondents per Batch

Batch Year	Target Respondents	Actual Respondents
2015-2016	55	20
2016-2017	52	28
2017-2018	53	37
2018-2019	51	31
2019-2020	13	13
Total	224	129

Based on the Table 1 above, researchers have concluded a number of target respondents, but due to some factors, the target sample size was not reached. Only 129 respondents were able to answer the questionnaire, 20 respondents from batch 2016, 28 from batch 2017, 37 from batch 2018, 31 from batch 2019, and 13 from batch 2020.

3.3 Instrumentation/Data Measures

The study used primary data gathered from constructed survey questionnaires. The questionnaire has three parts wherein the first part contains the employee profile followed by the list of skills and competencies on the second part. The list was answered through a 5-point scale based on their importance towards career success and to what extent they could develop these skills and competencies after they graduated. The last part of the questionnaire is composed of the career success status of the respondents based on the extrinsic and objective components. The questionnaire used was validated by professionals in the academe prior to distribution to assure its reliability and validity.

3.4 Data Collection Procedure

Data was collected through distribution of surveys via google forms. Respondents were gathered through optimizing networks with acquaintances and social media platforms such as Facebook and LinkedIn. Each respondent was contacted in their respective accounts and was given the link to the survey questionnaire. However, not all respondents were able to respond to our messages. Follow ups were made to some respondents until the data collecting period was concluded.

3.5 Ethical Consideration

The researchers ensured that the respondents were well informed about the study's objectives and asked permission from them. A data privacy and consent form were included in the Google Form that the respondents answered. This was done to get the respondents' permission and inform them that their answers will be confidential and used only for academic purposes and this particular research. Moreover, the respondents were given the right to pull back from the study if they wanted to.

3.6 Data Analysis

The gathered data was tabulated and processed using SPSS Statistics ver. 22 to determine the interpretation of the results. The data gathered from the survey questionnaires were grouped into three parts: the first part is the demographic data which consists of employee profiles, such as job level, salary level, promotion, and job changes. The data was analyzed by getting the average

of each option. The second part of the questionnaire is the perceived and developed skills and competencies. The statistical tools used for this data are: (1) mean and standard deviation and (2) independent sample t-test to compare the means of the two data sets mentioned to determine whether they are significantly different.

The second part serves as the objective part of the survey wherein the researchers used Pearson's Product Moment Coefficient to determine the linear relationship between two variables in which the values of the correlation coefficient range from +1 to -1. The variables used for this test are the perceived and developed skills and competencies to career success. Correlation coefficients near zero suggest a weak linear or insignificant relationship between two variables, whereas those near –1 or +1 indicate a strong linear or significant relationship between two variables.

4.0 Results and Discussion

The gathered data are presented in tabular forms. Each table is given corresponding interpretation and analysis.

4.1 Results

The following tables are the results from the conducted survey to the graduates.

Table 2

Promotion

Promotion	Frequency
Not yet promoted	60.47%
Promoted once	30.23%
Promoted twice	6.98%
Promoted 3 times or more	2.33%

Table 3

Job Changes

Change in Job Position	Frequency
No changes	51.16%
Change to a higher position	46.51%
Change to a lower position	2.33%

Table 4

Salary Level

Changes in Salary	Frequency
Salary did not change	22.48%
Salary went higher	76.74%
Salary went lower	0.78%

Table 5

Job Level

Job Level	Current	Previous
N/A	10.85%	24.03%
Entry Level	69.77%	65.12%
Mid Level	19.38%	10.85%

Based on the extrinsic and objective components of career success of the BSMA graduates regarding their job promotion, the data in Table 2 shows that 60.47% of the participants are not yet promoted. Regarding their job position, the data in Table 3 indicates that 51.16% of the participants did not change their job position, and 46.51% of the participants changed into a higher position. For the changes in salary, the result in Table 4 reveals that 76.74% of the participants have a higher salary than before. The data also shows, in Table 5, that 65.12% of the participants have an entry-level position from their previous job; however, there is a significant increase in their current job in an entry-level position and mid-level position, which has a percentage increase by 7.14% and 78.57%, respectively.

The results indicate that most participants started in an entry-level job position after graduating. It also shows that most participants did not switch from another job. Still, a significant increase in the entry-level and mid-level positions resulted in the increase of the respondents' salaries.

Table 6
Top 10 Skills and Competencies that BSMA Graduates perceived as needed for career success

Skills and Competencies	Frequency
Professional Attitude and Work Ethic	90.70%
Listening	86.05%
Oral Communication & Interpersonal Skills	81.40%
Analytical & Critical Thinking	79.84%
Ethical Awareness & Values	78.29%
Teamwork	77.52%
Problem-Solving	72.09%
Change Management (Adaptability)	66.67%
Reading and Writing Comprehension	78.29%
Interdisciplinarity & Flexibility	67.44%

As presented in Table 6, the result shows the top 10 skills and competencies that were answered "Extremely Important" based on the skills and competencies that are considered important or perceived as needed for career success to the BSMA graduates. Among the 10 skills and competencies that the respondents have chosen, the results show that Professional Attitude and Work Ethic ranked first. Next is Listening, then followed by Oral Communication and

Table 7
Soft Skills and Competencies that BSMA Graduates perceived developed after graduation and work experience

Skills and Competencies		Mean	Standard Deviation	t	p
Analytical & Critical Thinking	Perceived	4.75	0.5308	1.86	0.0633
	Developed	4.62	0.602		
Change Management (Adaptability)	Perceived	4.6	0.6049	1.78	0.076
	Developed	4.46	0.7182		
Cross-Cultural Appreciation & Cultural Sensitivity	Perceived	4.21	0.854	0.82	0.4109
	Developed	4.12	0.9571		
Cross-Cultural Communication & Foreign Language	Perceived	3.92	0.9812	0.44	0.6621
	Developed	3.87	1.0107		
Customer Service	Perceived	3.95	0.9426	-0.33	0.7433
	Developed	3.99	0.956		
Ethical Awareness & Values	Perceived	4.72	0.5725	2.13	0.0341
	Developed	4.55	0.7067		
Leadership	Perceived	4.31	0.7479	0.67	0.5007
	Developed	4.25	0.7292		
Lifelong Learning	Perceived	4.53	0.6001	2.12	0.0351
	Developed	4.35	0.797		
Listening	Perceived	4.83	0.4528	2.93	0.0038
	Developed	4.63	0.6382		
Logical Argument	Perceived	4.47	0.674	1.22	0.2225
	Developed	4.36	0.7494		
Negotiation	Perceived	3.97	0.9009	0.98	0.3267
	Developed	3.86	0.8727		
Oral Communication & Interpersonal Skills	Perceived	4.81	0.416	3.21	0.0015
	Developed	4.59	0.6448		
Problem-Solving	Perceived	4.64	0.6349	0.98	0.3279
	Developed	4.57	0.6355		
Professional Attitude and Work Ethic	Perceived	4.9	0.327	3.06	0.0024
	Developed	4.73	0.5413		
Teamwork	Perceived	4.74	0.5043	1.55	0.1212
	Developed	4.64	0.6116		

Interpersonal Skills. Most skills and competencies that are topped are considered "soft skills."

Table 8

Hard Skills and Competencies that BSMA Graduates perceived developed after graduation and work experience

Skills and Competencies		Mean	Standard Deviation	t	p
Accounting Software Skills	Perceived	4.2	0.8513	1.74	0.0837
	Developed	4.01	0.9395		
Auditing	Perceived	4.23	0.7553	1.34	0.1801
	Developed	4.09	0.9052		
Competence & Computer Literacy	Perceived	4.53	0.6383	2.08	0.0382
	Developed	4.33	0.8416		
Decision-Modelling & Decision-Making	Perceived	4.57	0.5965	1.67	0.0961
	Developed	4.43	0.7379		
Entrepreneurship	Perceived	3.43	1.022	-1.24	0.2146
	Developed	3.6	1.0791		
Interdisciplinarity & Flexibility	Perceived	4.6	0.6177	1.47	0.1419
	Developed	4.48	0.7299		
Project Management	Perceived	4.36	0.6953	2.06	0.0404
	Developed	4.17	0.8113		
Reading and Writing Comprehension	Perceived	4.74	0.5379	2.09	0.0372
	Developed	4.58	0.6459		
Research	Perceived	4.04	0.8697	0.42	0.6758
	Developed	3.99	0.9143		
Resource Management	Perceived	4.26	0.7554	1.67	0.0959
	Developed	4.09	0.8789		
Risk Analysis	Perceived	4.28	0.7804	1.4	0.162
	Developed	4.14	0.8172		
Risk Propensity (Risk Management)	Perceived	4.1	0.7989	0.37	0.7132
	Developed	4.06	0.8905		
Strategic Management	Perceived	4.38	0.7826	1.39	0.1652
	Developed	4.24	0.827		

In Table 7 and 8, the results show that among the 28 skills and competencies listed, the skills and competencies that BSMA graduates perceived to have developed after they have graduated, for the most part, in table 7 are soft skills such as Professional Attitude and Work Ethic at 0.0024, Oral Communication & Interpersonal Skills at 0.0015, and Ethical Awareness & Values at 0.0341. While in Table 8, Hard skills such as Project Management at 0.0404, Reading and Writing Comprehension at 0.0372, and Listening at 0.0038 are also considered to be developed by the respondents. The following skills and competencies show significance at 0.05 level.

Table 9

Correlation Analysis between perceived soft skills and competencies to career success

Skills and Competencies	r	p
Analytical & Critical Thinking	0.098	0.27
Change Management (Adaptability)	0.172	0.051
Cross-Cultural Appreciation & Cultural Sensitivity	0.148	0.094
Cross-Cultural Communication & Foreign Language	0.158	0.074
Customer Service	0.14	0.114
Ethical Awareness & Values	0.036	0.682
Leadership	0.14	0.113
Lifelong Learning	0.046	0.607
Listening	-0.004	0.967
Logical Argument	0.127	0.153
Negotiation	0.13	0.141
Oral Communication & Interpersonal Skills	0.041	0.647
Problem-Solving	0.067	0.448
Professional Attitude and Work Ethic	0.085	0.337
Teamwork	-0.089	0.313

Table 10

Correlation Analysis between perceived hard skills and competencies to career success

Skills and Competencies	r	p
Accounting Software Skills	-0.002	0.978
Auditing	-0.087	0.326
Competence & Computer Literacy	-0.045	0.615
Decision-Modelling & Decision-Making	0.155	0.08
Entrepreneurship	0.039	0.664
Interdisciplinarity & Flexibility	0.118	0.184
Project Management	0.269	0.002
Reading and Writing Comprehension	0.165	0.062
Research	-0.147	0.096
Resource Management	0.142	0.108
Risk Analysis	0.147	0.096
Risk Propensity (Risk Management)	0.092	0.302
Strategic Management	0.168	0.057

In Table 9, the result shows that the perceived skills and competencies of the respondents do not affect their success in their careers. Thus, the null hypothesis cannot be rejected because the presented r-value of "0.143" indicates a "weak relationship," which means the positive correlation between the two variables (perceived skill and career success) is minimal or unreliable. Furthermore, the relationship is not statistically significant since the p-value is "0.106," which is greater than the significance level of 0.01.

On the other hand, when the listed perceived skills and competencies are looked at individually, the results in Table 10 show that only the Project Management skill and competency have a significant positive relationship to career success. The two variables (perceived Project Management skill and competency and career success) r-value is "0.269," indicating a "weak relationship"; however, the relationship is statistically significant since its p-value is "0.002," wherein the significance level is 0.01.

Table 11

Correlation Analysis between developed soft skills and competencies to career success

Skills and Competencies	r	p
Analytical & Critical Thinking	0.097	0.275
Change Management (Adaptability)	0.051	0.565
Cross-Cultural Appreciation & Cultural Sensitivity	0.068	0.444
Cross-Cultural Communication & Foreign Language	0.034	0.699
Customer Service	0.074	0.407
Ethical Awareness & Values	0.009	0.916
Leadership	0.245	0.005
Lifelong Learning	-0.029	0.746
Listening	-0.074	0.407
Logical Argument	-0.008	0.93
Negotiation	0.124	0.161
Oral Communication & Interpersonal Skills	0.101	0.255
Problem-Solving	-0.007	0.933
Professional Attitude and Work Ethic	0.084	0.347
Teamwork	0.061	0.491

Table 12

Correlation Analysis between developed hard skills and competencies to career success

Skills and Competencies	r	p
Accounting Software Skills	-0.011	0.901
Auditing	-0.087	0.326
Competence & Computer Literacy	-0.1	0.259
Decision-Modelling & Decision-Making	-0.011	0.904
Entrepreneurship	0.051	0.568
Interdisciplinarity & Flexibility	-0.036	0.687
Project Management	0.095	0.282
Reading and Writing Comprehension	0	0.996
Research	-0.089	0.317
Resource Management	0.023	0.794
Risk Analysis	-0.009	0.92
Risk Propensity (Risk Management)	0.048	0.586
Strategic Management	0.057	0.523

Lastly, in Table 11, among the 28 developed skills listed in the survey, only the developed skill of Leadership that has a p-value of "0.005" (which is lower than the significance level of 0.01) is considered statistically significant to the career success of BSMA graduates of the UST-AMV College of Accountancy for the past five years.

Similar to the perceived skills and competencies, there is a "weak relationship" between the developed skills and competencies and the career success of the respondents, and with the developed skills having a p-value of "0.677" (which is greater than the significance level of 0.01), the null hypothesis cannot be rejected. This suggests that other factors affect the graduates' career success since there is little to no positive relationship between the developed skills and competencies to the graduates' success in their careers.

4.2 Discussion

The graduates' career success is measured through the number of promotions, job changes, salary level, and job level that they currently have; this was gathered in the third part of the

questionnaire. Tables 2 and 3 show that most have not yet experienced a promotion or job change. Considering the current status of the pandemic, this may have affected the working conditions of the graduates. The pandemic greatly affected different industries; some led to terminating employees to cut costs and avoid bankruptcy. A research by Karmel and Carroll (2016) stated that there is a fall in the number of graduates having full-time employment compared to previous economic downturns because employers are not expanding their graduate recruitment process. Contrasting to the previous results, the salary and job levels of graduates showed positive results. Majority of the graduates indicated that their salary went higher; complimentary to this is the increase of job level of graduates both in entry-level and mid-level jobs. These results show that there has been an increase in employment in graduates. The discrepancy in results may have been caused by the unequal distribution of responses from different batches of graduates. In line with this, Gericke (2017) stated that fresh graduates may not have prepared themselves well for work. Sithole (2015) also stated that graduates are expected to train more in computing techniques, communication, reporting, measurement, and professional skills.

In table 6, eight out of ten of the top skills and competencies that the graduates perceived as needed for career success are soft skills. These type of skills include personality traits, goals, motivations, and preferences that add value to a person in school, workplace, and other domains (Heckman & Kautz, 2012). According to Ngang et al. (2015), communication skills are included as soft skills that are deemed important and gradually developed in the workplace. Policy reviews and prescriptions about how soft skills can be developed can confidently conclude that (CIPD, 2010, p. 30): "The most important of the soft skills are best learned with a small amount of highly focused and relevant formal input, a large amount of real-world experience, practice inside and outside of one's comfort zone, and timely, relevant and constructive feedback from other people in a community of practice, and where the consequences of what we do can be easily observed and understood."

In addition, the results from table 7 and 8 showed that among the five skills and competencies that showed a significant difference between their perceived and developed skills, three were soft skills which are Ethical Awareness & Values, Listening, and Oral Communication & Interpersonal Skills. In the accounting and finance career, soft skills are increasingly important. According to Chabus (2021), a recent survey conducted by the Society for Human Resource Management, 97% of employers believe soft skills are just as important as hard skills. Focusing on and strengthening soft skills can help employees become more well-rounded and employable professionals, whether they are looking for a new job or seeking a promotion. Under the hard skills category, the skills were Project Management and Reading and Writing Comprehension.

Furthermore, the findings in table 10 showed that there is a significant relationship between Project Management skills and competency and Career Success. It aligns with the studies of Hefley & Bottion (2021) and Sharma (2021), which states that Project Management skills and competency are in demand locally and globally. In the research of Ada et al. (2021), they determined that under the Technical Skill cluster, Project Management skill is the most important criterion when identifying the required skill set in Industry 4.0. This can be linked to employability, salary, and promotion history, which underlies career success (subjective) (Spurk et al., 2018). However, the perceived skills and competencies were correlated to career success as a whole and showed no significant relationship, which rejects the second hypothesis of the study.

Tables 11 and 12 showed that there was no significant relationship between the overall developed skills and competencies to career success, which rejects the third hypothesis. However, upon analyzing each skill individually, Leadership skill and competency was able to show a

positive relationship to career success. This is supported by the studies of Maurer and Hartnell et al. (2017), wherein they discovered evidence of discriminant and predictive validity between two leadership motivations (motivation to lead and motivation to develop leadership skills) on key leadership processes and outcomes but is found out that motivation to develop leadership skills was more dominant. Similarly, a study by Chugtai (2018) resulted in findings indicating that authentic leadership behaviors can positively impact an employee's career success. The author further states that to ensure that employees accomplish their career goals and realize their full potential, it is vital that organizations devise strategies geared towards promoting authentic leadership.

5.0 Conclusions

In this era, diverse skills and competencies are what employers look for when hiring, so this means that graduates must possess the required skills and competencies to get hired and be employed. The main objective of this study was to know the perspectives of the BSMA graduates of the UST- AMV College of Accountancy regarding the necessary skills and competencies to achieve a successful career. Another purpose of the study was to identify the skills and competencies that the graduates developed along their way to career success.

The main limitation of this study is that the target respondents were not reached due to various reasons. One reason for the low questionnaire response rates is the lack of name lists of the target respondents. The researchers could not acquire the list of BSMA graduates for the academic year 2015 to 2020 since they are not permitted to do so due to confidentiality purposes. Another reason is that respondents were hard to connect with since the researchers only had the option to contact them through online platforms such as Facebook and LinkedIn. They may be too busy to check their messages or busy with their jobs and lives. The second limitation is that the whole world is currently under a pandemic. This pandemic may have affected the results since lockdowns affected both jobs and schools.

Among the skills and competencies that the respondents perceived as important for career success are primarily soft skills that most employers in the industry look for. In addition, the skills and competencies that the respondents developed upon entering the industry are mainly soft skills. Employers believe that graduates from universities should not only be equipped with technical skills but also interpersonal skills to be successful in their careers. However, contradicting the results, as the graduates developed various soft skills, the majority have not yet been promoted or experienced job position change. We could consider the unexpected occurrence of the pandemic, which led to some of the graduates losing their jobs or having difficulty applying for a job.

Furthermore, the study findings suggest that there was no significant relationship between both the perceived and developed skills and competencies to career success. However, as stated in the limitations that the required number of respondents were not reached, these findings may be affected by that. If the target respondents were reached, there could be additional findings, such as other skills and competencies that have a significant relationship to career success.

Based on the results, it is evident that the graduates have the skills and competencies they perceived as needed in career development; the Bachelor of Science in Management Accounting program's current curriculum may have contributed to this. Therefore, the current curriculum immensely helped the graduates in their jobs. However, the curriculum should be consistently updated to answer the changing needs of the industry. A tracer study can be conducted for each batch to keep track of the graduates, analyze the possible gaps in the current curriculum, and recommend enhancements that can be done.

Lastly, the administration should highly encourage students to participate in different activities outside of the academe, such as internships and competitions, by promoting certain events to the student body. Future researchers are encouraged to conduct another inquiry that focuses on specific skills and competencies such as Project Management and Leadership skills and their relationship to the career success of UST BSMA graduates or other BSMA graduates from different universities.

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Exploring the Online Learning System: A SWOC Analysis

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Abstract – Educational institutions are generally traditional, where classes are in real-time and face-to-face. Even though they are starting to adopt online learning due to its convenience and ease of use, still many of them stick with the traditional system. However, as the Covid-19 pandemic occurred, changes were rapidly emerging, especially in educational institutions, which led them to switch from a conventional to an online learning approach. The purpose of this study is to explore the online learning system through the lens of students and professors, specifically in the College of Business Education, utilizing the Strengths, Weaknesses, Opportunities, and Challenges analysis. This study surveys one hundred seventy-five students and seven professors to capture the online learning system's strengths, weaknesses, opportunities, and challenges. The survey questions were from the existing related literature and studies, divided into internal and external variables using the Learning Management System. The distribution of questionnaires was online using google form. The variables were analyzed to assess the strengths, weaknesses, opportunities and challenges of the online learning system based on the responses of the respondents. Based on the findings of the study, there were more strengths and opportunities of the online learning system compared to its weaknesses and challenges utilizing the Learning Management System. A SWOC analysis matrix was proposed on strengths-opportunities such as creative teaching and learning and continuous improvement for feedback and monitoring. The strengths-challenges include: improve communication through various tools/platforms and conduct of capacity building and LMS practice sessions. The weaknesses-opportunities were integration of additional online learning activities and creation of an LMS technical support service and lastly, weaknesses-challenges were creation of a peer support system.

Keywords: *Online learning system, Strengths, Weaknesses, Opportunities, and Challenges*

INTRODUCTION

The outbreak of Coronavirus significantly affects all segments of the population, particularly in the education sector. Since then, academic institutions have been forced to remain closed, temporarily adhering to the protocols and policies implemented by the government. This tragedy shook schools and universities to find options to deal with this challenging situation. Due to the pandemic, the new normal was implemented, forcing schools to conduct classes through online means to continue the education of the students. Fortunately, rapid developments in technology have made online learning possible (McBrien et al., 2009). Online learning can be considered a tool that can make the learning environment more student-centered, flexible, and innovative.

Technology is playing a vital role in education as it fosters learning through the interactivity in its platforms. As a result of this advancement, online learning was introduced, defined by most of the authors as access to education utilizing technology. It was postulated that an increased acceptance of online learning has changed the way instructions are conveyed and how learning intercessions are used. Thus, this learning structure brought numerous benefits to students and instructors, particularly to time flexibility and convenience. In addition, this eliminates the time, space, and learning styles barriers, which enables a more significant number of people to continue education with a strengthened online learning environment.

Despite the benefits of technology, integrating into online education creates various difficulties. These difficulties associated with technology included downloading and uploading errors, installation and login problems, audio and video concerns, etc. In addition, students tend to lose motivation as the online learning system requires enough preparation to adapt to the changes from traditional to a new system. However, the primary concern of the shift from a traditional to an online learning environment is the quality of education. The new normal forced institutions to accept modern technology and avoid being reluctant to change. It is indeed difficult for educational institutions to adapt to the sudden change of the learning environment. It will take some time and experience to provide the highest possible quality of education for the student's learning process.

Online learning system offers opportunities to both students and professors. Based on the analysis of Guma (2019), having a solid internet connection enables the users to access learning materials more conveniently. It significantly benefits the users since the availability of an internet connection allows them to perform multitasking. Furthermore, online learning offers different resources such as free webinars and online reviews in which both users can explore new learning strategies and acquire additional knowledge (Lagman et al, 2015.). He also added that the effective use of valuable media resources could help the students and professors continuously learn new things and improve their teaching skills.

Consequently, the online learning method needs close consideration of how students and professors are prepared for shifting and critical care of whether the learning approach is still thriving when taken into the classroom and implemented in technical devices. In addition, disparities in access to infrastructure and digital devices are intensified. With this known commons, online learning approaches must be on the verge of improvement to enhance the quality for the students and the professors and academic institutions. It makes it relevant to understand how an online learning system shapes student learning and experience to improve online learning.

As to Artemi & Kumar (2009), one of the weaknesses of the online learning system is the lack of interaction between the students and professors. Furthermore, the detachment of students from online learning causes them to be less likely to commit to the setup of online learning (Clinefter and Magda, 2016).

Due to these challenges, concerns between the students and professors are not addressed in a timely manner. In the study of Longhurst et al. (2020), the interaction and communication among students and professors are affected and the exchanging of ideas is very limited.

A SWOC analysis is a renowned tool used to evaluate an entity's strengths, weaknesses, opportunities, and challenges. SWOC analysis has two dimensions: Internal and External Dimensions. The internal dimension is viewed as the strengths and weaknesses of the organization. The external dimension is considered opportunities and challenges presented by the environment outside the organization. A strength is something an organization excels in or a characteristic that gives it a vital capability (Thompson and Strickland, 1989). A strength is an advantage relative to

its competitors. Weakness refers to not having the competency necessary for something. An entity also lacks something that puts them at a disadvantage (Thompson and Strickland, 1989). Opportunity refers to a condition that would yield positive results presented by an external environment that allows an entity to take advantage of its strengths, overcome weaknesses, and negate threats (Harrison and St. John, 2004). Challenges refer to disadvantageous situations that can prevent the development of an entity (Ülgen and Mirze, 2010).

Statement of the Problem

The study aimed to explore online learning systems in the new normal through Strengths, Weaknesses, Opportunities and Challenges (SWOC) analysis. Specifically, it aimed to answer the following questions:

1. What are the strengths in utilizing online learning systems based on the internal factors?
2. What are the weaknesses in utilizing online learning systems-based on the internal factors?
3. What are the opportunities in utilizing online learning systems based on external factors?
4. What are the challenges in utilizing an online learning system based on external factors?
5. What are the proposed strategies based on the findings of the study?

Conceptual Framework

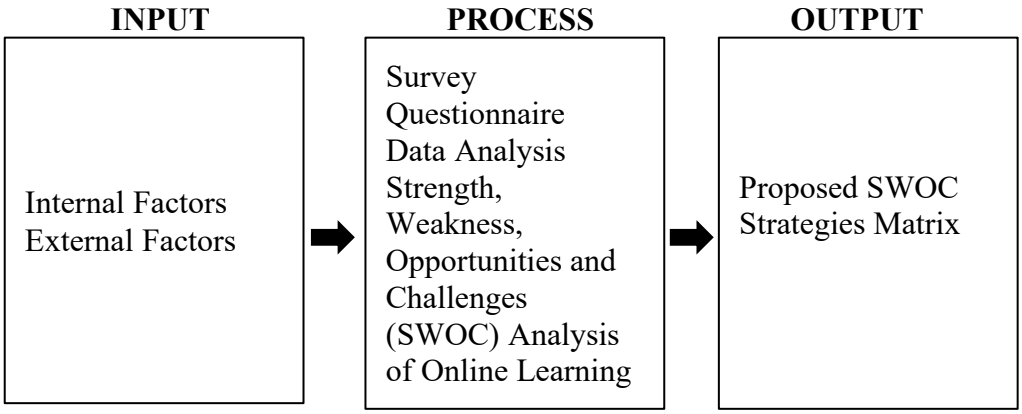

Figure 1. Paradigm of the Study

Figure 1 shows inputs that will be processed to derive the desired output. The inputs composed of internal and external factors. In the process phase, the researchers analyze the strengths, weaknesses, opportunities and challenges (SWOC) utilizing the survey questionnaires. After gathering and processing the data, the researchers developed a proposed SWOC Strategies Matrix.

RESEARCH METHODS

This study is a mixture of qualitative and quantitative research. It is qualitative in the sense that the researchers used a descriptive research method that focuses on gathering, analyzing, and presenting the processed information, while, quantitative in a sense that researchers used statistical procedures for data analysis. It described with emphasis what actually exists on the current conditions, performance, challenges and situations.

The study used survey questionnaires as research instruments for data gathering. These were formulated using related literature and studies organized and divided into four sections: the strengths, weaknesses, opportunities, and challenges. The instrument went through a validation process and pilot testing. After the validation process, the validity of the questionnaire has been achieved with the facilitator's approval. The researchers distributed survey questionnaires embedded in google forms and distributed to the respondents through Facebook and Gmail.

There were one hundred eighty-two (182) respondents of the study comprising one hundred seventy-five students (175) and seven (7) professors. The statistical tools used are the percentage distribution that showed the respondents' level of agreement on the questionnaires provided under each section of SWOC analysis. The weighted mean scores were computed based on a 5-point Likert scale on a 0.8 interval.

RESULTS AND DISCUSSION

This study aimed to explore the online learning system in the new normal by analyzing its Strengths, Weaknesses, Opportunities, and Challenges (SWOC) among business students and professors.

Table 1: Strengths, Weaknesses, Opportunities and Challenges (SWOC)

STRENGTHS	WEAKNESSES
1. Online learning system allows students and professors to access course content at their own pace. 2. Utilizing an online learning system helps students to develop independent learning and additional teaching experiences for professors. 3. Online learning system enables students and professors to conveniently access courses through their technological equipment. 4. Learning and teaching materials are readily available for use. 5. Students can keep track of their progress in class, as well as professors can keep track of the progress of the students easily. 6. Students and professors are frequently notified and updated about the actions taken in their LMS account. 7. Students and professors were able to establish communication quickly by utilizing readily available online tools. 8. Utilizing an online learning system allows immediate results and feedback from work. 9. Utilizing an online learning system allows students and professors to take and conduct automated assessments such as quizzes, different types of activities/exams, etc.	1. There are distractions in using online learning leading to frustration, anxiety, & confusion. 2. Utilizing an online learning system lacks personal interaction between students and professors. 3. There are frequent issues involving the use of LMS such as glitch and instability. 4. Students and professors find online learning systems less engaging due to their physical absence. 5. There are instances that discussion should finish in a short time frame. 6. Discussions are usually based on theoretical approaches but lack practical applications. 7. Collaborative learning environment depends on student's participation.
OPPORTUNITIES	**CHALLENGES**
1. Online learning system allows students and professors to access learning materials in a more convenient manner. 2. Students and professors are capable of exploring new	1. There are instances that concerns between students and professors are not addressed in a timely manner. 2. Having a loud home environment prominently affects online learning among students and professors.

learning strategies. 3. Online learning system provides comfortable virtual classroom set-up 4. Utilizing the online learning system, students and professors are continuously learning new things and experience from applications as they engage into online learning. (excel, google document, LMS features 5. There is continuous development of technology and software applications like LMS. 6. Students and professors are able to use a variety of alternative video-conferencing platforms like Google meet and Zoom in case of technical difficulties in BigBlueButton. 7. Online learning system develops digital literacy skills of students and professors.	3. Chat sessions and other hindrances frequently occur during online discussions 4. Insufficient knowledge of other online learning applications and LMS features affect the performance of the students and professors.

Table 1 shows the internal and external factors which identify the strengths, weaknesses, opportunities and challenges presented in each quadrant. Under the strengths quadrant, there were nine identified strengths based on descriptors given on the survey questionnaire. On the weaknesses quadrant, there were seven identified weaknesses based on the responses of the respondents. Under the opportunities quadrant, there were seven identified opportunities. Lastly, under the challenges quadrant, there were four identified statements about challenges of the online learning system using the learning management system.

In summary, based on the responses, strengths of online learning system include: access to course content at their own pace, develop independent learning and additional teaching experience, convenient access courses in their equipment, materials are readily available for use, students can keep track of their progress in class, students and professor are notified and updated about the actions taken in LMS, establish communication quickly, immediate results and feedback, allows students and professors to take and conduct automated assessments.

Weaknesses of the online learning system are as follows: there are distractions leading to frustration, anxiety and confusion, lacks personal interaction between students and professors, there are frequent issues on the use of LMS involving glitch and instability, OLS is less engaging, discussion on a short time frame, lacks practical application, collaborative learning depends on students' participation.

Opportunities identified of online learning system on the given variables consisted of the following: allows students and professors to access learning materials on a more convenient manner, capable of exploring new learning strategies, provides comfortable virtual classroom set up, continuously learning new things and experience, continuously development of technology and software applications, use a variety of alternative video conferencing platforms, develops digital literacy skills.

Challenges identified are as follows; concerns are not addressed in a timely manner, loud home environment affects online learning, chat sessions and other hindrances frequently occur, insufficient knowledge of other online learning applications and LMS features affect performance of students and professors.

Table 2: Proposed SWOC Strategies Matrix

	OPPORTUNITIES	CHALLENGES
STRENGTHS	**S-O Strategies** Design an Innovative Teaching and Learning S1, S2, S3, S4, S9, O1, O2, O3, O4, O5, O6 Develop a feedback and monitoring system for continuous improvement for feedback S5, S6, S7, S8, O7	**S-C Strategies** Improve communication through various tools/platforms S5, S6, S7, S8, C1, C3 Conduct of Capacity Building and a regular LMS Practice Session S6, C4
WEAKNESSES	**W-O Strategies** Integrate additional online learning activities W2, W4, W5, W6, W7, O2, O4, O5, O6, O7 Create an LMS Technical Support Service W3, O5	**W-C Strategies** Creation of a peer support system W1, C2

Table 2 presents the proposed SWOC strategies matrix composed of the following combination of strengths-opportunities; strengths-challenges; weaknesses-opportunities, and weakness-challenges. Proposed strategies under the Strengths-Opportunities include design innovative teaching and learning, and continuous improvement for feedback and monitoring. Strengths-Challenges strategies as proposed consist of: improve communication through various tools/platforms, and conduct of capacity building and regular LMS practice sessions.

In terms of weaknesses-opportunities strategies, integration of additional online learning activities and creation of an LMS technical support service were proposed. On the other hand, weaknesses-challenges where the creation of a peer support system was proposed.

CONCLUSIONS

Based on the results and data gathered which analyzed the strengths, weaknesses, opportunities and challenges of online learning, the following conclusions were drawn:

Online learning systems develop independent learning at their own pace through easy access to materials or course content because materials are readily available anytime. It also develops independent learning on the part of the students while additional teaching experience on the part of the teachers. Digital skills of both the teachers and students are also enhanced. Moreover, students can keep track of their progress in class.

On the other hand, an online learning system may lead to frustration, anxiety and confusion among students especially when they are not able to attend synchronous classes and cannot submit requirements because of internet connectivity issues. Furthermore, the online learning system lacks personal interaction between teachers and students while students are less engaged. Activities lack practical application because of virtual classes.

Finally, insufficient knowledge of online learning applications and the features of the learning management used and the loud home environment affect the performance of not only the students but also the teachers.

RECOMMENDATIONS

Based on the summary of findings and conclusions, the following are recommended:

1. Design innovative teaching and learning. Both students and professors may use learning materials available online such as google, youtube and other online platforms that aid to teaching and learning. Other Online Learning Applications such as Quizziz.com, Quizlets, Wordwall, Kahoot, Mentimeter, Poll everywhere, etc. may also be used for formative assessments.
2. Develop a feedback and monitoring system for continuous improvement. The department may develop a feedback and monitoring system for continuous improvement to monitor progress and immediately address issues and concerns.
3. Improve communication through various tools/platforms. The department may utilize the use of Viber, FB messenger, email, telegram, etc. to collect concerns.
4. Conduct of capacity building and a regular LMS practice session. The institution and the college may conduct capacity building activities and regular LMS practice sessions in order for the professors and students to be knowledgeable on the use of the online learning application.
5. Integrate additional learning activities. The teacher may integrate additional learning activities such as real-world case studies, simulations, video conferencing, podcasting, problem solving, and other interactive learning activities to encourage students' engagement.
6. Create LMS Technical Support Service. Technical support may be provided for any issues and concerns regarding use of the learning management system.
7. It is recommended for further research using other learning management systems and other locales/respondents.

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Relevance of Circadian Rhythm and Class Schedules to the Academic Performance of Accountancy Students

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Abstract – Current studies explore the impact of Circadian Rhythm, the timing of Class Schedule, and social jetlag (mismatching of these two variables) on Academic Performance but failed to incorporate all of these variables in one study. Because of this gap, this study was formulated to investigate how the students' Circadian Rhythm and Class Schedule, individually and jointly, affect their Academic Performance. The study aims to aid not only the students themselves but also the educational institutions in understanding the underlying reasons as to why students perform the way they do, from effective scheduling following the Circadian Rhythm of the students, to designing an entire set of new programs to cater to the varying Circadian patterns present in our world. The study examined the chronotype preferences, and Class Schedule of 213 Accountancy students to determine the impact of the two variables on Academic Performance as measured by Grade Point Average. The participants were asked to answer a Morningness-Eveningness questionnaire while providing their Grade Point Average and Class Schedule for the study to be able to determine their impact. The impact of Circadian Rhythm and Class Schedule were tested through Analysis of Variance. The analysis found out that there are no significant differences in the Academic Performance of groups with matching status, and such significant differences only arise when the groups being compared have different matching statuses. The results exhibit that individually, Circadian Rhythm and Class Schedule have no significant impact on Academic Performance; rather, matching these two variables impacts the students' performance.

Keywords: *Circadian Rhythm, Academic Performance, Class Schedule, Accountancy, Relevance*

Introduction

The term 'Academic Performance' revolves around the concept of how well a student meets the obligations of a particular field in which they are enrolled. It can be measured in several ways, but the most common is the final grade earned in their chosen course. Educators then evaluate one's Academic Performance to determine whether there are improvements. Studies show that certain factors can significantly impact students' performance.

A 'Circadian Rhythm', also known as a circadian cycle, is a natural, intrinsic process that controls the sleep-wake cycle and occurs every 24 hours. It can refer to any process starting inside an organism and how it responds to its surroundings. It is an internal clock unique to each person and serves as the body's master controller of numerous operations. Our sleep patterns are

the most evident, but our internal clock also influences our hunger and eating habits, hormone levels, and possibly even our mood.

According to Smarr and Schirmer (2018), night owls, morning larks, and daytime finches' schedules may be used to predict their educational results. In connection with this, a study by Wehr et al. (2001) supports the claim that the transitions between nocturnal and diurnal Circadian Rhythms are separate from the daylight cycle. Their experiment exposed individuals to different lengths of nights that affected the secretion of melatonin, prolactin, and cortisol, indicating that changing the cycle at which a person is situated can significantly affect their external and internal states.

The modern world has different demands for different individuals and can cause misalignment with a person's genetics. This can severely throw off the body and mind of that person, which can hinder their performance in day-to-day activities. This study will focus on the sleep-wake aspect of the Circadian Rhythm that contributes significantly to academics.

Part of a student's academic life is the Class Schedule they opt to enroll in. It refers to the subjects that the student will be taught at a specific time and days of the week. Universities and colleges have varying Class Schedules, from the interval between class meetings, duration of class meetings, and the time of class meetings; this study only tackles the timing of class meetings component of the Class Schedule. As such, Class Schedules can be morning, afternoon, or a combination of both. At the college level, students may have the discretion to choose their Class Schedule based on their personal preferences. However, that depends on whether their preferred schedules are still available or not.

With that, the study aims to observe students with morning, afternoon, and scattered schedules and how that and their Circadian Rhythms play a role in their Academic Performance.

Theoretical/Conceptual Framework

Several theories, such as Information Consolidation Theory of Sleep, Decision-Making Theory, and Theory of Mismatch were used in the study and applied to formulate a Consolidated Theory. The information consolidation theory of sleep emphasizes the importance of sleep in the process of learning which is only possible when we choose a schedule that allows for longer sleep (Born & Wilhelm, 2012). On the other hand, the decision-making theory suggests that an individual must weigh the advantages and disadvantages of each option and analyze which will yield the best results which entails choosing a Class Schedule that is in sync with our Circadian Rhythm (Parmigiani & Inoue, 2009). While the theory of evolutionary mismatch states that organisms adapt to the current environment to survive so when changes in the environment occur, the previous adaptations may harm the organism resulting in a mismatch that can only be solved through the change in the current environment or subsequent evolution (Riggs, 1993). The information consolidation theory and the decision-making theory prescribes the matching status of the Circadian Rhythm and Class Schedule. While the evolutionary mismatch shows the impact of different matching statuses on the Academic Performance of the student.

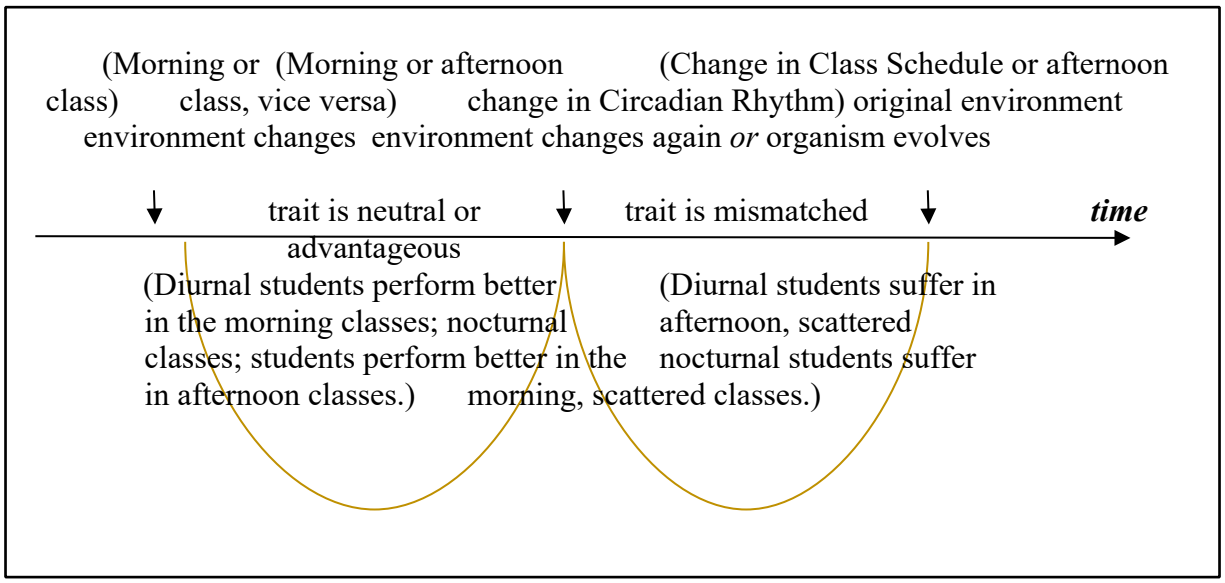

Figure 1. Consolidated Theory

Presented is the developed consolidated theory for the study as seen in the above figure, the organism is the students, the environment is the Class Schedule, and the adaptation is the Circadian Rhythm. This suggests that when the student's Class Schedule is not following their Circadian Rhythm: diurnal students have afternoon classes or scattered classes and nocturnal students have morning classes or scattered classes, there is a possibility that the students will suffer in the form of lower grades which can only be solved through the change in Class Schedule appropriate with the Circadian Rhythm or through the change in the Circadian Rhythm of students.

This mismatch is referred to as social jetlag. However, due to the nature of neither type of Circadian Rhythm, this theory suggests that it has neither a match nor mismatch on any Class Schedule. Similarly, the nature of a scattered schedule makes it have no matched Circadian Rhythm.

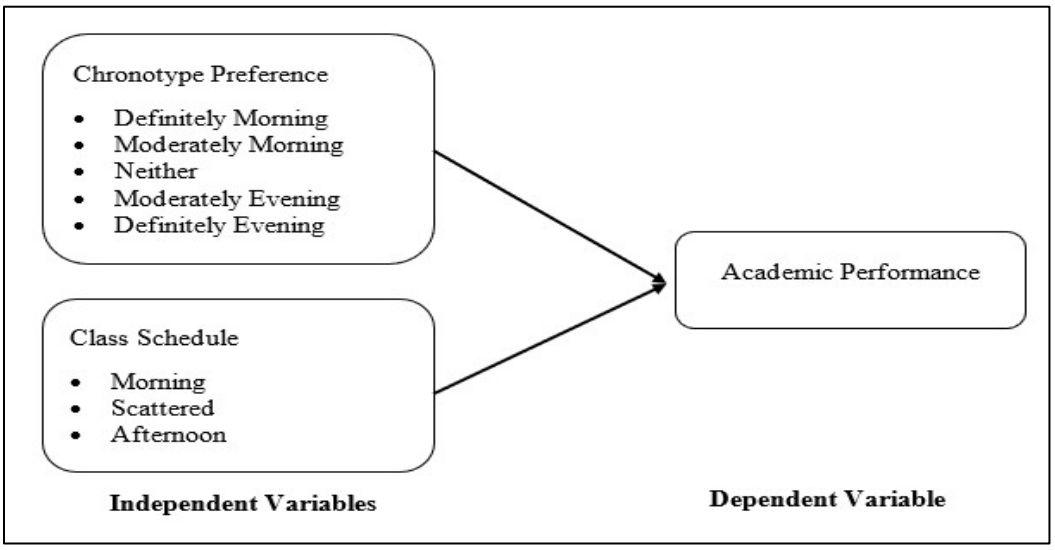

Figure 2. Conceptual Framework

The study aims to determine the relationship between the independent variables, the Circadian or chronotype preference and Class Schedule to the dependent variable, students' Academic Performance. The chronotype variable is divided into five, which are definitely morning, moderately morning, neither, moderately evening, and definitely evening. At the same time, the Class Schedule variable is divided into three: the morning, afternoon, and scattered schedules. According to the theory of evolutionary mismatch, as stated in the theoretical framework, having a chronotype incompatible with the schedule of operation can prove to be a disadvantage.

Statement of the Problem

Generally, this research aims to determine the impact and role of Circadian Rhythms and Class Schedule in the Academic Performance of BSA students. Specifically, this research seeks to answer the following problem statements:

1. What is the Profile of the Respondents in terms of:
   a. Year Level
   b. Class Schedule
2. What is the Circadian Rhythm of the respondents?
3. What is the Academic Performance of the respondents?
4. Is there a significant difference in the Academic Performance of students enrolled in different Class Schedules?
5. Is there a significant difference in the Academic Performance of students with different Circadian Rhythms, enrolled in different Class Schedules?

Significance of the Study

The undertaking of this study was done with the intent to help several groups of people. Primarily, this study would be beneficial to students since this can enhance their awareness of how their sleep-wake pattern affects their performance. Secondly, the results therefrom can also help educational institutions since this provides an avenue where they can modify programs and Class Schedules to accommodate different types of Circadian patterns exhibited by individuals. Notably, professors may also obtain a deeper understanding of why students perform the way they do and may discover teaching strategies to aid different types of students. The study does not have to stop at this paper, as it can be improved on by future researchers. Those who wish to focus on the same topic or use this paper as a benchmark may help improve future research.

Literature Review

Several studies were reviewed for this paper. In particular, studies of Modna and Scott (2017), and Besoluk, et al. (2011), show and conclude that a correlation exists between the Circadian Rhythm and Academic Performance of students, where diurnal students exhibit better Academic Performance than nocturnal students. The study conducted by Besoluk, et al. (2011) shows that diurnal students with morning classes perform better than nocturnal students on the same schedule. While the opposite is true that nocturnal students perform better than diurnal students on the same schedule. Pagulayan (2019) raises a different concern, however. According to him, Circadian Rhythm does not affect the Academic Performance of students in any significant manner. Rather, his study has shown that the number of hours slept matters more. The differences between these studies possibly stem from several factors including the Class Schedule of students.

Class Schedule significantly affects the Academic Performance of students, and this claim is supported by the studies of Baui, et al. (2018), Yeo et al. (2021), Koscec Bjelajac et al. (2020), Pope (2016), and Onyper et al. (2012). Their studies observed that there are significant deviations between the Academic Performance of students enrolled in different Class Schedules. However, such studies have results that are inconsistent relative to each other. To add, Mulenga and Mukuka (2016) contend that Class Schedules do not significantly affect Academic Performance. Different studies claimed different results. The differences in such results are attributable to several factors, such as sleep and wake time of the students, day and night activities, etc., or in a broad sense, due to differences in the Circadian Rhythms. Smarr and Schirmer (2018) and Haraszti, et al. (2014) found that a mismatch between the Class Schedule and Circadian Rhythm negatively impacts Academic Performance. Although this gives further insight into how the different variables interact, none of the studies individually tested the impacts of the two variables.

As found, most studies agree that both Circadian Rhythm and Class Schedule significantly affect Academic Performance. However, there are inconsistencies on which Circadian Rhythm provides for the best Academic Performance and Class Schedule. Most of the studies discuss the effects of the two variables individually, but none considered the factors jointly. This may lead to a mismatch between the Circadian Rhythm and Class Schedule as supported by Smarr and Schirmer (2018) and Haraszti, et al. (2014). The differences in the focus of the studies mean that the variables have not been tested jointly. And the studies focusing on the mismatch did not determine the impact of the two variables individually.

Evidently, there exists a gap that this study aims to address. The study aims to address this gap by incorporating the two variables: Class Schedule and Circadian Rhythm: in its analysis, thereby providing a more relevant and less inconsistent result through with and without mismatch comparison.

Methodology

The study aims to approach this in a descriptive-quantitative and comparative manner. The research is designed this way since it primarily aims to identify and describe the effects of the independent variables such as Class Schedule and chronotype preference to the dependent variable, i.e., Academic Performance. Since this is also designed as a comparative study, it also aims to uncover any differences between the previously discussed variables, how they interact and how much of their effects are concerned with one another. The component of comparability is necessary because this study aims to identify the differences between several respondents.

The duration of the study is from August to December 2021, in the first semester of the academic year 2021-2022. The paper is also done during the second year of the onslaught of the pandemic. The students are also in their second academic year of online classes. The paper is to be completed in four months from the submission of requirements up to the final defense.

The respondents of this study are 1st Year, 2nd Year, 3rd Year, and 4th Year Bachelor of Science in Accountancy (BSA) students in the University of the East - Manila for Academic Year 2020-2021. Based on the enrollment data derived from the College of Business Administration (CBA), the total population of BSA students is 475. The study covers 213 students who are further divided depending on their year level. In proportion to the population per year level, 90 1st Year students, 87 2nd Year students, 33 3rd Year students, and three (3) 4th Year students.

The study is limited to 1st, 2nd, 3rd, and 4th Year BSA students enrolled during the second semester of Academic Year 2020-2021. This is because the basis of their Academic Performance will be the respondents' grade point average (GPA) during the aforementioned academic semester they were enrolled in, covering both face-to-face and online setup. Regardless of whether students studied in a face-to-face or an online environment, the presence of their chronotype preference still exists. Moreover, the grade point average is based only on the answers of the respondents on the survey questionnaire.

Other courses or programs will also not be a part of the study. The accountancy program of the University of the East has a retention policy, requiring students to maintain a grade of 2.50 or better. The heavy demands of this course are potentially contributing to the degradation of sleep quality of the students who take it. The study aims to incorporate such aspects into consideration. Moreover, the study did not consider other universities due to the differences in Class Schedules, availability of respondents, and ease of access to the institution's data.

The sampling method implemented in the study is stratified random sampling. Stratified random sampling divides the population into strata or subgroups in which a random sample is taken from each subgroup (Taherdoost, 2016.) Students are sampled from the list of students enrolled for the 1st Semester of Academic Year 2021-2022 who are divided per year level. A random sample is obtained in proportion to the total population per year level. Two students are drawn and held in reserve for every five students drawn if the original students refused to participate. The use of this sampling method is to ensure that respondents with specific attributes important in this study are included in the sample.

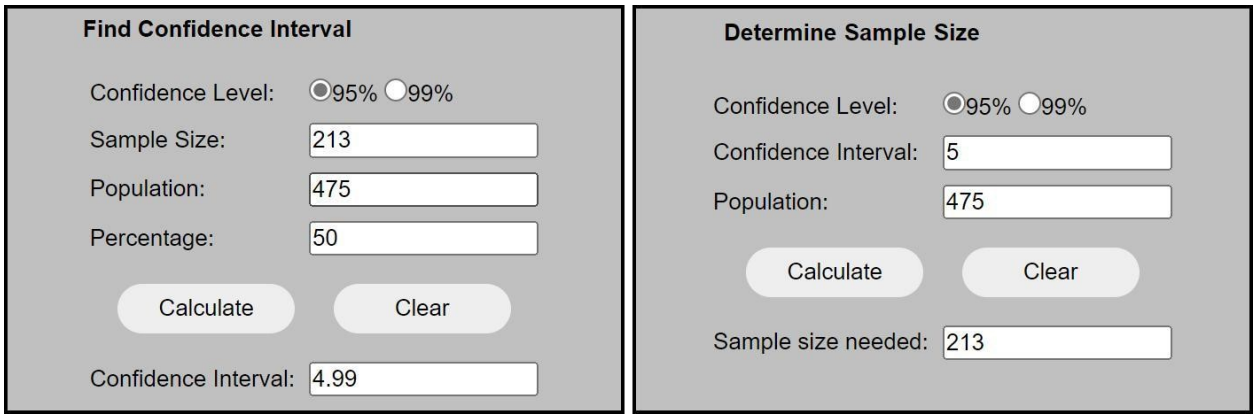

Figure 3: Computation of Sample Size and Confidence Level

The sample size is computed through the Creative Research System survey software based on the total population of students under the BS Accountancy program during the 2nd semester of Academic Year 2020-2021 verified by the College of Business Administration. With a population of 475 students and a 95% confidence level, a sample size of 213 respondents was determined.

Table 1: Proportionate Stratified Random Sample

Year Level	Population	Ratio	Sample Size
1st	200	42.11%	90
2nd	194	40.84%	87
3rd	75	15.79%	33
4th	6	1.26%	3
Total	**475**	**100.00%**	**213**

The table above shows the proportionate sample per year level according to their population calculated by multiplying the per year level ratio to the sample size of 213. Each student was assigned a number, and a random number generator was used to select the respondents.

Results / Analysis

Table 2. GPA of respondents based on Circadian Rhythm and Class Schedule

	Class Schedule		
Circadian Rhythm	**Morning**	**Scattered**	**Afternoon**
Moderately Diurnal	1.4149	1.8455	1.827
Neither	1.6307	1.5819	1.6887
Moderately Nocturnal	2.087	1.7088	1.4976
Definitely Nocturnal	2.055	n.a.	1.454

Table 2 above presents the Academic Performance of the respondents, as measured by their Grade Point Average (GPA), based on their Class Schedule, and Circadian Rhythm. The table suggests the best Academic Performance of the respondents with match Circadian Rhythm and Class Schedule, while respondents with mismatched Circadian Rhythm and Class Schedule tend to have the worst Academic Performance.

Table 3. Summary of statistical tests

T-test

Class Schedule	Average GPA
Morning	1.6132
Scattered	1.6937
Afternoon	1.6335

a.

T-test: Differences in the GPA of respondents enrolled in different Class Schedules

P-Value	Interpretation
0.283	No significant difference.

b. ANOVA: Differences in the GPA of respondents enrolled in different Class Schedules, with different Circadian Rhythm

P-Value	Interpretation
< 0.05	Has significant difference.

Table 3 above shows the results of the T-test on determining whether a significant difference in the Academic Performance of students enrolled in different Class Schedules exist or not. The P-Value is 0.283 which is less than the significance level of 0.05; therefore, the null hypothesis is accepted which means that the result of the test is due to chance finding and that the Class Schedule has no individual effect on Academic Performance. Furthermore, the ANOVA test resulted in a P-Value of less than the significant level of 0.05; the null hypothesis on such problem statement is rejected, and that there are significant differences in the GPA of the groups; thus, the two variables have an impact on Academic Performance but such impact is not yet known to be jointly or individually, this question is answered by the post-hoc test in the next table.

Table 4. ANOVA of the GPA of respondents with different class schedules and different circadian rhythm

Groups	Compared to	P-value	Interpretation of difference
Moderately Diurnal-Morning **(MDM)**	MDS	0	Significant
	MDA	0	Significant
	NM	0	Significant
	NS	0.201	Not significant
	NA	0	Significant
	MNM	0	Significant
	MNS	0.014	Significant
	MNA	0.953	Not significant
	DNM	0	Significant
	DNA	1	Not significant
Moderately Diurnal-Scattered (MDS)	MDM	0	Significant
	MDA	1	Not significant

	NM	0.059	Not significant
	NS	0.051	Not significant
	NA	0.604	Not significant
	MNM	0.222	Not significant
	MNS	0.942	Not significant
	MNA	0.001	Significant
	DNM	0.817	Not significant
	DNA	0.023	Significant
Moderately Diurnal- Afternoon (MDA)	MDM	0	Significant
	MDS	1	Not significant
	NM	0.165	Not significant
	NS	0.119	Not significant
	NA	0.8	Not significant
	MNM	0.163	Not significant
	MNS	0.982	Not significant
	MNA	0.004	Significant
	DNM	0.742	Not significant
	DNA	0.046	Significant

Table 4 (Continuation)

Groups	Compared to	P-value	Interpretation of difference
Neither - Morning (NM)	MDM	0	Significant
	MDS	0.059	Not significant
	MDA	0.165	Not significant
	NS	0.999	Not significant
	NA	0.986	Not significant
	MNM	0	Significant
	MNS	0.995	Not significant
	MNA	0.388	Not significant
	DNM	0.004	Significant
	DNA	0.753	Not significant
Neither - Scattered (NS)	MDM	0.201	Not significant
	MDS	0.051	Not significant
	MDA	0.119	Not significant
	NM	0.999	Not significant
	NA	0.887	Not significant
	MNM	0	Significant
	MNS	0.944	Not significant
	MNA	0.985	Not significant
	DNM	0.003	Significant
	DNA	0.981	Not significant
Neither - Afternoon (NA)	MDM	0	Significant
	MDS	0.604	Not significant
	MDA	0.8	Not significant
	NM	0.986	Not significant
	NS	0.887	Not significant
	MNM	0	Significant
	MNS	1	Not significant
	MNA	0.136	Not significant
	DNM	0.049	Significant
	DNA	0.441	Not significant

Table 4 (Continuation)
Compared to

Moderately Nocturnal- Morning (MNM)	MDM	0	Significant
	MDS	0.222	Not significant
	MDA	0.163	Not significant
	NM	0	Significant
	NS	0	Significant
	NA	0	Significant
	MNS	0.007	Significant
	MNA	0	Significant
	DNM	1	Not significant
	DNA	0	Significant
Moderately Nocturnal- Scattered (MNS)	MDM	0.014	Significant
	MDS	0.942	Not significant
	MDA	0.982	Not significant
	NM	0.995	Not significant
	NS	0.944	Not significant
	NA	1	Not significant
	MNM	0.007	Significant
	MNA	0.387	Not significant
	DNM	0.194	Not significant
	DNA	0.538	Not significant
Moderately Nocturnal- Afternoon (MNA)	MDM	0.953	Not significant
	MDS	0.001	Significant
	MDA	0.004	Significant
	NM	0.388	Not significant
	NS	0.985	Not significant
	NA	0.136	Not significant
	MNM	0	Significant
	MNS	0.387	Not significant
	DNM	0	Significant
	DNA	1	Not significant

Table 4 (Continuation)

	Compared to		
Definitely Nocturnal- Morning (DNM)	MDM	0	Significant
	MDS	0.817	Not significant
	MDA	0.742	Not significant
	NM	0.004	Significant
	NS	0.003	Significant
	NA	0.049	Significant
	MNM	1	Not significant
	MNS	0.194	Not significant
	MNA	0	Significant
	DNA	0.001	Significant
Definitely Nocturnal- Afternoon (DNA)	MDM	1	Not significant
	MDS	0.023	Significant
	MDA	0.046	Significant
	NM	0.753	Not significant
	NS	0.981	Not significant
	NA	0.441	Not significant
	MNM	0	Significant
	MNS	0.538	Not significant
	MNA	1	Not significant
	DNM	0.001	Significant

Table 4 above shows the significance of the differences in the Academic Performance of students enrolled in different Class Schedules, with different Circadian Rhythms. The table shows that the significant differences between the groups arise when the matching status of the groups are different (matched vs mismatched, or mismatched vs neither); while no significant differences arise between groups with the same matching status (matched vs matched, or mismatched vs mismatched). This suggests that the variables, Class Schedule and Circadian Rhythm, have no individual impact on Academic Performance; rather, the matching status of these two variables is what influences Academic Performance. The table also shows that the performance of respondents with neither Circadian Rhythm is not significantly different from each other. Lastly, the degree of Circadian Rhythm (Moderately diurnal vs. Definitely diurnal) has no moderating effect on the Academic Performance of students.

Conclusion

The timeliness and relevance of this study stem from students in the accountancy program being subjected to a Grade Retention Policy and the same policy is being instilled even during the pandemic. In this situation, every change in the students' grades has a greater weight and impact on their overall Academic Performance. Students who rely on scholarships based on their GPA

have to do well and maintain a high GPA, especially since the university regulated a stricter policy recently, in regard to scholarships. Hence, determining the factors that may affect their Academic Performance will be of great help to adjust in ways advisable and necessary.

The study reveals that incorporating the impact of the two variables has resulted in significant differences in the Academic Performance of students with different Circadian Rhythms enrolled in the different Class Schedules. Although individually, Circadian Rhythm and Class Schedule have no significant impact on Academic Performance, what matters is matching these two variables because it impacts the students' performance. It emphasizes that as much as possible, it is important for students to have a Class Schedule that is in sync with our Circadian Rhythm so that they can obtain higher grades, which is the measure of Academic Performance. It was also discovered that the level or degree of Morninngness or Eveningness has no significant moderating effect on the impact of matching status on Academic Performance.

Despite several studies tackling topics related to the effects of sleep-wake patterns and how it affects Academic Performance, those were mostly focused on one variable, either the Class Schedule or the Circadian Rhythm. Rather than looking at one variable alone, this study bridges the aforementioned gap, that is to address the joint effect of the Circadian Rhythm and Class Schedule towards Academic Performance to yield a more consistent result.

Concerning the previously discussed variables, this study presents how those play a factor in peoples' lives. Students should be more aware of themselves and know how they can adapt to their chronotype preference. Institutions can use this study as a guide in preparing programs to cater to various types of students. It may also help professors to further understand the chronotype patterns their students present with their performance. Furthermore, this study can be used as a benchmark for other undertakings for future researchers.

Recommendations

With the analysis and conclusions presented, these are the recommendations that the study would like to impart, which, if taken into consideration, would be beneficial to its stakeholders.

Students are recommended to be aware of their Chronotype preference and why it matters. They can do such by taking the Morningness-Eveningness Questionnaire that is available online. Being aware of what time they are at their peak and matching that to their Class Schedule will impact their performance.

If the students take the test and the resulting Circadian pattern from the MorningnessEveningness Questionnaire matches an available schedule, it is advised that the students enroll for that schedule as it will enable them to perform at their peak and achieve optimal Academic Performance. However, if the available schedules do not match the Circadian pattern resulting from the Morningness-Eveningness Questionnaire, then it is recommended that the students gradually realign their sleep-wake patterns to the schedule that is available to them. Since the classes offered by the university is beyond the control of the students, diurnal and nocturnal behaviors must be changed if needed.

Furthermore, institutions can use the findings of this study to assess their current Class Schedules. They should investigate the possibility of whether there is a need to revise or amend such Class Schedules. It will help create effective Class Schedules that can accommodate different types of individuals to achieve a more inclusive learning strategy regardless of the chronotype preference of the students.

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An Empirical Investigation on the Effects of Perceptual and Non-Perceptual Measures on Career Advancement among Managers, Directors and Partners of the Top 6 Auditing Firms in the Philippines

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Abstract – Advancement in one's career has become a significant expectation for every career-minded professional. The unquenchable thirst for career advancement has led researchers to extensively analyze the issues related to career advancement including the factors affecting it. Literature, conducted in various contexts, shows interesting and diverged results. From here, the study was drawn to determine the effects of perceptual and non-perceptual measures on career advancement among managers, directors, and partners of the top 6 auditing firms in the Philippines. To understand career advancement, two measures were used in the study, namely: objective measures (total cash compensation and number of levels away from the managing partner) and subjective measure which is perceived career satisfaction. On the other hand, the factors used to explain career advancement include perceptual measures (supervisory support, developmental experience, perceived organization support, role conflict, role ambiguity, procedural justice and distributive justice) and non-perceptual measures (demographic, human capital, organizational and interpersonal factors). With the data collected from 212 accountants, quantitative analyses were conducted using Partial Least Squares-Structural Equation Modelling (PLS-SEM). The results of the study clearly show that career advancement of a professional accountant depends on the actions of both the organization and the individual. The common predictors among the measures of career advancement are role ambiguity and educational attainment.

Keywords: *Career Advancement, Perceptual Measures, Non-perceptual Measures, Objective Career Advancement, Subjective Career Advancement, Professional Accountants*

INTRODUCTION

Background of the Study

Career advancement is referred to as the upward movement of job level, position and title in an organizational hierarchy and an increase in earnings or income (Jauhar & Lau, 2018). Career success is defined by Shockley, Ureksoy, Rodopman, Poteat & Dullaghan (2015) as the accomplishment of desirable work-related outcomes at any point in a person's work experiences over time. In this study, the two concepts – career advancement and career success may be used interchangeably.

Researchers often operationalize career advancement in two ways. The first includes variables that measure objective or extrinsic career advancement. These are indicators that can be seen, observed, and evaluated objectively by others (Ng, Eby, Sorensen & Feldman, 2005).

Several researchers used total compensation, number of promotions, rank and current pay grade as objective measures. Career advancement extends beyond traditional objective factors, several studies have applied the concept of subjective career advancement (Shockley, Ureksoy, Rodopman, Poteat & Dullaghan, 2015). Subjective or intrinsic career advancement measures capture individuals' subjective judgments about their career attainments (Ng, Eby, Sorensen & Feldman, 2005). Studies on subjective career advancement used measures such as career satisfaction, job satisfaction, advancement satisfaction and perceived career success (Supangco, 2011).

What factors lead some individuals to be successful in their careers? Every professional is probably focused on wanting to know the "recipe" or the factors that would make them successful in their own fields. The interest in career advancement could be related to the theory of evolution or the "survival of the fittest" in which professionals try to thrive to be the fittest, or at least to be the fittest, to compete in the corporate jungle (Thurasamy, Lo, Amri & Noor, 2011). Because of these, several studies have been done to determine career advancement factors. These factors include perceptual and non-perceptual measures. Perceptual measures include supervisory support, developmental experience, perceived organization support, role conflict, role ambiguity, procedural justice, and distributive justice. Non-perceptual measures include demographics, human capital factors, organizational factors, and interpersonal processes.

While there have been studies exploring the effects of various perceptual and non-perceptual measures on objective and subjective career advancement, some studies showed different results. Additionally, they were conducted in various contexts which may have changed over time. None of the previous studies have tried to determine career advancement factors of professional accountants in the Philippines. Thus, this motivated the researcher to conduct this study.

The study generally aimed to determine the effects of perceptual and non-perceptual measures on objective and subjective career advancement among managers, directors and partners of the top 6 auditing firms in the Philippines. This study has progressed incorporating all related studies to contribute meaningful insights about career advancement of professional accountants with evidences from the Philippines.

Statement of the Problem

The study asked the general question, "What are the effects of perceptual and non-perceptual measures on career advancement among managers, directors and partners of the top 6 auditing firms in the Philippines?"

Specifically, it sought answers to the following questions:

1. What are the effects of perceived (a) supervisory support, (b) developmental experience, (c) organizational support, (d) role conflict, (e) role ambiguity, (f) procedural justice, and (g) distributive justice on the objective and subjective measures of career advancement among managers, directors and partners?
2. What are the effects of (a) demographic, (b) human capital, (c) organizational factors, and (d) interpersonal processes on the objective and subjective measures of career advancement among managers, directors and partners?

Framework of the Study

Conceptual/Theoretical Framework

The interest in career advancement could be related to the theory of "survival of the fittest." Every career-minded individual is believed to be focused on wanting to know the "recipe" or factors that would allow him or her to be the fittest, or at least be among the fittest, to compete in the corporate jungle. The thirst for career advancement is unquenchable and thus has led to many researchers spending time and effort analyzing career advancement factors (Thurasamy, Lo, Amri and Noor, 2011). As stated by Garavan, et al. (2006) as cited in Thurasamy, Lo, Amri and Noor (2011), research on career advancement has focused on how the shape of traditional career paths has changed due to increasing environmental uncertainty.

The theory of human capital holds that education directly augments individual productivity and therefore earnings. By forgoing current earnings and investing in education, individuals can improve the quality of their labor services in such a way as to raise their future market value. According to this view, human capital is akin to physical capital, the acquisition of which entails a present cost but a future benefit (Aracil and Albert, 2018). Furthermore, as students (future workers) accumulate human capital, their value in the marketplace increases as they bring more expertise and effectiveness to their job tasks. If human capital increases with additional education, a worker's market value should theoretically increase in proportion to the amount of education he or she receives, often captured by the total number of credits accumulated (Xu and Fletcher, 2017).

In signaling theory, education acts as a signaling or screening device for unobservable ability. Merwe (2010) also added that screening theory posits that the value of higher education credentials flows primarily from their value as signals to potential employers of the abilities of the holders of such qualifications. This is confirmed by Page (2010) when he highlights that as employers cannot observe potential workers' actual productivity, they instead use educational qualifications to predict productivity, make hiring decisions, and set wages, based on the assumption that individuals who have more years of education are more productive.

The theory of career choice maintains that in choosing a career, people prefer jobs where they can be around others who are like them. They search for environments that will let them use their skills and abilities, and express their attitudes and values, while taking on enjoyable problems and roles (New Zealand Government Careers, n.d.).

From career point of view, the Expectancy Theory suggests that effective learning is most likely to occur when professionals have confidence in themselves if they work hard. They are also likely to work and do their jobs better when the job is linked to desired outcomes like improved work performance, better pay, peer recognition, possibility of promotion, etc. (Mugisha, 2015).

Operational Framework

Figure 1 shows the graphical presentation of the operational framework which gives the overview of what the study intends to determine. It provides the variables used in the study. The independent variables used in the study include both perceptual and non-perceptual measures. Perceptual measures include Supervisory Support (SS), Developmental Experience (DE), Organizational Support (OS), Role Conflict (RC), Role Ambiguity (RA), Procedural Justice, (PJ) and Distributive Justice (DJ). On one hand, non-perceptual measures include demographic variables – Gender (G) and Marital Status (MS), human capital factors – Educational Attainment (EA), Work Experience (WE), Tenure in the Organization (TO), Tenure in the Position (TP), Number of Organizations Worked For (NO), Licenses (L) and Certifications (C), organizational

factor measured by Number of Employees in the Organization (NE), and interpersonal processes measured by Mentoring (M).

The dependent variable used in the study is career advancement which is operationalized in two ways. The first includes variables that measure objective or extrinsic career advancement. These are indicators that can be seen, observed, and evaluated objectively by others (Ng, Eby, Sorensen & Feldman, 2005). Objective measures of career advancement in this study include Total Cash Compensation (TCC) and Number of Levels from the Managing Partner (LMP). Career advancement extends beyond traditional objective factors. Several studies have applied the concept of subjective career advancement (Shockley, Ureksoy, Rodopman, Poteat & Dullaghan, 2015). Subjective or intrinsic career advancement measures capture individuals' subjective judgments about their career attainments (Ng, Eby, Sorensen & Feldman, 2005). The subjective measure in this study is Career Satisfaction (CS) scales developed by Greenhaus, Parasuraman and Worley (1990) and Turban and Dougherty (1994).

Model 1 which shows the effects of perceptual measures on career advancement is presented in Figure 2. Model 2 which shows the effects of non-perceptual measures on career advancement is presented in Figure 3.

Figure 1
Operational Framework

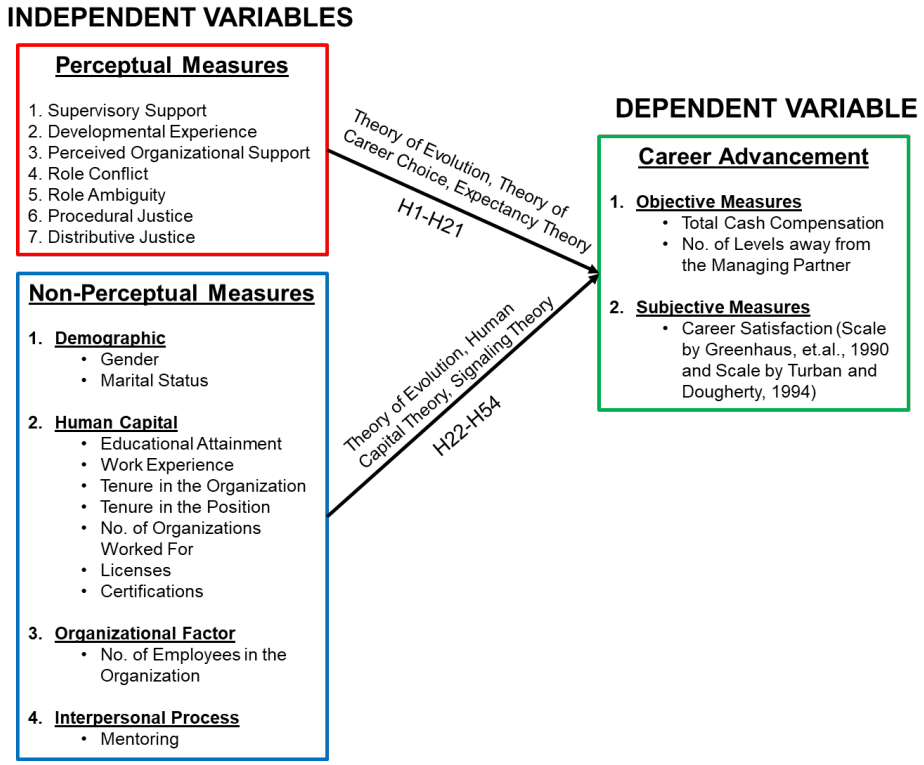


Figure 2
Effects of Perceptual Measures on Career Advancement Model

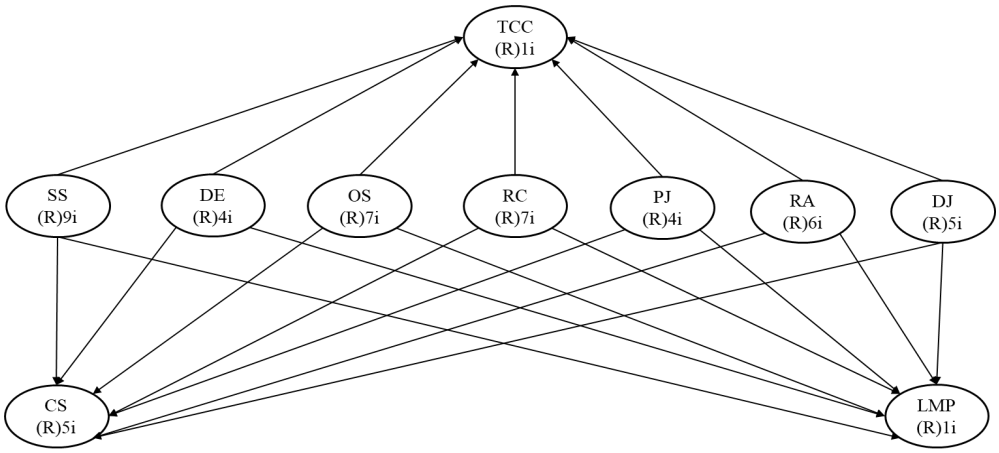
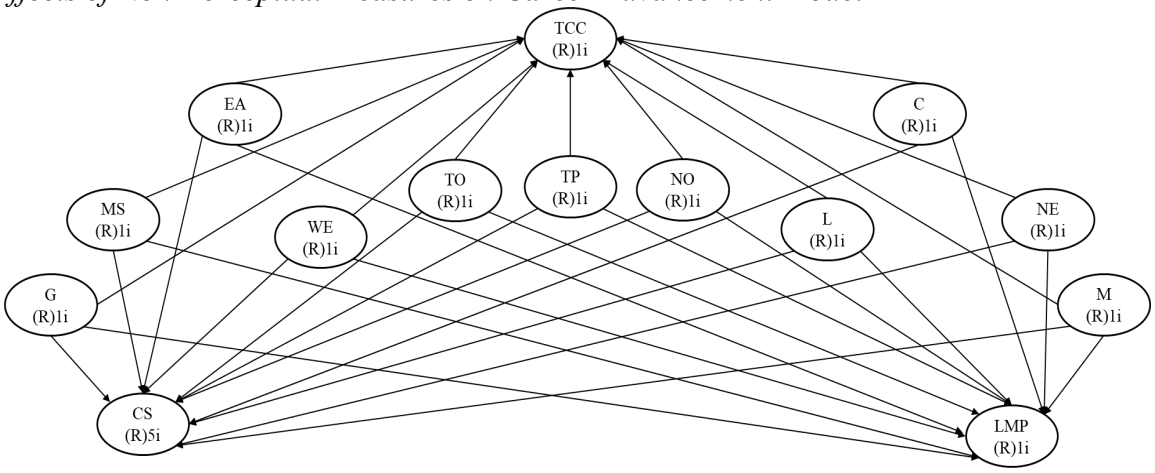


Figure 3

Effects of Non-Perceptual Measures on Career Advancement Model



Review of Related Literature

Several studies have been conducted on the effects of various factors on career advancement resulting to consistent and/or contradicting findings. The studies found focused primarily on the effects on salaries and perceived career satisfaction, with limited information on the effects on the number of levels away from the managing partner. Table 1 presents the a-priori expectations in the study based on previous literature gathered and results of studies previously documented.

For the effects of perceptual measures on career advancement, the results of previous studies show the same and consistent results even if the studies are done in various contexts. For the effects of non-perceptual measures on career advancement, studies reveal different results. This study, however, aimed to contribute insights on the effects of perceptual measures on career advancement with evidences from the accountancy practice in the Philippines.

Table 1
A-priori Expectations

Effect of	A-priori Expectations	Supporting Studies
Supervisory Support on Career Advancement	+	Greenhaus, Parasumaran & Wormely (1990), Ng, Eby, Sorensen & Feldman (2005), Thurasamy, Lo, Amri & Noor (2011)
Developmental Experience on Career Advancement	+	Ng, Eby, Sorensen & Feldman (2005), Supangco (2011)
Perceived Organizational Support on Career Advancement	+	Jawahar & Hemmasi (2006), Karatepe (2011), Loi & Ngo (2008)
Role Conflict on Career Advancement	-	Bedeian & Armenakis (1981), Igbaria & Guimaraes (1999)
Role Ambiguity on Career Advancement	-	Bedeian & Armenakis (1981), Igbaria & Guimaraes (1999), Supangco (2011)
Procedural Justice on Career Advancement	+	Loi & Ngo (2008), Saraih, Ali & Khalid (2015), Supangco (2011)
Distributive Justice on Career Advancement	+	Kim (2017), Saraih, Ali & Khalid (2015)
Demographics on Career Advancement		
Gender	+/-	Supangco (2011), Thurasamy, Lo, Amri & Noor (2011), Gerson, et.al. (2007), Windsor & Auyeung (2004)
Marital Status	+/-	Judge, Cable, Boudreau & Bretz (1994), Ng, Eby, Sorensen & Feldman (2005), Pfeffer & Ross (1982), Supangco (2011), Thurasamy, Lo, Amri & Noor (2011)
Human Capital on Career Advancement		
Educational Attainment	+	Judge, Cable, Boudreau & Bretz (1994), Ng, Eby, Sorensen & Feldman (2005)
Work Experience	+/-	Ng, Eby, Sorensen & Feldman (2005), Supangco (2001), Supangco (2011), Whitely, Dougherty & Dreher (1991)

Tenure in the Organization	+	Ng, Eby, Sorensen & Feldman (2005), Supangco (2011), Thurasamy, Lo, Amri & Noor (2011)
Tenure in the Position	+/-	Ng, Eby, Sorensen & Feldman (2005), Supangco (2011)
No. of Organizations Worked For	-	Supangco (2011)
Licenses and Certifications		-
Organizational Factor (No. of Employees in the Organization) on Career Advancement	+/-	Judge, Cable, Boudreau & Bretz (1994), Ng, Eby, Sorensen & Feldman (2005), Supangco (2001), Supangco (2011)
Interpersonal Process (Mentoring) on Career Advancement	+	DeCastro, Griffith, Ubel, Steward & Jagsi (2014), Ismali (2007), Whitely, Dougherty & Dreher (1991)

The study primarily focused on the factors affecting career advancement of managers, directors and partners of the top 6 auditing firms in the country. While there have been studies exploring the effects of various perceptual and non-perceptual measures on objective and subjective career advancement, some studies show different results. Additionally, they were conducted in various contexts which may have changed over time.

None of the previous studies have tried to determine factors affecting objective and subjective career advancement of CPAs in the Philippines using the perceptual and non-perceptual measures as used in the study. This study progressed incorporating all related studies to contribute meaningful insights about career advancement of professional accountants with evidences from the Philippines.

Methodology

Research Design

The study utilized the descriptive-quantitative type of research and causal-explanatory method. It used primary data which are gathered directly from the survey questionnaires that the respondents answered. The survey questionnaire includes scales and statements developed by various researchers. To ensure that the research instrument is valid and applicable to the current study, the researcher submitted the questionnaire to the Institutional Testing and Evaluation Office (ITEO) of DLSU for validation. Moreover, to measure the reliability of the scale used in the survey questionnaire, the Cronbach's alpha for each of the variables was computed.

Population and Sampling Design

The population in the study was limited to CPAs who are managers, directors, and partners in the top 6 auditing firms in the Philippines. These are the top 6 most sought-after auditing firms by the country's leading companies included in the 2015 and 2016 edition of BusinessWorld's Top 1000 corporations in the Philippines. There are a total of 11,635 professionals working in said firms and a total of 1,636 managers, directors, and partners.The study used the GPower software in conducting the power analysis. It yielded a conservative sample size of 208. This means that the

present study requires a minimum sample of 208 to achieve a statistical power of 80% for detecting a small to medium effect size of .085, with a 5% level of significance. The sample size per firm was proportionally determined.

Data Analysis

Descriptive statistics presented the coefficients summary of the data set using mean, standard deviation and frequency distribution for all variables used in the study. It was utilized in order to summarize and provide a comprehensive description of the data collected. The researcher used the data analysis function in Excel.

Structural equation modeling (SEM) employing the partial least squares (PLS) method or PLS-SEM is being used extensively in various fields. The present study employed PLS-SEM to investigate the relationship among the variables under consideration, specifically in testing the following hypotheses: H_1 to H_{21}: Effects of the perceptual measures on total cash compensation, number of levels away from the managing partner and career satisfaction and H_{22} to H_{54}: Effects of the non-perceptual measures on total cash compensation, number of levels away from the managing partner and career satisfaction. Internal Consistency and Reliability, Convergent Validity, Discriminant Validity, Multicollinearity, Coefficient of Determination and Effect size using Cohen's F^2 Model were also examined.

Results and Discussion

Descriptive Statistics

The researcher was able to gather 212 responses from the online survey questionnaire distributed to managers, directors, and partners of the top 6 auditing firms in the Philippines. Table 2 shows the demographic profile of the respondents. Almost half of the respondents (103) are from Firm A, 31 are from Firm B, 22 each from Firm E and Firm F, 19 are from Firm C and 15 are from Firm D. The sample size per firm was proportionally determined based on the total number of managers, directors, and partners in the said firm. Majority of the respondents (165) are managers, 42 are directors and 5 are partners. Out of the 212 respondents, 117 of them are females and 95 are males. Majority of the respondents (137) are single, 72 are married, 2 are widowed and 1 is separated.

Table 2

Demographic Profile of the Respondents

Variable	Frequency	Percent	Rank
Company/Organization			
Firm A	103	48.58	1
Firm B	31	14.62	2
Firm C	19	8.96	5
Firm D	15	7.08	6
Firm E	22	10.38	3.5
Firm F	22	10.38	3.5
Total	212	100.00	
Job Level			
Manager	165	77.83	1
Director	42	19.81	2

Partner	5	2.36	3
Total	212	100	
Gender			
Male	95	44.81	2
Female	117	55.19	1
Marital Status			
Single	137	64.62	1
Married	72	33.96	2
Divorced	0	0.00	5
Separated	1	0.47	4
Widowed	2	0.94	3
Total	212	100.00	

Table 3 shows that the highest educational attainment of the 140 respondents is bachelor's degree, 63 have master's degrees and only a small percentage of the respondents have doctorate degrees and diploma (post-baccalaureate).

Table 3

Profile of the Respondents on Human Capital Measures

Variable	Frequency	Percent	Rank
Highest Educational Attainment			
Bachelor's Degree	140	66.04	1
Diploma (Post-baccalaureate)	2	0.94	4
Master's Degree	63	29.72	2
Doctorate Degree	7	3.30	3
Length of Work Experience			
1 to 5 years	38	17.92	3
6 to 14 years	126	59.43	1
15 to 20 years	40	18.87	2
Above 20 years	8	3.77	4
Tenure in the Present Organization			
1 to 5 years	81	38.21	2
6 to 14 years	118	55.66	1
15 to 20 years	9	4.25	3
Above 20 years	4	1.89	4
Total	212	100.00	
Tenure in the Present Position			
1 to 5 years	187	88.21	1
6 to 14 years	22	10.38	2
15 to 20 years	2	0.94	3
Above 20 years	1	0.47	4
Total	212	100.00	

Number of Organizations Worked For Since Graduation			
1 to 2	121	57.08	1
3 to 4	78	36.79	2
5 to 6	12	5.66	3
More than 6	1	0.47	4
Total	212	100.00	
Holder of other professional licenses aside from CPA license			
Yes	27	12.74	2
No	185	87.26	1
Total	212	100.00	
Holder of other professional certifications			
Yes	71	33.49	2
No	141	66.51	1
Total	212	100.00	

Almost 60% (126) of the respondents have 6 to 14 years of work experience while only few have been in the professional service for more than 20 years. Moreover, 118 of the respondents have been in their present organization for 6 to 14 years and 187 have been in their present position for 1 to 5 years. In addition, 121 of the respondents have worked for 1 to 2 organizations since graduation. Only 27 respondents are holders of other professional licenses and 71 are holders of other professional certifications.

Table 4

Profile of the Respondents on Organizational and Interpersonal Process Factors

Variable	Frequency	Percent	Rank
Career Mentor			
Yes	140	66.04	1
No	72	33.96	2
Total	212	100.00	
Number of Employees in the Present Organization			
Less than 1,000	48	22.64	3
1,000 to 2,000	53	25.00	2
2,001 to 3,000	4	1.89	6
3,001 to 4,000	5	2.36	5
4,001 to 5,000	22	10.38	4
More than 5,000	80	37.74	1
Total	212	100.00	

Table 4 reveals that 140 of the respondents indicated that they have career mentor. In addition, about half of the respondents indicated that there are more than 3,000 employees in their present organization.

Table 5
Summary of Responses on the Objective Measures of Career Advancement

Variable	Frequency	Percent	Rank
Monthly Gross Salary or Income			
Below P20,000	1	0.47	7
P20,000-P39,999	21	9.91	4
P40,000-P59,999	64	30.19	2
P60,000-P79,999	71	33.49	1
P80,000-P99,999	36	16.98	3
P100,000-P150,000	13	6.13	5
Above P150,000	6	2.83	6
Total	212	100.00	
Number of Levels Away from the Managing Partner			
0	2	0.94	7
1	9	4.25	6
2	47	22.17	2
3	52	24.53	1
4	45	21.23	3
5	31	14.62	4
More than 5	26	12.26	5
Total	212	100.00	

Table 5 shows the two objective measures of career advancement: total cash compensation and number of levels away from the managing partner. As shown in the table, 71 of the respondents are earning P60,000-P79,999 and 64 are earning P40,000-P59,999. Most of the respondents indicated that they are 2 to 4 levels away from the managing partner. Since majority of the respondents are managers, it can be inferred that their average cash compensation is P40,000-P79,999 with 2 to 4 levels away from the managing partner.

Table 6
Summary of the Respondents' Perceptions on the Latent Variables

Variable	Min	Max	Std. Dev.	Mean	Verbal Interpretation
Career Satisfaction (CS)	1	5	0.54	4.12	Agree
	1	5	0.80	3.75	Successful
	1	3	0.54	1.97	On Schedule
Supervisory Support (SS)	1	5	0.49	4.11	Agree
Developmental Experience (DE)	1	5	0.54	4.25	Agree
	1	5	0.70	3.89	To a Large Extent
Organizational Support (OS)	1	5	0.50	3.67	Agree
Role Conflict (RC)	1	5	0.94	2.52	Neither Agree nor Disagree
Role Ambiguity (RA)	1	5	0.48	4.14	Agree
Procedural Justice (PJ)	1	5	0.46	4.18	Agree

Distributive Justice (DJ)	1	5	0.82	3.76	Agree

To summarize, results show that most of the respondents agree on the question-statements on perceived supervisory support, organizational support, role ambiguity, procedural justice, and distributive justice. For role conflict, most of the respondents are neutral while for developmental experience, the respondents indicated that they agree and to a large extent on the given statements. For career satisfaction, most of the respondents agree that they are satisfied and successful in their careers and they are on schedule.

Figure 4

Effects of Perceptual Measures on Career Advancement Model with Path Coefficients

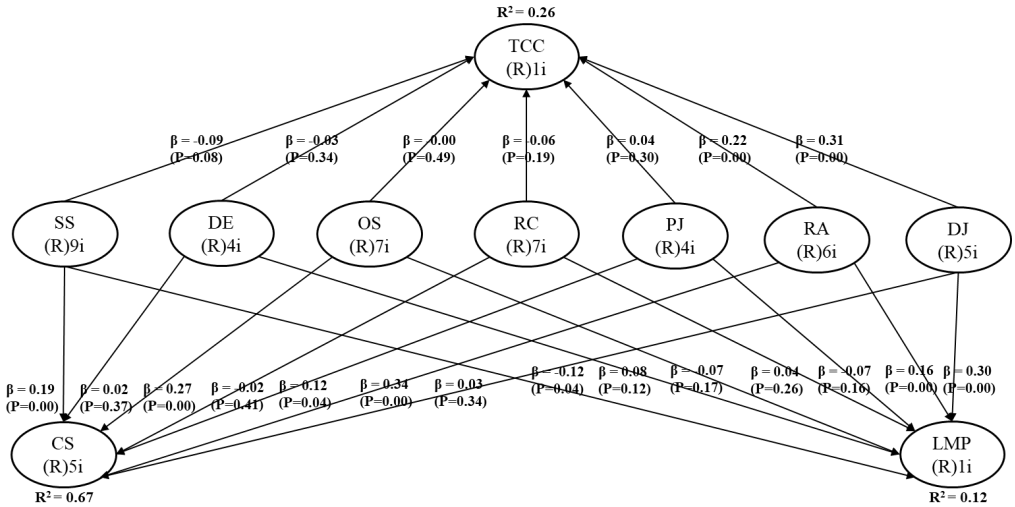


Table 7

Summary of the Effects of Perceptual Measures on Career Advancement

Model 1			
Independent Variable	**TCC**	**LMP**	**CS**
Supervisory Support (SS)		-0.121*	0.192**
Developmental Experience (DE)			
Organizational Support (OS)			0.270**
Role Conflict (RC)			
Role Ambiguity (RA)	0.219**	0.161**	0.343**
Procedural Justice (PJ)			0.120*
Distributive Justice (DJ)	0.305**	0.301**	
R^2	0.260	0.120	0.670

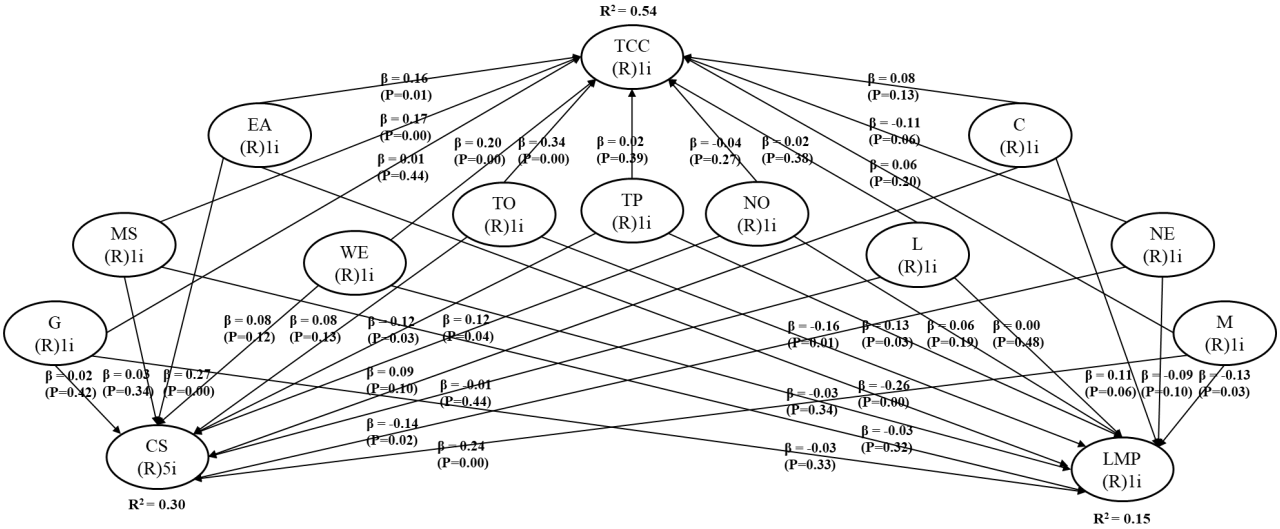
*Note: *p<0.05, **p<0.01*

To summarize, Model 1 explains 26% of the variation in total cash compensation, 12% in the number of levels away from the managing partner and 67% in career satisfaction. R^2 or the coefficient of determination is a measure of predictive accuracy. Role ambiguity and distributive justice significantly explain the differences in total cash compensation. The distance from the managing partner is inversely related to supervisory support but positively related to role

ambiguity and distributive justice. Supervisory support, organizational support, role ambiguity and procedural justice are all positively related to career satisfaction.

Figure 5

Effects of Non-Perceptual Measures on Career Advancement Model with Path Coefficients



To summarize, Model 2 explains 54% of the variation in total cash compensation, 15% in the number of levels away from the managing partner and 30% in career satisfaction. Educational attainment, work experience, and tenure in the organization positively influence total cash compensation, while single employees earn less than married, separated, and widowed employees in the sample. The distance from the managing partner is inversely related to educational attainment, tenure in the organization, and mentoring but is directly related to tenure in the organization. Educational attainment, tenure in the position, number of organizations worked for since graduation, and mentoring are all positively related to career satisfaction, while the number of employees in the organization is negatively related.

Table 8

Summary of the Effects of Non-Perceptual Measures on Career Advancement

	Model 2		
Independent Variable	**TCC**	**LMP**	**CS**
Gender (G)			
Marital Status (MS)	0.167**		
Educational Attainment (EA)	0.155*	-0.255**	0.270**
Work Experience (WE)	0.204**		
Tenure in the Position (TP)		0.127*	0.123*
Tenure in the Organization (TO)	0.341**	-0.163**	
No. of Organizations Worked For (NO)			0.120*
Licenses (L)			
Certifications (C)			
No. of Employees in the Organization (NE)			-0.137*

Mentoring (M)		-0.132*	0.238**
R^2	0.54	0.15	0.30

*Note: *p<0.05, **p<0.01*

Conclusions

The study clearly shows that career advancement of a professional accountant depends on the actions of both the organization and the individual. The study also identified various perceptual and non-perceptual measures that determine career advancement.

Perceptual measures that account for difference in total cash compensation include role ambiguity, which signifies that clarity on one's role job responsibility and authority affect one's salary level; and distributive justice, which indicates that employees who perceive that their work schedule, level of pay, workload, rewards received, and job responsibilities are fair tend to receive higher cash compensation. Non-perceptual measures that positively influence total cash compensation are marital status, work experience, and tenure in the organization. CPAs who are married, with longer work experience, and with longer tenure in the organization tend to receive higher compensation. The added responsibility of being married gives an additional motivation and reason for employees to work harder and accept more challenging assignments. Both work experience and tenure in the organization are human capital factors. As employees accumulate human capital, their value in the marketplace increases as they bring more expertise and effectiveness to their job tasks, thus the employees with longer work experience and service tenure enjoy a higher compensation.

Number of levels away from the managing partner is explained by supervisory support, role ambiguity, and distributive justice. Employees who have good assessment on the perceived support that they get from their supervisors in doing their jobs are positioned nearer to the level of the managing partner. Interestingly, employees who have clear understanding of their role and authority and those who perceive that their work schedule, level of pay, workload, rewards received, and job responsibilities are fair tend to be in a job level that is farther of that of the managing partner. The model explaining the number of levels away from the managing partner shows that tenure in the organization and mentoring are inversely related while tenure in the position is directly related. The results indicate that CPAs who stay in their present position for so long are positioned father away from the managing partner but those who have stayed longer in their present organization and those who have career mentors would have job levels that are nearer to that of the managing partner. The length of stay in the present position and the present organization has an effect on one's job level. Staying in a position for too long creates a feeling of stagnation in one's career. But staying in the present organization for too long may mean that one is satisfied with the present work environment and may also mean loyalty to the organization which is being reciprocated with promotions leading to a job level that is nearer to the managing partner. Moreover, based on the result, career mentoring is related to promotion rate which leads also to a job level that is nearer to the managing partner. The mentor imparts knowledge and skills to the protégé. As these accumulate, they become part of human capital that contribute to one's productivity which may lead to promotions.

Perceived career satisfaction is influenced by four perceptual measures namely supervisory support, organizational support, role ambiguity, and procedural justice. This means that supervisor's and organization's support are critical to an employee's career satisfaction. The more the supervisors and the organization, as a whole, support their employees considering their career goals and values, care about their well-being and general satisfaction as well as extend themselves

in order to help their employees perform their jobs to the best of their abilities, the more that they feel satisfied with the success they have achieved in their career. Moreover, employees feel satisfied with the progress they have made toward meeting their overall career goals including goals for income, advancement, and development of new skills. When employees are involved in making decisions that directly affect their work and in implementing such decisions, they also feel satisfied at work. Other factors that positively influence career satisfaction are tenure in the position, number of organizations worked for after graduation and mentoring. Number of employees in the organization is indirectly related. CPAs who have stayed longer in their current position, who worked for more organizations after graduation and with career mentors tend to be more satisfied in their careers while employees in large organizations feel less satisfied. Employees who have worked in many organizations bring more expertise and effectiveness to their job tasks which may lead them to feel satisfied with their career progress. The presence of a career mentor is also critical in one's perception to career satisfaction as the mentor helps the protégé with workplace learning and leadership principles in career advancement. Other things being equal, those in larger organizations may feel less satisfied as to their career progress as larger organizations have more complex work set-up.

Recommendations

In the light of the conclusions of the study, the researcher strongly recommends the following:

Professional Accountants. It is recommended that professional accountants consider pursuing diploma courses, master's and doctorate degrees that are related to their jobs in order to develop their knowledge and skills. In addition, professional accountants must establish a relationship with a more experienced person who can be their career mentor who can impart learning and leadership principles which the protégé can utilize. Furthermore, professional accountants must also undertake different examinations to earn additional licenses and certifications. In doing so, new knowledge and skills can be gained and as they accumulate, their value in the marketplace will definitely increase. Career plans and strategies may be derived directly from the variables that turned out to be significant in explaining career advancement. The results should give the professional accountants insights in making sound decisions about what path to take, goals to pursue and how to achieve them. Developing effective career strategies is important, especially now that RA 10912 or the PQF Act has been approved, in evaluating one's career progression.

Auditing Firms. Firms must encourage and support their employees in their attempts to acquire additional training or education to develop their skills and knowledge for their personal and professional growth. The firms must offer scholarships for their employees who want to take their master's and doctorate degrees. In addition, firms should use the results as a baseline data on their assessment of the company's current practices, policies and the company culture as a whole in ensuring that their employees are supported well, feel satisfied and have continuous development. The firms must continue to look for ways on how to support their employees, to care about the well-being and general satisfaction at work and to always extend themselves to help their employees progress in their careers.

PRBOA, PICPA and ACPAPP. The Professional Regulatory Board of Accountancy (PRBOA) should utilize the findings of the study for them to have an overview of the current profile of the professional accountants working in the top 6 auditing firms in the Philippines. Specifically, they use the results as an additional input in the formulation and implementation of

the career progression and specialization program for accountants. It is further recommended that PICPA and ACPAPP should consider conducting needs assessment on what particular trainings and seminars are needed to develop the knowledge and skills of the professional accountants working in the public practice sector. In doing so, they will be helping the professionals in their career progression. PRBOA, PICPA and ACPAPP must make sure that roles and responsibilities of professional accountants have predictability, clarity, and certainty especially in dealing with clients. They must provide continuous assistance to practitioners in improving the quality of their audit works and in determining the level of compliance with the requirements of the Philippine Standard on Quality Control or PSQC.

Future Researchers. The researcher recommends the academic community to utilize the current study as a future reference for academic discussions on topics related to career advancement and the different measures and variable used. Moreover, future researchers can explore into other measures that can indicate the variables at hand, especially on licenses and certifications, and can also explore on the possible effect of job ranks in career advancement. A similar study can also be conducted utilizing the 2nd tier firms and the professional accountants from other sectors (Commerce and Industry, Government and Academe) in the accountancy practice.

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Financial Literacy, Financial Attitude Among Business Students: Inputs to Course Enhancement

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Abstract – The study discloses Filipinos are seen to be financially illiterate and vulnerable to making terrible financing, investing, and money management decisions. Financial literacy among young adults is a social challenge, and illiteracy restricts people's ability to make sound financial decisions. This study surveyed two hundred (200) business students to analyze the students' financial literacy, where the variables of the study are; the impact of financial knowledge on attitudes, behavior, and decisions; the influence of environmental and social factors; and problems students encountered on financial literacy. The distribution of standardized surveys was online responses which were analyzed using descriptive statistics. Results show that 81% of the respondents have lower financial literacy levels. Sex, age, year level, and the program do not directly impact a student's financial literacy. Overall, business students exhibited remarkable responses in all variables of financial attitude, behavior, and decisions. Financial knowledge has a significant influence on financial attitude and determination, whereas it does not entirely influence behavior. Life experiences, followed by parental influence, have the most significant influence on business students' money management practices. Most students exhibit signs of being impulsive buyers. Students with little knowledge are more likely to make poor judgments and incorrect attitudes. The limited ability of business students to make educated decisions was due to their lack of financial literacy. Individuals who cannot manage their money are of social concern.

Keywords: *Financial literacy, financial knowledge, financial behavior, financial attitude, financial decisions*

INTRODUCTION

Finance is a highly complex subject, and majoring in it could take years of study. On the other hand, financial literacy does not imply that a person should be a financial guru or have a specialist degree in finance. But it refers to an individual's basic knowledge and understanding of any area of finance that can assist them in making knowledgeable, rational, and relevant financial decisions and practices. Financial literacy among a group of people has become a global concern, a basic knowledge that every individual must have to survive. Lack of this basic knowledge would hinder achieving financial goals, limit opportunities, and cause financial problems and lower financial well-being.

It is of paramount importance to handle finances at a young age personally. It would identify those who will have guaranteed long-term stability, a prosperous future, and debt-free adulthood. Financial literacy is a collection of skills and expertise that enables a person to make intelligent and successful financial choices using all of their capital. Further, as described by

academic researchers, is the ability to use knowledge and skills to effectively manage one's financial resources for lifetime stability (Mandell, 2009).

Meanwhile, financial literacy refers to the understanding of monetary items, concepts, the mathematical knowledge critical for effective financial decision-making and activities such as financing (Hastings et al., 2013). Hogarth and Hilgert (2002) stated that financially literate individuals are knowledgeable, educated, and informed on the issues of managing money and assets, banking, investment, credit, insurance, and taxes. And those who understand the basic concepts underlying the management of funds and assets and those who use that knowledge and understanding to plan and implement financial decisions.

In today's world, one's ability to handle finances personally has become radically essential; being financially literate is of paramount importance as it aids individuals in making sound financial decisions. A critical phase among college students is being financially knowledgeable, as it decides whether they'd be able to handle their finances effectively once they earn their own money. In addition to individual growth, financial literacy also provides assistance to improve a country's economic growth and development.

Generation Z, a group of people born between 1995 and 2000, is where most college students belong. The need for this group of people to be financially competent is of utmost importance as the number of seniors who have neglected to plan for retirement rises dramatically. It also found that seniors and retired individuals rely on their children for financial support. Chen and Vope's (1998) study concluded that most college students are financially illiterate about personal finance. The research showed that investment is the weakest point in general knowledge, savings and borrowing, investment, and insurance, with an average of 40 percent of the 924 students surveyed responding correctly to questions. One of most adults' inappropriate habits is that they end up spending more than their anticipated profits, contributing to tons of maturing obligations. Individuals who have not made sound financial choices will suffer from various financial reversals that could threaten their own lives and their families.

A study by Mandell and Klein (2009) revealed that being a full-time college student has a significant impact on an individual's financial behavior. They further analyzed that those who enroll and remain as full-time college students tend to be more focused, future-oriented, and willing to defer current consumption gratification for future benefits. One of the factors impeding the economy's faster growth is a lack of basic financial knowledge. Financial literacy and day-to-day money management skills are inextricably linked (Hilgert, Hogarth, and Beverly, 2003). A financially literate person is more likely to save for retirement, accumulate more wealth (Lusardi and Mitchell, 2007), and invest in capital markets and stocks (Arrondel, Debbich, and Savignac, 2012).

According to Montemayor (2018), which the Philippine News Agency published, the need to teach financial education to the youth. Based on the published news, individuals who started saving habits in their early adulthood have better attitudes toward saving than those who did not. Financial attitudes and behavior developed during childhood carry over into adulthood. Based on the findings, the World Bank concluded that a curriculum should be improved and incorporate financial education as one of the core subjects of education system programs.

Moreover, according to a recent survey, most Filipinos are financially illiterate. The 2014 Standard & Poor's Global Financial Literacy Survey, conducted in collaboration with McGraw Hill Financial, Gallup Inc., and the World Bank Development Research Group, examined four basic financial concepts: risk diversification, inflation, numeracy, and interest compounding, and found only one out of three adults is financially literate, with just 25% are Filipinos. When it comes

to daily money management, younger adults struggle more than their counterpart groups regarding budgeting, monitoring expenses, and not overspending. In contrast, respondents who saved at a young age outperform their counterpart group when choosing financial products and services, planning for old age expenses, and monitoring expenses (World Bank Financial Capability Survey, 2014).

Unfortunately, research has shown that most Filipinos are seen as financially illiterate, making them vulnerable to terrible financing, investment, debt management, and retirement decisions. Numerous people lack basic knowledge about how to save, how to invest, how to handle debt, and how to prepare for a solid financial future. In 2020, the World Bank reported that only 2% of Filipinos could correctly answer interest, inflation, and investment questions. In this pandemic, most people faced enormous financial problems due to job loss, business closures, payment of maturing obligations. Filipinos were challenged, among others, making it necessary to be financially literate as early as possible. Financial illiteracy limits Filipinos to many possibilities that could help them grow, and being economically unprepared leads to over-indebtedness that limits Filipinos to a better and more harmonious life. A study by Wang and Xia (2009) revealed that most college students are vulnerable to making impulsive purchases, inability to monitor expenses, and do not differentiate needs from wants

Business-related programs must have solid financial knowledge since they have taken sufficient financial courses to provide them with thorough personal finance, interest, inflation, compounding, and diversification skills. Failure to handle personal finances could become a global issue for both society and the country's economy.

Statement of the Problem

This research aimed to assess the financial literacy and financial attitude among business students in Manila.

This study ought to answer the following questions.

1. What is the level of financial literacy among college of business students in Manila?
2. What is the impact of having adequate or inadequate financial knowledge to the following:
    a. Financial Attitude
    b. Financial Behavior
    c. Financial Decision
3. How do the environmental and social factors influence the financial literacy of college students in Manila?
4. What are the problems encountered by college students regarding financial literacy?
5. Is there a significant influence between students' level of financial literacy and financial attitude?

Hypothesis of the Study

Ho1: There is no significant influence between the students' level of financial literacy and financial attitude.

Conceptual Framework

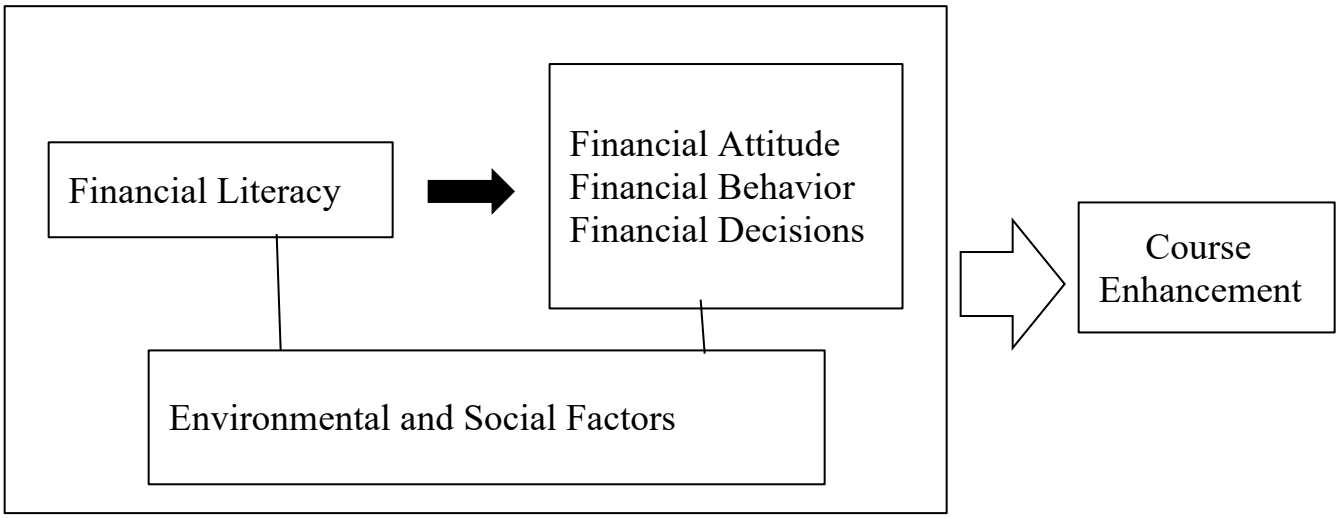

Figure 1. Paradigm of the Study

Figure 1 shows the impact of financial literacy on business students' financial attitude, behavior, and decision. The study also assesses the environmental and social factors that influence the students' financial literacy. The study hopes to provide and propose program development and course enhancement.

RESEARCH METHODS

The study used a mixed-method to achieve its goals and respond to the problem statement. Researchers used a random sampling procedure, and the sample came from the population of business students of the College of Business Education of the Technological Institute of the Philippines Manila. There are two types of data in the study: primary and secondary. The primary data is used to analyze the financial literacy of business students and is collected using standardized survey questionnaires. In contrast, the secondary information serves as the study's framework for a better understanding of the focus subject. The standardized survey questionnaires are culled from various similar studies on the same focus topics and distributed to respondents utilizing the google form via social media.

The research used descriptive statistics to calculate the average responses for each component per section and the section as a whole, as well as analysis of variance (ANOVA) to test the hypothesis and learn more about the influence between the dependent and independent variables, as well as to compare the means of the two groups. In the presentation of results, researchers used graphical and tabular analysis.

RESULTS AND DISCUSSION

This study aims to analyze the financial literacy of business students enrolled in the Technological Institute of Philippines - Manila.

Table 1: Percentage Score per Area of Literacy

Areas of Literacy	Low (<= 75%)	High (>75%)
Risk Diversification	69.00%	
Inflation	71.50%	
Numeracy	70.00%	
Compound Interest	48.25%	
Money Management	36.50%	
Savings and Investment	59.25%	
Spending and Credit		82.50%
Entire Section	58.46%	

Presented in table 1 among areas of literacy, business students got the highest score in the area of spending and credit with 82.50 percent, whereas showing low results in the area of money management and compound interest with 36.5% and 48.25%, respectively.

Table 2: The Level of Financial Literacy of Business Students

Level	Frequency	Percentage
High (>75%)	38	19%
Low (<=75%)	162	81%
Total	**200**	**100%**

Table 2 showed that 81 percent of the business students surveyed have a low level of financial literacy, with only 19 percent of the students having a high degree of literacy.

Table 3: Financial Attitude of Business Students

How true is the following statement to you?	Mean	Response	Interpretation
1. I feel in control of my financial situation.	3.9	Somewhat true	Quite Favorable Financial Attitude
2. I am certain about where my money is spent.	4.0	Somewhat true	Quite Favorable Financial Attitude
3. I feel capable of using my future income to achieve my	4.1	Somewhat true	Quite Favorable Financial Attitude

financial goals.			
4. My finances are not a significant source of my worry.	3.2	Not sure	Neutral Financial Attitude
5. I feel putting away money each month for savings or investment is important.	4.0	Somewhat true	Quite Favorable Financial Attitude
6. Purchasing things is not important to my happiness.	2.1	Not too true	Quite Unfavorable Financial Attitude
WEIGHTED MEAN	**3.5**	**Somewhat true**	**Quite Favorable Financial Attitude**

As shown in Table 3, when provided with hypothetical situations regarding correct financial attitude, a majority of business students responded that they somewhat feel confident in their ability to control their financial situation with a mean of 3.9, at some extent certain on where their money is spent with a mean of 4.0, to a certain degree feel capable of using their future income to achieve their financial goals with a mean of 4.1 and slightly feel that savings are essential with a mean of 4.0. Among all the financial attitude variables, with a mean of 2.1, business students responded that purchasing things is necessary to their happiness. In contrast, business students remain silent as to whether they consider their finances as a source of their worry or not. Regarding the financial attitude of business students, the results revealed that to some degree, business students show a favorable financial attitude that derives a weighted mean of 3.5.

Table 4: Financial Behavior of Business Students

How true is the following statement to you?	Mean	Response	Interpretation
1. I budget and track spending.	4.0	Somewhat true	Quite Favorable Financial Behavior
2. I compare prices when buying things.	4.6	Very true	Strongly Favorable Financial Behavior
3. I have money left over at the end of the month.	4.0	Somewhat true	Quite Favorable Financial Behavior
4. After buying something, I ask myself if I could have got it cheaper somewhere else.	4.3	Somewhat true	Quite Favorable Financial Behavior
5. I put money aside for savings, future purchases, or emergencies.	4.2	Somewhat true	Quite Favorable Financial Behavior

6. When I buy something I carefully consider whether I can afford it.	4.7	Very true	Strongly Favorable Financial Behavior
WEIGHTED MEAN	**4.3**	**Somewhat true**	**Quite Favorable Financial Behavior**

As exhibited in Table 4, on average, business students always make a trade-off between items or compare prices of the things they want to purchase before buying them and always think of whether they could afford it with a mean of 4.6 and 4.7, respectively. While business students at some point budget and keep track of their spending, quite thrifty to have money left over at the end of the month, slightly ask themselves if they make a reasonable purchase and to some degree put aside money for savings. Overall, with a mean of 4.3, the results indicated that business students show quite good financial behavior.

Table 5: Financial Decision of Business Students

How often do you consider the following statement before making financial decisions?	Mean	Response	Interpretation
1. I consider whether the financial decision is a need or a want.	3.8	Often	Quite Favorable Financial Decision
2. I consider the lifespan of financial decisions (Short-term or Long-term).	4.0	Often	Quite Favorable Financial Decision
3. I consider whether a purchase will delay or accelerate my financial goals.	3.7	Often	Quite Favorable Financial Decision
4. I consider whether I have educated myself enough on this purchase or investment.	3.9	Often	Quite Favorable Financial Decision
5. I consider whether I have educated myself enough on this purchase or investment.	3.6	Often	Quite Favorable Financial Decision
6. I consider who or what is influencing my decisions.	3.8	Often	Quite Favorable Financial Decision
WEIGHTED MEAN	**3.8**	**Often**	**Quite Favorable Financial Decision**

Results presented in table 5 show "Often" in all aspects of financial decisions. The mean of the element with the highest norm derives 4.0, which represents consideration of the lifespan of financial decisions. On aspects whether the business students consider that financial decisions are a need or want and who influence their choices have both have a mean of 3.8. Other factors gain a mean of 3.7 for whether purchase delays or accelerates their financial goals, while the lowest standard of 3.6 for whether business students have educated themselves enough on a purchase. The findings suggest that business students weigh the circumstances before making major financial decisions.

Table 6: Factors That Influence Financial Literacy

How much did you learn about managing your money from?	Mean	Response
1. Parents	2.6	A lot
2. Friend	1.8	Some
3. School	2.1	Some
4. Books	1.9	Some
5. Social Media	2.1	Some
6. Life Experience	2.7	A lot
7. Public Seminar	1.8	Some
8. Financial Counselor	1.5	Some

Table 6 summarizes the factors that influence the financial literacy of business students. From the above table, business students influenced a lot about managing their money from life experience with a mean score of 2.7, followed by influence from their parents with a 2.6 mean score. Some influences came from the school and social media with mean scores of 2.1, respectively. Some also influence books, friends, public seminars, and lastly financial counselors with mean scores of 1.9, 1,8, 1.8, and 1.5, respectively. .

Problems Encountered by Students regarding Financial Literacy

Based on the interview, the researchers found some problems encountered by the students that prevented them from becoming financially literate include the following;

1. Business students lack knowledge in money management, savings, and investments.
2. Most students exhibit signs of being impulsive buyers, often considering the lifespan and importance of every purchase they make.
3. Being an impulsive buyer leads students to be spending-oriented, which often results in a lack of savings.
4. Among other areas of finance, students only resort to burying their money in a bank or their wallet instead of investing it in somewhere where they could get much more return.

Table 7: Significant Influence of Financial Literacy to Financial Attitude

Source of Variation	SS	df	MS	F	P-value	F-crit
Between Groups	51.017	20	2.551	4.400	0.000	1.573
Within Groups	2641.830	4557	0.580			
Total	2692.848	4577	3.132	4.400	0.000	1.573

Table 7 presents the results of F-value of 4.4001 and p-value of 0.000. The decision rule based on p-value states that if the p-value is less than or equal to $\alpha = .05$, $p \leq \alpha$ (.05), reject the null hypothesis; otherwise, it fails to reject the null. In this test, the null hypothesis states a significant difference in the respondent's satisfaction based on courier services quality.

CONCLUSIONS

Based on the findings of the study, the following conclusions were drawn:

The results show that the overall financial literacy level of 81 percent among all respondents ranked low and is not an encouraging result. It shows that a more significant number of college business students still lack financial knowledge and are not much aware of finance-related problems despite being in a program where business and finance courses are taught. The results suggest that most students have inadequate knowledge even though most of the questions in the survey were specific topics.

It can be concluded further that students' financial literacy was still at a basic level of finance. They are only familiar with spending and credit and demonstrate a deficiency in money management, compound interest, inflation, numeracy, and risk diversification. However, the study also suggests that most students are interested in studying other business and finance topics such as budgeting, savings, investing, insurance, and the stock market and trading to increase their financial knowledge.

It can be concluded that students' financial literacy is determined based on their own life experiences, first-hand management finances, and parents' influence.

One of the many problems concerning the financial literacy of individuals, not just students, is the lack of a strong foundation regarding finance, such as money management and the importance of savings and investment.

Financial literacy does significantly influence the financial attitude and decision, whereas it does not entirely affect the economic behavior of students. It concludes that having a high literacy level helps students have a clear perception of finances and be more likely to make better decisions than those with a low literacy level.

RECOMMENDATIONS

In light of findings and conclusions drawn from the data, the following recommendations are presented**:**

It is evident that most students have low financial literacy levels and still lack lots of essential finance knowledge. Thus, universities, educators, financial counselors, and the financial regulators' sector should take necessary measures in developing programs such as inviting speakers to talk about finance, investment, savings, and retirement planning in a webinar/seminar.

Enhancing finance courses through integration of experiential activities like budgeting and stocks investment simulation and presentation of the actual finance market transactions/activities to increase financial literacy and awareness of the students concerning financial-related matters.

The researchers recommend a future study of the same topic using variables other than those used by the survey.

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Financial Performance Pre and During COVID-19 Pandemic of Listed Companies in the Philippine Stock Exchange for 2019-2020

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Abstract – The study determined the impacted industries and Financial Ratios and the significant difference in the Financial Ratios of pre and during the COVID-19. This research used a sample of 18 industries with 173 financial firms from the listed companies in the Philippine Stock Exchange for 2019-2020. The Paired Samples T-Test is deployed to accomplish the research's objectives. The study found that the most impacted industry in terms of Liquidity: was Power and water; for Financial Leverage: the Chemical and Industrial; and Profitability: Transportation. Furthermore, Financial ratios on pre and during COVID-19 impacted the Liquidity by decreasing Current and Quick Ratios and increasing Solvency, with the most impacted Current Ratio. In addition, the Financial Leverage ratio is impacted by increasing the Debt to Equity, Interest Coverage, and an Equity Asset by decreasing the Debt Ratio, with Debt Ratio as the most impacted. Finally, Profitability is impacted by decreasing Net Profit Margin, Return on Assets, Return on Equity, and Price/earnings, with the Price/Earnings Ratio being the most impacted. Our analysis found no significant differences in Financial Ratios in pre and during the COVID-19 pandemic in the listed companies of PSE. The study results recommended for Managers, Executives and Philippine Government's Policymakers for win-win decisions in investing strategies formulation, and financial management; and future studies can consider including the industries that are not listed in the PSE, Small and Medium-Sized Enterprises and consider other inferential statistics such as regression for the improvement for this paper.

Keywords: *Financial ratios, Leverage, Liquidity, Profitability, pre and during COVID-19*

Introduction

Firm performance is measured using financial ratio analysis. Financial ratios are numeric ratios derived from the financial statements of a company. They form an integral part of the quantitative analysis of a company and help an investor determine its financial health by providing an investor with an outlook of the performance trend of the company (Arora, 2021). The financial ratio analysis includes Liquidity, financial leverage, and Profitability. Carlson (2020) noted that financial ratios are only meaningful compared to other ratios for different periods within the firm. They can also compare the same ratios in other industries, similar firms, or the business sector. Thus, this research paper analyzed different industries, periods from 2019 to 2020, and ratios of the companies listed in the Philippine Stock Exchange. Kumar & Haydon (2020) surveyed the most and least impacted of COVID-19 and reported that the most impacted industries are airlines,

casinos & Gaming, and leisure facilities; while industries with the most negligible impact are insurance, property & casualty, life & health, health care, and industry. Financial performance analysis includes analysis of financial statements so that it undertakes a complete analysis of the Profitability and financial health of the industry. Therefore, it involves the use of the financial statement. A financial statement is a compendium of data organized according to logical and consistent accounting procedures, and its objective is to convey an understanding of some financial aspects of a business firm (Verma, 2021). Our study is novel in that we scrutinized each Financial Ratio; thus, this research aims to analyze the difference in three significant parts of financial ratios: Liquidity ratios, Financial Leverage Ratios, and Profitability Ratios.

Literature Review

Pre and During COVID-19 Pandemic Period

In the pre-COVID-19, the Philippines was one of the most dynamic economies in East Asia; the Philippine economy was one of the world's most excellent players, with an average growth rate of 6.6% from 2012 to 2019 (International Trade Administration, 2021). The services industry, which comprises business process outsourcing, real estate, tourism, banking, and insurance, performed well. However, in January 2020, the nation's initial COVID-19 case was recorded, and by March, the country had been placed under a strict community quarantine, restricting mobility and commercial activity. A high number of businesses reported severe liquidity problems, with many claiming to be cash-strapped and behind on payments. For example, 66% of businesses lacked sufficient cash to cover all costs and liabilities for more than a month, including wages, suppliers, taxes, and loan repayment. In addition, 48% of businesses were in default (Future Learn, 2021). During the COVID-19 pandemic (Abrigo et al. 2020) mentioned that the Philippines suffered economic losses between P276.3 billion and P2.5 trillion during the COVID-19 pandemic in the whole year of 2020, and the most affected business sectors are manufacturing, with losses between P82.1 billion and P855.2 billion, wholesale and retail trade, between P93.2 billion and P724.8 billion, transport/storage/communication losses between P11.7 billion and P124.3 billion. World Bank (2021) reported that the most closure firms during the pandemic in the Philippines were tourism, arts and entertainment, transportation, food services, ICT BPO, education, manufacturing, Agri and fishing, construction, and utilities. The 30-member Philippine Stock Exchange index (PSEi) embodies the country's most profitable and liquid companies; net profits attributable to equity holders of parent firms declined by an average of 38.4 percent year-on-year in the first nine months. The 22 index stocks suffered a year-on-year decline in nine-month earnings within the basket while three turned unprofitable. Only five index companies bucked the downturn (Abadilla, 2020).

Measuring Company's Financial Performance Using Financial Ratios

Liquidity suggests a firm's ability to meet short-term fund needs. Firms are more profitable if short-term fund needs are derived from the high value of current assets rather than the external debt (Ahmad, 2016). Hence this ratio plays an essential role in the financial stability of any company and credit ratings (Clear, 2021). This study's Liquidity includes the Current Ratio; current assets are divided by current liabilities. A higher ratio signifies a higher level of Liquidity (Kibet, 2021), enabling the company to plan inventory storage mechanisms and optimize the overhead costs (Borad, 2019); the Quick Ratio is known as the acid-test ratio; the quick ratio measures the ability of a business to pay its short-term liabilities. The quick ratio is defined as quick assets divided by current liabilities (Johnson, 2021), and the Solvency Ratio measures a business's ability

to fulfill long-term debt requirements and is used by prospective business lenders (Vishnava, 2021).

Leverage means to the extent to which firms use their borrowings to improve Profitability (Alkhatib, 2012). Leverage can impact a firm's value positively or negatively since it magnifies returns and risk (Ivo & Anyanwaokoro, 2019). In addition, they are indicators of a company's ability to meet its short-term and long-term debt obligations (Tamplin, 2021). This study's leverage includes the Debt Ratio; it reflects the percentage of assets covered by debt. Therefore, it is a reasonable amount of equity. Therefore, reducing the debt ratio and providing potential opportunities are necessary (Hoare, 2021); the Debt-to-Equity Ratio; is a simple measure of how much debt is used to run a business. A meager debt-to-equity ratio puts a company at risk for a leveraged buyout (Gallo, 2015); Interest Coverage determines how effectively a company can pay the interest charged on its debt. One should also track the company's past performance to determine whether the interest coverage ratio has improved or worsened over time (Singh, 2021); the Asset to Equity Ratio measures a firm's total assets concerning the total stockholder equity. The higher the ratio is, the more outstanding the firm's debt. There is no ideal ratio to aim for, as all firms have different tolerance for debt. (Arbuckle, 2017).

According to Yusuf & Surjaatatmadja (2018), Profitability is also crucial for maintaining its long-term survival since it suggests whether the company has good prospects in the future. Margin ratios are used to analyze how effectively a company transforms sales revenue into profits, while return ratios measure whether a company generates a profit for its owners or shareholders (Black, 2020). This study's leverage includes Gross Profit Margin; it indicates how efficient a business is at managing its operations. However, like other financial ratios, it is only valuable if the inputs into the equation are correct (Carlson, 2020); the Net Profit Margin; is the ratio of profit a company or business unit earns to the total revenue (net sales) generated by the company or business unit. This metric can signal whether a business is doing a comparatively better or worse job controlling its expenses (Dilallo, 2016); the Return on Assets compares the value of a business's assets with the profits it produces over a set period. A declining ROA suggests a company has made bad investments, is spending too much money, and is headed for trouble (Birken, 2021); Return on Equity (ROE) is a financial ratio that states how much profit a public company earns compared to the net assets it holds a business would have to repayment back its debts or liabilities. Then the difference of its assets would be spread among the shareholders (Birkin, 2021), and Price/Earnings Ratio measures the relationship between its stock price and its earnings per issued share. The most significant limitation associated with the P/E Ratio is the potential for earnings distortions (Price, 2021). Nevertheless, many stock screeners include P/E, which can be an excellent way to find likely candidates for a portfolio (Marquit, 2019).

Financial Performance on COVID-19 Pandemic

The COVID-19 pandemic has impacted frugality and negatively crushed all financial performance. Nguyen (2021) studied the effect of the COVID-19 pandemic on the Financial Performance of Firms: Empirical Evidence from Vietnamese Logistics Enterprises and found out that during the COVID-19 pandemic, the leverage ratio increased while the profitability and efficiency increased ratios decreased. However, the liquidity ratio did not show any significant differences. On the contrary, these businesses' performance, such as returns on assets, receivable turnover, and leverage, has decreased. A similar study by Devi et al. (2020) found no significant change in the Liquidity and leverage ratios. Nevertheless, the public companies' Profitability and short-term activity ratios differed significantly before and during the COVID-19 pandemic. The

segment that suffered a growth in Liquidity Ratio, Profitability Ratio, and short-term activity ratio but a decrease in the Leverage Ratio was the consumer goods sector. In contrast, the sectors experiencing a decrease in the Liquidity and profitability ratios were property, real estate and building construction, finance, trade, services, and investment.

Statement of the Problem

Based on the theoretical framework mentioned above, we developed a conceptual framework and reflected in Figure 1, wherein the financial ratios were analyzed pre and during the COVID-19 in the listed companies of PSE. In particular, the study answered the following questions: (1) What industries are most impacted in pre and during the COVID-19 pandemic? (2) What financial ratios are most impacted in pre and during the COVID-19 pandemic?; and (3) Is there a significant difference in the financial ratios of pre and during COVID-19?

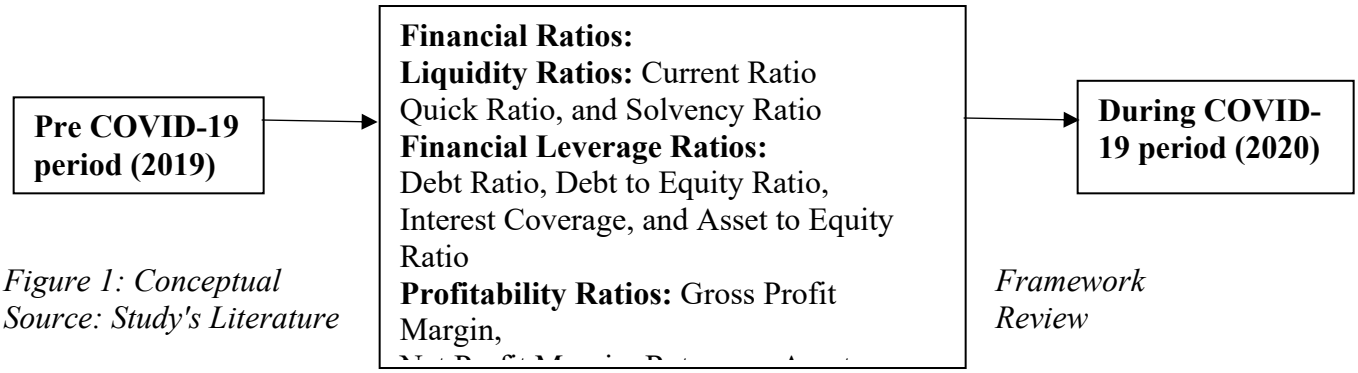

Figure 1: Conceptual Framework
Source: Study's Literature Review

Hypothesis

There are no significant differences in financial ratios: Liquidity, financial leverage, and Profitability in pre and during the COVID-19 pandemic in the listed companies of PSE.

Methods

This research is a comparative study that examined the financial performance between pre and during the COVID-19 pandemic in the listed company in the Philippine Stock Exchange for 2019-2020. Comparative research studies should be used when comparing two people groups, often cross-nationally (Richardson, 2018). The population in this research is the annual report of listed companies in the Philippine Stock Exchange, which had annual reports from 2019 until 2020 on its disclosure. This research used purposive or judgmental sampling to select 18 industries with 173 financial statements. Purposive or judgmental sampling because the researchers used judgment to select items considered representative of the populations (Singh, 2018). The firms that do not have a completed annual report for 2019 and 2020 were not included.

The data collected were examined using the SPSS Program. The statistical analysis elements consisted of descriptive statistics and inferential statistics used based on the study's respective objectives. The descriptive statistics in this study illustrated the mean difference ratios of financial ratios per industry. In addition, inferential statistics using Paired t-test was used to analyze if there are significant differences in financial ratios: Liquidity, financial leverage, and Profitability in pre and during the COVID-19 pandemic in the listed companies' PSE at a 95% level of significance. The study also conducted the normality test using Kolmogorov-Smirnov and Shapiro-Wilk Normality. The distributed data is said to be expected if the significance value is ≥

0.05, then H_0 is accepted, and the data is said to be abnormal if it has a significant value ≤ 0.05, then H_0 is rejected (Ghozali, 2016).

Results and Discussions

Impacted Industries in pre and during the COVID-19 pandemic

Table 1 shows the pre and during (2019 - 2020) COVID-19 Liquidity Ratio per industry. It was reflected that other financial institutions have the most substantial increase on current and quick ratios among all industries by 20.46 and 20.45 times respectively and the Construction industry for solvency ratio with 18.52 times. On the other hand, the Power and water industry have the most significant drop for the Current, Quick, and Solvency ratios by 180.99, 180.66, and 187.22 times.

The results indicate that Financial institutions and the Construction industry were least impacted, while Power and water were most impacted in Liquidity with the lower value of ratios. The higher ratio, the higher is the security margin that the business possesses to meet its current liabilities (Hussain, 2020). Although financial institutions have succeeded in making the Banking sector more resilient, the policy framework for the non-bank financial sector is far less developed. In particular, the macroprudential framework for the non-bank financial sector is still in its infancy, limiting authorities' ability to address emerging risks and vulnerabilities (Schnabel, 2020). Furthermore, the global pandemic restricting the movement of people pulled down water and energy consumption of the tourism industry in 2020 leads to the decrease of power and water industry cope up in terms of Liquidity (Ordinario, 2021). Besides, the strict lockdown has halted the industrial operation due to a lack of workforce and local business due to a travel ban (Madurai et al., 2020).

Table 1
Pre and During COVID-19 (2019 – 2020) Liquidity Ratio Difference per Industry

Liquidity Ratios Industries	Current	Quick Difference (2019 - 2020)	Solvency
Bank	3.41	2.17	0.66
Chemical and industrial	-15.8	-15.85	-13.71
Construction	18.26	18.22	18.52
Consumer	0.09	-0.05	-0.08
Education	0.27	0.26	-0.29
Gaming	-10.47	-10.43	-2.75
Holding	1.67	1.55	1.22
Hotel	0.32	0.14	0.07
Information	-1.39	0.05	0.28
Media	-0.28	-0.23	-0.04
Mining and oil	-0.43	-0.47	-29.1
Other Financial Institution	20.46	20.45	-0.38
Other services	4.22	4.24	2.52
Power and water	-180.99	-180.66	-187.22
Preferred	-5.45	-5.43	-1.39
Property	0.15	0.12	-0.01
Retail	0.48	0.49	-0.14

Transportation	0.17	0.14	-0.07

Table 2 shows the Pre and During COVID-19 (2019 – 2020) Financial Leverage ratio Difference. It was reflected that the Gaming and Bank industry have the highest increase on Debt and Debt to Equity Ratios by 0.99 and 6.54, respectively, and Media and Construction industries on Interest Coverage and Asset to Equity Ratios with 54.73 and 5.20, respectively. On the other hand, the Chemical and Industrial industry has the most significant decrease in Debt Ratio by 9.25 and the Transportation industry for Debt to Equity, Interest Coverage, and Asset to Equity Ratios by 5.40, 51.15, and 7.60, respectively.

The results implied that Gaming, Bank, Media, and Construction were the least impacted, while the Chemical and Industrial industries were most impacted. These ratios indicate how the industry assets and business operations are financed using debt or equity (Corporate Finance Institute, 2020). The global corporate sector has been stuck in the COVID-19 shock with unprecedented levels of Financial leverage (Ivashina & Harmon, 2020). In addition, revenues for gaming companies and platforms have increased during the pandemic (Hall, 2020). Thus, these industries can pay their financial obligations.

Table 2
Pre and During COVID-19 (2019 – 2020) Financial Leverage ratio *Difference per Industry*

Leverage Ratios Industries	Debt	Debt to Equity	Interest coverage Difference (2019 - 2020)	Asset to equity
Bank	-0.3	6.54	-1.79	4.99
Chemical and industrial	-9.25	-0.01	25.21	-0.06
Construction	0.14	5.33	2.11	5.2
Consumer	0.02	0.09	0.15	0.32
Education	-0.01	-0.01	1.33	-0.01
Gaming	0.99	2.94	-3	2.96
Holding	0	-0.1	-3.5	-1.6
Hotel	-0.03	-0.07	-2.67	-0.07
Information	-0.02	0.14	1.68	0.18
Media	0.03	0.14	54.73	0.28
Mining and oil	-0.04	0.86	-0.18	0.85
Other Financial Institution	-0.11	-0.33	-4.1	-3.23
Other services	-0.07	0.03	7.07	0.09
Power and water	0	-0.01	-1.25	0.02
Preferred	0.52	0.95	6.32	0.9
Property	0	0.07	12.57	0.03
Retail	0.05	0.19	-1.24	0.26
Transportation	0.04	-5.4	-51.15	-7.6

Table 3 shows Pre and During COVID-19 (2019 – 2020) Financial leverage ratio difference per industry. It was reflected that the Media industry has the highest Gross Profit Margin and Return on Assets with 4.29 and 1.46, respectively. Also, the Mining and Oil industry has the

highest increase in Net Profit Margin and Price/Earnings Ratio, with 9.79 and 131.20, respectively. In addition, the Construction industry has the highest Return on Equity, with 18.15. On the other hand, the Construction industry has the most significant drop in Return on Assets with 63.72, while Transportation has the most significant decrease in Return on Equity with 23.03. In addition, other Financial institutions have the most significant decline for the Gross Profit Margin, Net Profit Margin, and Price/Earnings Ratios with 18.20, 20.86, and 152.81, respectively.

The results implied that Media, Mining, Oil, and Construction were the least impacted, whereas Construction and Transportation were the most impacted. It shows how well a company utilizes its assets to produce profit and value. A higher ratio or value is commonly sought-after by most companies, as this usually means the business is performing well by generating revenues, profits, and cash flow (Corporate Finance Institute, 2020). The results of our study are like the study of the Statista Research Department (2020) in the Philippines online media market in Southeast Asia was one of the highest, valued at over two billion U.S. dollars. For the construction sector, private construction is robust growth, residential – the most significant and fastest-growing segment, accounting for 28% of the total output in 2019 (Rellana, 2020). Finally, the mining industry contributed a total of P102.3 billion to the country's Gross Domestic Product (GDP) in 2020; notwithstanding the challenges posed by COVID-19, it implies that the mining industry has a most negligible impact pandemic (Mayuga, 2021).

Table 3
Pre and During COVID-19 (2019 – 2020) Financial Leverage ratio *Difference per Industry*

Profitability Ratio	Gross Profit Margin	Net Profit Margin	Return on Assets	Return on Equity	Price/Earnings
Industries	Difference (2019 - 2020)				
Bank	-1.35	-2.13	-0.27	-2.19	2.24
Chemical and industrial	-0.46	1.77	-0.51	-0.75	-60.33
Construction	-5.19	-5.29	-63.72	18.15	84.23
Consumer	-0.02	-4.25	-1.36	-3.26	-11.53
Education	0.42	-0.41	-0.72	-0.84	8.75
Gaming	0	-6.02	-1.11	-2.2	-12.47
Holding	2.89	-4.58	-0.17	-0.15	38.96
Hotel	-9.68	0.58	0.06	0.09	-55.46
Information	-0.82	0.66	0.01	-0.02	8.27
Media	4.29	3.74	1.46	3.21	7.35
Mining and oil	-0.68	9.79	0.85	4.5	131.2
Other Financial Institution	-18.2	-20.86	-0.6	-0.52	-152.81
Other services	-0.37	-4.11	-0.72	-1.2	10.98
Power and water	0.3	-0.21	-0.21	-0.89	1.33
Preferred	1.79	-1.39	-0.5	-1.21	-15.66
Property	3.1	-1.84	-1.04	-3.9	13.55
Retail	-0.98	-1.65	-3.04	-11.98	-143.36
Transportation	-0.96	-14.61	-3.99	-23.03	-3.01

Analysis of Financial Ratios on Pre and during COVID-19

Table 4 shows the Descriptive Statistics of Financial Ratios from 2019 to 2020. The liquidity ratios in terms of current and quick ratios decreased in the mean value from 23.93 to 14.75 and 23.08 to 13.90, respectively; the mean difference value of the Current and Quick Ratio was similar (9.18) and most affected by the COVID-19 pandemic than Solvency Ratio (0). The results implied that the Current Ratio of listed companies in the PSE was significantly affected; it signifies that they cannot pay short-term obligations or those due within one year. Amidst of pandemic, not all were essential workers, and many business institutions were closed; thus, people with no work no pay status were greatly affected. COVID-19 shock is placing enormous strains on corporates' cash buffers, and firms do not have sufficient cash to cover total debt servicing costs over the coming year (Barnerjee et al., 2020).

Financial leverage is the usage of debt to buy more assets. The study revealed that debt to equity ratio, interest coverage, and an asset to equity ratio increased in the mean value from 17.97 to 18.60, 14.83 to 17.17 to 26.05 to 26.25, whereas a decreasing debt ratio value from 4.20 to 3.76 respectively; and the mean difference value of the debt ratio (0.45) was most affected by the COVID-19 pandemic compare in the other Financial Leverage ratios. The results indicate that corporate debt increased, and earnings were hit during the pandemic. It implied that the firms were in trouble paying for their debt, and business investments could be put in danger if the debt level was too high. Moreover, the reduction in equity relative to a business-as-usual scenario has immediate consequences on firms' leverage ratios. The sudden drop in profits reduces equity buffers, leaving firms highly indebted and reducing their ability to service debt (OECD, 2021).

Profitability ratios assess a company's ability to earn profits from its sales or operations, balance sheet assets, or shareholders' equity. The study revealed the gross profit margin ratios such as net profit margin, return on assets, return on equity, and price/earnings ratio decrease in mean value from 9.16 to 7.77, 3.76 to 0.94 to 1.23 to -2.97, 0.9 to -0.46, and 4.92 to -3.29, respectively; and the mean difference value of the price/earnings ratio (8.21) was most affected by the COVID-19 pandemic among profitability ratios. Thus, COVID-19 has created an enormous increase in economic uncertainty that includes the Profitability of the firms, especially the Price/Earnings Ratio. Pandemic-related disruptions pull-down valuations, rapid price decline, lower than its long-run average. This result was expected given the high level of uncertainty in future corporate Profitability and the high starting point of over 18-times forward earnings (Golding, 2020).

Table 4
Descriptive Statistics of Financial Ratios 2019 to 2020

N = 18	Mean		Mean Difference
Financial ratios	2019	2020	(2019 - 2020)
Liquidity Analysis Ratio			
Current Ratio	23.9375	14.7533	9.1842
Quick Ratio	23.0861	13.9047	9.1814
Solvency ratio	22.7782	22.7782	0
Financial leverage ratio			
Debt ratio	4.2027	3.7563	0.4464
Debt to Equity ratio	17.9725	18.6019	-0.6294
Interest coverage	14.8255	17.1749	-2.3494
Asset to equity ratio	26.0549	26.2505	-0.1956

Profitability ratio			
Gross Profit Margin	9.1572	7.7173	1.4399
Net Profit Margin	3.761	0.9393	2.8217
Return on Assets	1.2311	-2.9684	4.1995
Return on Equity	0.9995	-0.458	1.4575
Price/Earnings ratio	4.917	-3.2918	8.2088

Hypothesis Testing

Table 4 shows the Financial ratio Paired Sample T-Test; it was revealed that there no significant average difference between the pre (2019) and during (2020) pandemic in the listed companies of PSE in all financial ratios Liquidity: Current Ratio ($t_{17} = 0.00$, $p < 1.00$), Quick Ratio ($t_{17} = 0.00$, $p < 1.00$), and Solvency Ratio ($t_{17} = 0.00$, $p < 1.00$); Financial leverage: Debt Ratio ($t_{17} = 0.00$, $p < 1.00$), Debt to Equity Ratio ($t_{17} = 0.00$, $p < 1.00$), Interest Coverage ($t_{17} = 0.00$, $p < 1.00$), and Asset to Equity Ratio ($t_{17} = 0.00$, $p < 1.00$); and Profitability: Gross Profit Margin, ($t_{17} = .25$, $p < 1.00$), Net Profit Margin : ($t_{17} = .09$, $p < 1.00$), Return on Assets : ($t_{17} = 0.00$, $p < 1.00$), Return on Equity ($t_{17} = 0.00$, $p < 1.00$), and Price/Earnings Ratio ($t_{17} = 0.00$, $p < 1.00$).

The outcomes indicate no significant differences in financial ratios: Liquidity, financial leverage, and Profitability in pre and during the COVID-19 pandemic in the listed companies of PSE. It implied that pre and during COVID-19 impacted the financial ratios of the listed companies in the PSE. Our study results correspond to the results of Devi et al. (2020) that the COVID-19 crisis has affected all firm characteristics, including firm performance, corporate governance structure, dividend level, Liquidity, and leverage, but not at a significant level as the difference between prior and post COVID-19 is not significant. Similarly, the global COVID-19 pandemic and diminished economic activity that resulted from it significantly impacted financial institutions around the world in 2020. (International Finance Corporation, 2021).

Table 4
Financial ratio Paired Sample T-Test

		Paired Differences							
					95% Confidence Interval of the Difference				
		Mean	SD	Std. Error Mean	Lower	Upper	t	df	Sig. (2-tailed)
Liquidity Analysis Ratio: 2019 and 2020									
Pair 1	Current Ratio	0.00	.134	.031	-.067	.067	0.00	17	1.00
Pair 2	Quick Ratio	0.00	.114	.026	-.056	.056	0.00	17	1.00
Pair 3	Solvency ratio	0.00	.169	.039	-.084	.084	0.00	17	1.00
Leverage: 2019 and 2020									
Pair 1	Debt ratio	0.00	4.043	.953	-2.010	2.010	0.00	17	1.00
Pair 2	Debt to Equity ratio	0.00	1.188	.280	-.5908	.590	0.00	17	1.00
Pair 3	Interest coverage	0.00	2.700	.636	-1.343	1.343	0.00	17	1.00
Pair 4	Asset to equity ratio	0.00	2.449	.577	-1.218	1.218	0.00	17	1.00
Profitability ratio: 2019 and 2020									
Pair 1	Gross Profit Margin	1.43	5.198	1.225	-1.145	4.024	1.17	17	.256
Pair 2	Net Profit Margin	2.82	6.650	1.567	-.485	6.129	1.80	17	.090
Pair 3	Return on Assets	0.00	4.946	1.165	-2.459	2.459	0.00	17	1.00
Pair 4	Return on Equity	0.00	2.828	.6666	-1.406	1.406	0.00	17	1.00

Pair 5	Price/Earnings ratio	0.00	6.498	1.531	-3.231	3.231	0.00	17	1.00

Conclusion

Our study identified the most and least industries impacted by the pandemic. Based on the results, we concluded that those industries affected prior to the COVID-19 restrictions and protocol did not happen only in the Philippines but also worldwide. Furthermore, the financial ratios were carefully analyzed, and our study found a decrease, increase, and the most impacted significant part of the financial ratios, and we concluded that a particular financial ratio is volatile because of the pandemic effect. Finally, based on the statistical analysis, the COVID-19 pandemic has no significant differences in financial ratios: Liquidity, financial leverage, and Profitability in pre and during the COVID-19 pandemic in the listed companies' PSE. However, it brought a havoc impact on the financial ratios of the listed companies in the PSE that led to a decline in the financial ratios and bankruptcy.

Recommendations

The study results recommended for Managers, Executives and Philippine Government's Policymakers for win-win decisions in investing strategies formulation, and financial management; and future studies can consider including the industries that are not listed in the PSE, Small and Medium-Sized Enterprises and consider other inferential statistics such as regression for the improvement for this paper.

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The Impact of Investments in Artificial Intelligence on Firm Valuation, Financial Performance, and Wealth Creation of Listed Companies in the Philippines

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Abstract – The world stands in the middle of emerging technologies being integrated into commerce and industry. To quantify their benefit, this study determined and evaluated the impact of investments in artificial intelligence on the dependent variables firm valuation, financial performance, and wealth creation. To do this, listed companies were subjected to indicators of artificial intelligence (AI) adoption covering an eight-year period starting 2012, the year AI resurfaced in the Philippines. Results show that only 73 companies manifested at least one indicator and that firm valuation and financial performance were significantly related to investments in AI. A discussion with industry experts and company representatives was then conducted to validate these results. In conclusion, artificial intelligence does exist, yet its impact needs more importance and exposure.

Keywords: *financial performance, firm valuation, investments in artificial intelligence, wealth creation*

INTRODUCTION

This study recognized the recent widespread development of artificial intelligence (AI) being integrated in the modern world and its corresponding developments in the economy. Firms continue to recognize the importance of technology as it is being integrated into the everyday workspace at different rates of speed. The question led to whether or not firms should invest in this new technology, and if they do -to what extent does investments in AI contribute to the value of the firm and thus shareholders' wealth? This study's main objective was to contribute more information about a firm's investment and expenditures in artificial intelligence and its contribution towards firm valuation, financial performance and wealth creation of listed companies in the Philippines.

This was made through the following specific objectives:

1. to establish a list of indicators identifying already integrated artificial intelligence systems in listed companies in the Philippines;
2. to evaluate the already integrated artificial intelligence systems taken from information on the firms' financial statements in terms of the previously established list of indicators;
3. to identify relevant measures of firm valuation, financial performance, and wealth creation;
4. to determine the impact of investments in artificial intelligence on firm valuation, financial performance, and wealth creation of a company; and

5. to come up with plausible recommendations on how various stakeholders can optimize benefits derived from investments in artificial intelligence.

AI comes in many forms and is implemented in different firms across the world in different ways. It has transformed different industries by improving decision-making and enhancing business models in real-time and complex environments. With the extensive literature found defining artificial intelligence and its scope, the researchers narrowed down the definition of AI as a machine integrated from fields of mathematics, science, and engineering that carry out abilities similar to that of a human being, including; cognitive functions, rational-thinking, and the ability to continuously evolve whilst making decisions on its own (Duan, Edwards, and Dwivedi, 2019; Purdy and Daugherty, 2017; Smith, 2019; Wisskirchen et al., 2017). In terms of measurement, since AI is within the sphere of information technology (IT), it is considered as part of the IT intangible capital (ITIC) as mentioned by the study of Tambe et al., (2019**)**. The indicators of artificial intelligence used in this research were as follows:

1. IT Salaries: It depicts the amount of labor a company is willing to spend on when it comes to installing, maintaining and using types of technology.
2. Research and development expenses: The researchers believe that most companies would survey the market before investing in artificial intelligence for viability purposes and whether the technology would be beneficial when it came to profit and consumer reaction.
3. Intangible assets investments: Some of the disclosures of companies include stating that intangible assets also include computer softwares and information technology.

These were backed-up by Tambe, et al. (2019), International Accounting Standards (IAS), and various literature reviews. Company disclosures and published news were also checked to back-up the research's assumptions. This research aimed to fill the gap by providing quantitative evidence from published financial statements as a replacement to Tambe et. al.'s initial AI measure using LinkedIn profiles to research about companies. Financial statements provide relevant information to also aid this research. Although most research related to artificial intelligence focused on qualitative analysis, the researchers intended to still back it up with theories and interviews to validate the quantitative results.

To ascertain the impact of these investments in AI, three categories of dependent variables were used, namely: firm valuation, financial performance, wealth creation. The researchers used various literature to find the reliable measurements of these dependent variables.

The Efficient Market Hypothesis states that the stock prices of assets reflect all available information (Ang, 2010; Dougal et al., 2012). Additional investments in relation to artificial intelligence are broadcasted and subsequent relevant information is made available. Various studies have been geared towards identifying and isolating the effect of media publications on stock prices (e.g., see Tetlock 2007, 2011, Fang and Peress 2009, Dougal et al 2011, Engelberg and Parsons 2011, and Peress 2013). Commonly, the increase in investments in artificial intelligence gives a promising and positive impression to the company's stakeholders.

Investing in artificial intelligence requires large capital and equity investments that are available to listed firms since they are the firms who have immediate access to financing. The Rational Expectations and Theory of Price Movements (Muth, 1961) states that the demand for the particular stock will increase because of the expectations of people that the company will perform well in the future. Moreover, this implies that buying the stock now will allow them to

earn a profit from stock price increase in the future. This positive relationship between additional investments in artificial intelligence is supported by findings (e.g. see Kumar and Li, 2016 and Sargent, 2002). In contrast, Polk and Sapienza (2009), Titman et al. (2004), and Dabar (2018) concluded that AI has a negative impact on firm valuation because higher abnormal investments are more sensitive to discretionary accruals for firms with more research expenditures and exhibit low stock returns, thus having low market value. Moreover, Dybvig and Warachka (2015) also states that while Tobin's Q is often used to proxy for firm performance when studying the relationship between corporate governance and firm performance, it may not be the best ratio to do so. To further strengthen this claim, Tobin's Q is highly focused on the measure of physical assets as against the intrinsic value of a company (Ben-Ami, 2020).

The differences in relationship between AI and firm valuation may lie in accounting policies placed among firms. Gray areas in accounting standards that govern companies and firms may lead to different classifications, manner of recordings, recognitions and disclosures of such items that may significantly affect the computation of Tobin's Q. Therefore, the positive relationship between P/E ratio and investment in AI may be deemed more reliable than that of Tobin's Q. (Al-Mwalla et al., 2010; Arslan et al., 2014; CFI Education Inc., 2015)

The most important part of considering investments as a potential investor are the risks and benefits which both affect shareholders' wealth. In finance, there exists the basic assumption that the financial ratios calculated from financial statements can be utilized to properly depict the status of the corporation, such as liquidity, profitability, and long-term solvency. Investors have been using models to forecast operations in order to adjust their decision-making for their portfolio investment (Geng, Bose, and Chen 2015). The DuPont Analysis was developed by a salesman from DuPont corporation in 1912 (Philips, 2015; Soliman, 2008). It is a framework that breaks down the three important elements that compose Return on Equity, otherwise known as ROE. Aburub, in his 2012 research, proved that the two ratios - Return on Equity (ROE), Return on Assets (ROA) - were able to successfully measure firm performance evaluation. A research conducted by KPMG, a globally leading auditing firm, shows that 51% of its executives believe it will take three to five years before AI projects will create significant return on investment (Vanian, 2019). To support these claims, the risk-return tradeoff theory highlights that every increase in risk must have a higher expected return. To quantify these risks and returns, investors would need to refer to financial measures in evaluating the performances of companies. With that, this justifies the use of Return of Asset and Return of Equity as measures

The Stern Stewart Approach introduced a new financial performance measure called Economic Value Added (EVA). According to Dillon, et. al (2005), more investments increases a company's chance of creating wealth. Various authors have already suggested the use of the Economic Value Added or EVA since it addresses the issues raised with other measures. For instance, the Economic Value Added eliminates the possibility of distortion in accounting results and is a true measurement of the company's success in maximizing the shareholders' wealth since it takes into account income and also the capital expenses (Yahaya, Mat Kila, and Mahmood, 2008; Allen, 2017; Bao and Bao, 1999; Wilson, 2008). In Makelalnen (1998), it was stated that Economic Value Added (EVA) is the "yardstick of wealth creation" – the true measurement of wealth creation. With EVA, it is possible to identify investment opportunities and practical company decisions. However, Coles, et. al (2001) begs to differ since he firmly believes EVA provided investors a full grasp of the company's performance thereby increasing the number of investors and the possibility of wealth creation. In Dehning and Richardson (2002) and Yao et al., (2009), it was stated that investments in information technology have increased company's productivity or

output which lead to a higher income less its cost of capital (or EVA as defined by Chen and Dodd, 1997). Hubbell (1996) states that EVA "assures that with each increment of volume, the profit earned will be at least equal to the economic cost of additional capital required" (page 47). With this, EVA shows the benefits of investments in information technology and how much these investments add value to the firm.

For the purpose of this study, firm valuation was measured using market ratios including price-to-earnings ratio and tobin's q ratio. As for financial performance, return ratios including Return on Asset and Return on Equity were used as measures. Finally, wealth creation was measured using Economic Value Added (EVA).

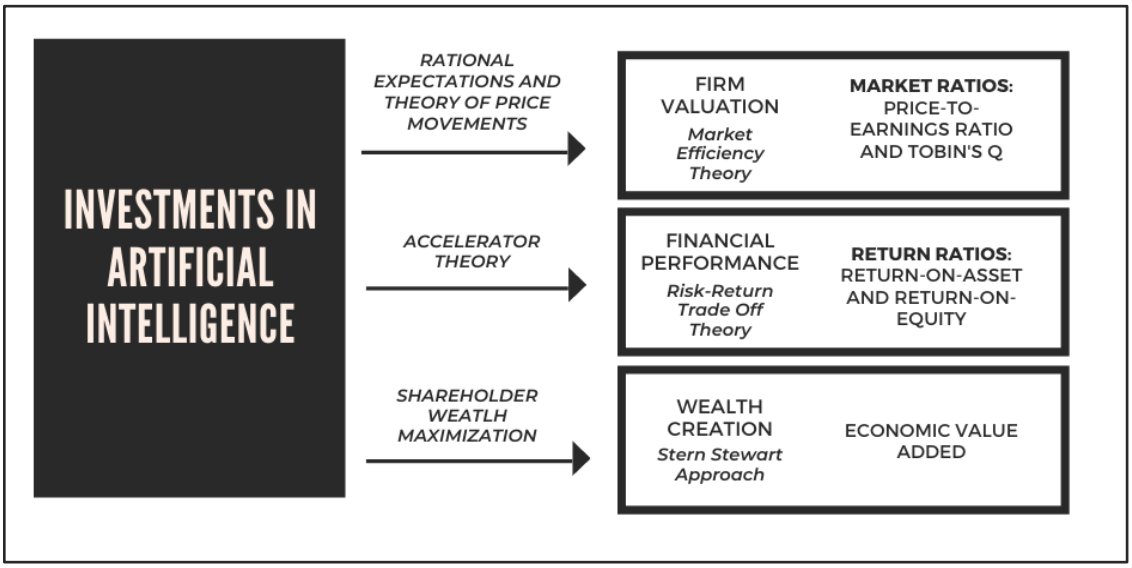

Figure 1. Schematic Representation of the Operational Framework

Hypotheses

HO_1 : The investments in artificial intelligence does not significantly affect the Price-to-Earnings ratio.

HO_2 : The investments in artificial intelligence does not significantly affect q-ratio.

HO_3 : The investments in artificial intelligence does not significantly affect the return on assets.

HO_4 : The investments in artificial intelligence does not significantly affect the return on equity.

HO_5 : The investments in artificial intelligence does not significantly affect the economic value added.

This research assumed that the information given in the audited financial statements of the listed companies were reliable, valid, timely, accurate, and consistent. Other than this principal assumption overarching this study, these assumptions were made to conduct the research further. The study has chosen an eight-year data interval from years 2012 to 2019 to indicate an effect from identified investments in artificial intelligence.

METHODS

The conductors of this study decided that using multiple research methods was the most appropriate approach for the study as it utilized quantitative data. This data was supported and validated through qualitative procedures that provided more sufficient evidence for the study. Using a combination of these methods lessened any existing biases the researchers may have for the study because of the objectivity of the method. This research study is a quantitative and qualitative research design that is geared towards the establishment of the independent variable's reaction to the dependent variables as well as the description of the former's impact. The researchers gathered secondary data from the financial statements of all the listed firms found in the Philippine Stock Exchange website from 2012 to 2019. Subsequently, annual reports from each company website were collected as well in case some line items are not found in the audited financial statements.

This study included the performance of mathematical or statistical procedures to analyze the data collected. This research design was used to know whether investments in artificial intelligence (independent variable) have an effect on firm valuation, measured through Tobin's Q and price-earnings ratio, financial performance, which is measured using ROA and ROE, and on wealth creation, which is measured using EVA. Finally, qualitative analysis was also conducted through a discussion involving various experts and industry leaders to add value to this study and to verify the validity of the findings of this research.

The population of this research focused on the 271 listed firms in the Philippine Stock Exchange database. This data was collected during the period between October 15, 2020 and November 30, 2020. The designated population will be subjected to the list of indicators aforementioned above. To be included in the sample size, it must meet at least one of the indicators. After careful review of financial statements, annual reports, and published news, this study utilized a sample size of 73 publicly listed companies. These publicly listed companies were also classified according to their sector.

The investments in artificial intelligence were subject to comparison against different measures specifically identifying its effect on firm value, financial performance and wealth creation. It included values from intangible assets related to AI, specific research and development expenses in relation to AI, and IT salaries. Data were compared for the duration of eight (8) years from 2012 to 2019. The financial metrics used for the analysis are:

1. Return on Equity
2. Return on Asset
3. Price-to-Earnings Ratio
4. Tobin's Q
5. Economic Value Added*

**Economic Value Added can be computed using either the formula of Nakhaei and Hamid (2013) or the model of Drake and Fabozzi (2010).*

The independent variable -investments in artificial intelligence -was regressed using the ordinary least squares against these five financial metrics individually in order to establish and quantify the effect of the independent variable to the dependent variables. This encompassed the procedure that accounted for the discrete independent variable. The research study has found interesting observations regarding the subject matter during the data gathering stage as well as the data processing. Initially, the sample was regressed as a whole using discrete and logarithmic forms. Afterwards, researchers also checked the results per industry as an observation to the listed companies and the whole country. The commercial banking industry and other financial

institutions were the only sectors in the Philippines that showed the best representation per sector. This phenomenon of the financial institutions pioneering in applications of artificial intelligence is further supported by the fact that financial institutions need to earn the trust of its clients by providing innovative products at value that caters for the customers current and future needs thus heavily investing in service related artificial intelligence systems (IBM, n.d.).

After performing the test of relationships, the researchers conducted a group discussion in order to present the study findings and subsequently validate and supplement the statistical findings with qualitative factors. Respondents in the discussions include industry experts from the Information Systems Audit and Control Association (ISACA) - Manila Chapter to which value-adding feedback was gained on how industry practices support or negate the findings. To conclude, qualitative data garnered from these discussions was used to supplement the findings of the quantitative data.

RESULTS AND DISCUSSIONS

This research yielded notable insights, covering even the smallest sectors in the listed companies up to the Philippine setup.

Table 1. Summary of Regression Results for Commercial Banks

	P/E Ratio	Tobin's Q	ROA	ROE	EVA
AI	**-0.0058828** (0.004692)	**-0.0129122**** (0.0064409)	**0.0000318** (0.0001243)	**0.0003387** (0.0009004)	**3.216895***** (0.6595124)
Constant	**23.53261***** (4.932613)	**31.5445***** (6.771177)	**0.4526796***** (0.1306226)	**3.81785***** (0.9465522)	**2099.92***** (693.33)
P-value	**0.2137*** **	**0.0485*** **	**0.7986*** **	**0.7078*** **	0.0000***
F-statistic	**1.57**	**4.02****	**0.07**	**0.14**	**23.79*** **
R-squared	**0.0198**	**0.048**	**0.0008**	**0.0018**	**0.2337**
Adjusted R-squared	**0.0072**	**0.0490**	**-0.0120**	**-0.0110**	**0.2239**

A study published by PricewaterhouseCoopers (PwC) Global (2017), where different industries were explored to study the impact of AI through each sector. The report ranked the sectors in terms of magnitude of AI impact, with healthcare ranking first, followed by automotive, financial services, transportation, communication, retail, energy, and manufacturing.

From this research, it can be highlighted that the banking and other financial institutions have high acceptance levels for investments in artificial intelligence. As seen in Table 1, the banking sector presents a statistically significant result in relation to investments in artificial intelligence. The inverse relationship between the investment and Tobin's Q is due to the current investments in artificial intelligence not immediately reflected against the market price of a bank's stock because of the timing and/or delay, thus there is a misalignment in recognition of these investments when market value is measured against asset replacement cost. Consequently, Economic Value Added shows a significant positive relationship with investment in artificial intelligence, indicating that the artificial intelligence generates good profits in the long run and aids the company to maximize wealth.

Table 2. Summary of Regression Results for Other Financial Institutions

	P/E Ratio	Tobin's Q	ROA	ROE	EVA
AI	**0.0000001238116*** ** (0.0241986)	**0.0019882*** ** (0.0005585)	**0.0002555*** ** (0.0000243)	**0.0039163*** ** (0.0005246)	**1.219591*** ** (0.0704551)
Constant	**14.93014** (14.71284)	**1.753793*** ** (0.3395497)	**0.0613587*** ** (0.0147664)	**-0.24824** (0.3189322)	**100.5497** ** (42.83705)
P-value	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**
F-statistic	**26.18**	**12.67*** **	**110.68*** **	**55.74**	**299.64*** **
R-squared	**0.3627**	**0.2160**	**0.7064**	**0.5479**	**0.8669**
Adjusted R-squared	**0.3488**	**0.1990**	**0.7000**	**0.5380**	**0.8640**

In contrast to the conservatism found in the banking sector, the other financial institutions sector are more accommodating of innovation and show a positive and significant relationship between investment in artificial intelligence and the dependent variables, such as Price-to-Earnings Ratio, Tobin's Q, Return on Asset, Return on equity, and Economic Value Added. This can be explained by recent developments in the sector caused by the COVID-19 pandemic. For instance, a partnership between Traydstrem and Finacle was created in May 2020 which aims to integrate the latter's platform to cut down the time it takes to check rules related to trade which will then lead to higher customer turnout of the former (BusinessWire, 2020)

Since the sector has become more attractive for investors and is continuously increasing its investments in artificial intelligence or anything related, it's market value will eventually grow in value. With the same idea in mind, this will increase the wealth of the company due to the sector's attractiveness to investors.

Table 3. Summary of Results

Hypothesis	Constant	α	p-value	F-statistic
HO_1	-248.016**	0.05	0.009	6.79
HO_2	102253.2***	0.05	0.000	57.07
HO_3	-0.6508483	0.05	0.005	7.91
HO_4	-3.507806	0.05	0.000	18.39
HO_5	-2.8700	0.05	0.416	0.66

Note: *** 1% significance level, ** 5% significance level, *10% significance level

As shown in Table 3, Investments in Artificial Intelligence impacts return on assets and return on equity. Both discrete and logarithmic forms agree that investment in artificial intelligence impacts return on assets and return on equity positively. Since work becomes more efficient, business profit also increases. Despite the country's effort to be at par with its neighboring countries, most companies in the Philippines have not yet adopted artificial intelligence. The sample size of this research showed that the Philippines have a low level of acceptance on artificial intelligence due to the huge amount of outlay (Kshetri, 2020; Umali, 2019;). A notable observation

the researchers have found is that companies who have invested in AI in 2012 continue to use such technology until 2019. Around 21 out of the 73 chosen companies initially invested in the technology but stopped midway and continued sometime after 2016 through 2019. This may mean that the consumer market did not respond well to the effects of the technology or the company was not fully equipped to take on the technology in the time frame where companies temporarily stopped their investments (See National Economic and Development Authority, 2017).

CONCLUSIONS AND IMPLICATIONS

Artificial intelligence does exist, yet its impact needs more importance and exposure. Nareyek (2004) highlighted that AI is going to be part of the future of games. As AI is developed and integrated into systems, the researchers aim to inform the firms of the impact of investments in AI on their firm valuation, financial performance, and wealth creation.

Theoretical Implications

Table 4. Theoretical Implications

Author/s	Investments in AI to P/E Ratio	Investments in AI to Tobin's Q	Investments in AI to ROA	Investments in AI to ROE	Investments in AI to EVA
This Study:					
Juantong et al. (2021)	***Positive***	***Negative***	***Positive***	***Positive***	***No Effect***
Other Studies:					
Chao et al. (2019)	N/A	N/A	Positive	Positive	N/A
Coles, et. al (2001)	N/A	N/A	N/A	N/A	Positive
Dabar (2018)	Negative	Negative	N/A	N/A	N/A
Dehning and Richardson (2002)	N/A	N/A	N/A	N/A	Positive
Dougal, et.al (2011)	Positive	N/A	N/A	N/A	N/A
Engelberg and Parsons (2011)	Positive	N/A	N/A	N/A	N/A
Fang and Peress (2009)	Positive	N/A	N/A	N/A	N/A
Hubbell (1996)	N/A	N/A	N/A	N/A	Positive
Kumar and Li (2016)	Positive	Positive	N/A	N/A	N/A
Muth (1961)	Positive	Positive	N/A	N/A	N/A

Author/s	Investments in AI to P/E Ratio	Investments in AI to Tobin's Q	Investments in AI to ROA	Investments in AI to ROE	Investments in AI to EVA
Peress (2013)	Positive	N/A	N/A	N/A	N/A
Polk and Sapienza (2009)	Negative	Negative	N/A	N/A	N/A
Purdy and Daugherty (2017)	N/A	N/A	Negative	Negative	N/A
Tetlock (2007)	Positive	N/A	N/A	N/A	N/A
Titman et. al. (2004)	Positive	N/A	N/A	N/A	N/A
Vanian (2019)	N/A	N/A	N/A	Positive	N/A
Yao, et. al (2009)	N/A	N/A	Positive	Positive	Positive

Practical Implications

Listed Companies. Investing in AI is a strategic decision that goes beyond the horizon as this would require a large initial capital outlay. Based on the results of this study, the positive relationship between P/E ratio, ROA, ROE and EVA to this platform entails that even if the return can only be noticed after some time has passed, the benefit is for the long term. Similar to other costly technological investments like the Automated Teller Machine (ATM), customers would most likely deposit their money to a bank that presents convenient ways for them to withdraw their money without letting go of security and confidentiality. In order to aid in the better innovation and progress of AI in the country, it is recommended that firms take into account the possible long term benefits of investments in AI when deciding whether to finance this kind of system. This is highly relevant especially since the COVID-19 pandemic where normal operations took a halt as the Philippines had to adjust to the "new normal." Due to lockdown protocols and safety measures the Philippine Government placed, business operations had to adapt to a work-from-home set-up where everything had to be done in a remote manner. Thus, the demand for complex automation processes increased as routine tasks that were time consuming were harder to do since employees cannot go back to their respective offices. The same goes with the traditional brick-and-mortar retailers who found it difficult to face the challenges that the pandemic brought, making them rely more on AI systems to aid in adapting to the "new normal." With such, it is recommended that companies prepare an escalation plan or strategic plan on how they can increase their investments in AI to be at par with their competitors and work towards the goal of being competitive with implementing new technologies. Apart from these, banks and other financial institutions whose sectors are now growing can take advantage of this opportunity in order to have efficient operations, to cater to more members, and to have more favorable financial performance.

Shareholders and Investors. When interested in investing in companies adapting AI, the researchers recommend that shareholders and investors take into account the industry the company belongs to and if such industry is growing. Like other financial institutions sectors, its growing and technology-involved industry showed how investments in AI helped the company's value and financial performance. Moreover, researchers suggest that investors should check the P/E ratio

rather than Tobin's Q ratio because the former represents the present value of the firm and also takes into account factors which are affected by qualitative factors (where perceived value is also one of the things dictated by the possible investors) while the latter consists of a mixture of market value of the firm and actual values of its assets and liabilities omitting some present firm characteristics (Bartlett & Partnoy, 2018; Chao, Cheung, and Lee, 2019).

Standard Setting Bodies. The researchers recommend that standard-setting bodies establish a new standard applicable exclusively to the recognition, measurement and disclosures of AI. Since some companies have invested heavily into this technology, the researchers believe that a different standard will help firms account for it properly and appropriately. Moreover, a separate standard will help firms to know whether they valued it correctly and to avoid overstated or understated assets. On the other hand, Mr. Allan Ocho, an Information Systems Audit and Control Association (ISACA) Board of Trustee member, shared his opinion through a personal interview regarding this recommendation. Since IAS 38 already covers how assets related to technology will be recognized; "disclosures on the breakdown [of] investments in technology" is more appropriate instead of having a separate standard to recognize investments in AI. For the convenience of future researchers, the researchers also recommend that firms create disclosures as to the components of their technological investments. As this study suggests, there is a positive relationship between investments in AI and P/E ratio, ROA, ROE, and EVA. Having a disclosure that includes the specific areas AI is being applied to or the percentage AI takes up in the technological investments of the company can be value-adding to future research and publications defining the importance of AI.

Academe and Future Researchers. The researchers recommend that the academe consider teaching the features of AI that set it apart from other technological investments. Specifically, literature in this study discussed that it is beneficial to the teaching aspect of the academe as it introduces different definitions and characteristics of AI. Moreover, this study narrows AI down to one definition, being a "machine integrated from fields of mathematics, science, and engineering that carry out abilities similar to that of a human being, including; cognitive functions, rational-thinking, and the ability to continuously evolve whilst making decisions on its own". Thus, this can hopefully spark the idea of delving into this topic as a future research for students and professors.

It is recommended that future researchers still use the relevant measures mentioned in this study as these represent firm valuation, financial performance, and wealth creation well. An additional step future researchers may take is to conduct more personal interviews with firm representatives to determine which departments or areas investments in AI are applied to. Moreover, investments in AI are valued similarly to other technological investments. Thus, it would be value-adding to determine what percentage of a firm's IT investments are relevant to investments in AI.

The researchers also recommend that primary data should be collected from a selection of companies in order to further support the claims of the study. This would improve the accuracy of showing the impact of investments in AI on a firm. Given the primary data, future researchers can focus on specific departments in a company and identify dependent variables that can be affected by investments in AI. Finally, the researchers recommend for future research to take a look at focusing on industry specific analysis, specifically on other financial institutions, since this research shows that there is a significant relationship between investments in AI and all the dependent variables mentioned in this study.

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Impact of Debt Financing on Profitability: The Case of Publicly Listed Real Estate Philippine Companies

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Abstract – Capital structure decisions warrant careful analysis as these impact firms' financial performance, particularly profitability, as explored by past studies and theories, such as the Signaling Theory and Pecking Order Theory. This study aimed to address the research void in the Philippine real estate industry. Financial figures from 31 listed companies were obtained and subjected to a panel least-squares regression analysis, revealing a significant relationship between debt financing and profitability. Results, however, showed that debt only weakly affected firms' profitability and cannot be a substantial driver of profit. Still, finding the optimal mix between these two sources is suggested to utilize this discovered relationship and conduct future research to explore other factors that affect firm profitability.

Keywords: *capital structure; debt financing; profitability; real estate; ROA; ROE.*

1 Introduction

In the age of technology and globalization, debt financing has become more accessible for existing firms and start-up businesses. Over time, it has been proven that obtaining debt has been of foremost importance for companies, whether big or small, to accumulate funds and capital for their operations (Omoshagba and Zubairu, 2018).

In the Philippines, the real estate industry has continued to show steady growth over the years, driven by the robust demand for commercial spaces and residential properties (Ortiguero, 2018). With the promise of capital asset appreciation, the industry also tends to attract a sizeable number of investors interested in the financial performance of real estate companies. Thus, firm decisions became of great importance, especially as companies provide continuous financing for the acquisition, construction, and development of lands and properties. According to Blokhin (2019), most companies in the real estate industry rely heavily on debt to finance their short-term and long-term need for funds. An enormous difference from other industries can be observed through the Debt-to-Equity Ratio, in which real estate companies' typical ratio goes higher than one (Blokhin, 2019).

Despite having the option between debt and equity financing, the real estate industry is seen to have relied more on debt. This might be perceived as a negative attribute. Still, the thorough analysis would show that shareholders do not have to give up their ownership and control with this type of financing employed (Maverick, 2020). Most start-up companies also view this as one of the best options to finance their operations (Allen, 2019). Nevertheless, the accumulation of debt

still poses risks and challenges for all companies. In the end, it is the preference of the owners and the shareholders that influence the financing decisions taken up by a company. Due to businesses being highly dependent on debt financing, numerous studies have investigated how different levels of debt financing establish a relationship with a company's profitability.

Brigham et al. (2019) illustrate that financially leveraging a company with debt introduces financial risk to be shouldered by the company's stockholders. Debts are susceptible to high-interest rates due to fluctuating economic conditions. Hence, business ventures that decide to take up debt must sustain financial performance to ensure that the business will continue to operate to pay back its debts in the future. More so, bankruptcy does not preclude companies from paying their obligations as creditors are prioritized over the firm's equity investors during liquidation. It must also be noted that lenders will pose a higher interest rate upon subsequent loans made due to increased risk, as reflected in a company's credit rating (Allen, 2019). These scenarios posit that determining the level of debt financing is a crucial consideration because of its variegated effects on its stakeholders. This is particularly true for the real estate industry; whose commercial projects are heavily financed by loans.

The relationship between debt financing and profitability and other measures of financial performance has been heavily explored by researchers in the context of foreign countries. However, there is a shortage of literature in the Philippines, leaving a research gap to fill. To shed light on the blind spot in the Philippine real estate industry context, the researchers investigated the impact of debt financing on publicly listed real estate firms' profitability.

The general objective of this study was to determine the effect of debt financing on the profitability of listed Philippine companies in the real estate industry. The specific objectives of this study were (1) to identify the present levels of debt financing employed by listed companies in the real estate industry; (2) to determine the present levels of profitability of the listed companies in the real estate industry and (3) to test the occurrence of a significant relationship between the levels of debt financing employed and the measures of profitability of listed companies in the real estate industry.

In assessing a company's capital structure, planning the level of debt financing to be employed is a fundamental aspect. Firms seek to attain the optimal capital structure that ensures that their market value is maximized while the cost of capital is kept at a minimum. With this, the results of this study can assist listed companies in the real estate industry of the Philippines in terms of how financial leverage impacts their financial performance. Such relationships established may aid corporations in decision-making on the steps and policies to be taken vital to gaining or maintaining their financial standing in the industry. The implications of this paper can be taken into consideration to improve their performance in financial measures. In addition, this study also proposes significance for the shareholders of the corporations being studied. Corporation shareholders eye significant returns on their investment. Hence, they may utilize the results of this study to determine how the level of debt financing employed by such investee corporations affects the value of their wealth. At the same time, potential investors of the listed companies in the Philippine real estate industry may find the results of this study helpful in deciding whether to invest in the companies included or not. Overall, this study presents itself to be beneficial to all stakeholders of listed corporations in the real estate industry in the Philippines.

The results and conclusions of this study are also of valuable use for the academe as instructors and students could incorporate the research findings in related lectures and develop meaningful discussions on debt financing and management.

The researchers investigated the relationship between selected independent variables and dependent variables to achieve the study's objectives. The first independent variable used in the study was the (1) *Short-Term Debt to Total Assets (STD-TA)* ratio of current liabilities to total assets. In this case, current liabilities refer to the company's liabilities payable within one year. The second independent variable was the (2) *Long-Term Debt to Total Assets (LTD-TA)*, reflecting the portion of the firm's assets financed by debts payable after one year. This ratio is computed by dividing the non-current liabilities by the total assets. On the other hand, the dependent variables investigated in this paper were (1) *Return on Assets (ROA)*, which is an indicator of profitability reflecting the ratio of net income to the company's average total assets, and (2) *Return on Equity (ROE)*, which is a profitability measure that is calculated by dividing net income by the average shareholders' equity.

This study primarily focuses on investigating the impact of debt financing on the profitability of listed companies in the Philippine real estate industry as measured by the selected profitability indicators. Thus, measures of performance and profitability other than those mentioned above are beyond the scope of this study. Consequently, the measures of the levels of debt financing were limited to the previously mentioned two independent variables only. Other variables that indicate levels of debt financing as used by previous studies, such as Total Debt to Total Assets Ratio and Debt to Equity Ratio were not investigated in the conduct of the study as it would likely create an issue of perfect multicollinearity between the variables if included in the regression model along with STD-TA and LTD-TA. Furthermore, the researchers did not incorporate control variables. This research was also confined to publicly listed real estate companies in the Philippine Stock Exchange. The panel data used for the analysis encompassed ten years. Hence, companies whose financial reports did not present figures covering ten years from 2010 to 2019 were excluded from the analysis.

1.1 Theoretical Framework

The research is anchored on two theories. The Signaling Theory and Pecking Order Theory relate to the utilization of debt financing and its implication for the current status and growth. It also involves the concept of asymmetric information that affects the varying and sometimes contrasting decisions and preferences of the management and external shareholders of the company.

The Signaling Theory pioneered by Ross (1977) posits that for managers possessing insider information not known by outside investors, increasing the proportion of debt financing in a company's capital structure sends favorable signals to investors about management's confidence in the company's future performance. Thus, it follows that employing higher levels of debt financing signals an expected increase in the company's profitability.

The Pecking Order Theory, popularized by Stewart Myers and Nicolas Majluf in 1984, explains how companies decide to source funds that drive their capital structure and provides them a good mixture of debt and equity financing. According to the Corporate Finance Institute, this theory stems from the concept of asymmetric information. Managers possess more information about the company's performance, prospects, risks, and future than external users.

Concerning the firm's capital structure, the Pecking Order Theory is evident when the company prioritizes the use of its retained earnings, termed as internal financing, as it does not associate extra costs and is the most convenient source of financing. When funds from internal financing have been exhausted, companies will then opt to use external financing. This is where information asymmetry starts, and the companies will have to compensate creditors (debt

financing) and shareholders (equity financing) through a higher rate of return (Corporate Finance Institute, 2020). Moreover, from these two types of external financing, companies tend to prioritize debt over equity as it has lower costs when compared to the latter. Debt financing signals an undervalued stock and implies that the business is confident of becoming profitable to make repayments for its debts in the future (Corporate Finance Institute, 2020).

1.2 Literature Review

Several works of literature have explored the relationship between the level of debt financing a company employs and its profitability. Past studies conducted on the same matter among different countries and different industries of focus present varying results and relationships between debt financing and firm performance as measured by several factors. The pieces of literature were analyzed by determining how debt financing impacts profitability and comparing the conclusions of such studies.

1.2.1 Determinants of Debt Financing

Luna (2016) researched to identify the determinants of optimal corporate structure in the Philippines. The researcher tested the significance of each factor, such as firm size, firm age, retained earnings, interest expense, and tangibility, on the data from 146 Philippine firms spanning 2006 to 2015. Findings suggested that those five factors are significant determinants of corporate capital structure. Firm size showed a positive coefficient, indicating that as the firm increases its size, that firm would use more debt financing in its capital structure. Thus, larger firms would choose debt financing due to its tax benefits from interest expenses paid from their debts.

On the other hand, firm age had a negative coefficient, indicating that less debt is being injected into their capital structure as the firm gets older. This was also strengthened by the Pecking Order Theory, where older firms are also observed to have lower information asymmetry than younger ones. The coefficient of retained earnings ratio also showed a negative coefficient, suggesting that as the firm's retained earnings ratio increases, it would have an inverse effect on its debt-to-equity ratio. It indicates that corporations tend to exhaust internal sources of financing first before looking to external opportunities, which is also consistent with Pecking Order Theory. Interest expense also showed a negative coefficient, indicating that as the interest expense increases, the debt-to-equity ratio would decrease. Thus, the Trade-Off Theory fortifies the claim that having higher amounts of interest expense would make firms less incentivized to use debt financing in their capital structure. Finally, tangibility showed a positive coefficient, indicating that as the firm's tangibility increases, it would directly affect its debt-to-equity ratio. It was consistent with the Signaling Theory, which tells that a firm with high tangibility sends out signals to investors that they are more capable of making interest payments. Likewise, they would choose debt financing in their capital structure.

Yousef (2019) also investigated the determinants of capital structure in the Gulf Cooperation Council and United Kingdom real estate sectors. Results showed that a firm's size, profitability, and retained earnings to total assets exhibited a significant impact on determining their capital structures. Under the Trade-Off Theory, firm size was found out to have a significant positive effect on the debt measurements used in the study. On the other hand, profitability and retained earnings to total assets showed a significant negative impact on debt measurements used in the study, consistent with Pecking Order Theory.

Qamar et al. (2016) investigated the relationship of debt financing determinants of non-financial firms listed on the Pakistan Stock Exchange with their profitability. It also considered

the firms' size, current ratio, tangibility, and sales growth to correlate with the change in profits. It discovered the utilization of external borrowings in financing the companies for more than half of all its assets. Various results occurred due to several combinations with the company's size, current ratio, tangibility, and sales growth status. The study showed that above-average size, current ratio, and tangibility are presenting a negative relationship.

Meanwhile, the study also displays that low current ratio and tangibility resulted in positive relationships. The effects of the firms' financing decision showed that unit change in debt ratio, profits will decrease by around one-fourth percent with medium-sized firms, current ratio, tangibility, non-tax debt shield, and growth. Additionally, for a below-average size, current ratio, and sales growth with a high tangibility, installing more debt further decreases their profits by nearing a half percent. However, with an above-average size, current ratio, and sales growth with low tangibility, it showed that having more debt will increase their profits.

1.2.2 Positive Impact on Firm Performance

Forte and Tavares (2019) sought to illumine the relationship between debt and the performance of a firm and the contribution of institutional factors (efficient regulatory systems and high credit access) on this relationship of manufacturing firms from nine European countries (Belgium, Finland, France, Germany, Greece, Italy, Portugal, Spain, and Sweden). It was found that the use of debt positively affects a firm's performance. The presence of the institutional factors also positively affects the relationship between debt and performance. Moreover, it is observed that the presence of control variables, particularly size (measured as the natural logarithm of total assets) and growth (measured through growth in the firm's sales), also affects the performance of a firm. In the case of company size, it has a negative impact on firm performance, which lends credibility to organisational theories whereby profit maximization is not among the company's main aims.

On the other hand, growth has a positive impact on firm performance as an increase in sales is believed to provide a company with brighter prospects to achieve higher performance. The researchers concluded that the institutional factors do impact the relationship between debt and a firm's performance, and it is observed to be more positive in countries with a greater level of legal efficiency and laws governing credit. It is because these laws secure investors' rights and increase their willingness to lend funds to companies.

Guo and Legesse (2020) investigated the relationship between debt financing and the performance of firms in the manufacturing industry giants China, Germany, India, and Japan. Firm efficiency was used as the indicator of performance, while debt financing was classified into short-term and long-term. The study also considered the moderating role of liquidity to capture the solvency risks of these firms. Results of the study indicate that firm efficiency positively relates to short-term financing while negatively with long-term debts. Hence, firms with high efficiency leverage themselves more with short-term debts than long-term financing options (Guo and Legesse, 2020).

Jepkorir and MwangiGichure (2019) explored the effects of debt financing on the growth of small and medium enterprises in Kenya. Sales volume, market share, market network, and network and staff were used as measures of growth, while debt financing was categorized into trade credit and microcredit, which are both short-term debts. Results of the research specified that growth has a significant positive relationship with both trade credit and microcredit. It concluded that debt financing had influenced the growth of the enterprises (Jepkorir and MwangiGichure, 2019).

1.2.3 Negative Impact on Firm Performance

Based on Swedish Data, Yazdanfar (2015) examined the relationship between debt levels and performance among small and medium-sized businesses. Results of the study have shown that the levels of accounts payable, short-term debt, and long-term debt negatively affect SMEs' performance in terms of profitability. It is in line with the Pecking Order Theory as the firms have shown to prioritize capital and retained earnings before turning to external financing to reduce costs caused by information asymmetry and agency conflicts. Further, firms with lower debt ratios appear to be more profitable. Forte and Tavares (2019) studied the relationship between debt (short term and long term) and a firm's performance as influenced by institutional factors and macroeconomic variables. Opposite to short-term debts, long-term debts are concluded to affect a firm's performance directly negatively. Upon considering institutional frameworks, such as legal systems and credit market regulations, results have shown that long-term debts can still impact firm performance positively. However, this is attained if there is a higher value of these variables existing in a particular country (e.g., Finland). For countries with lower values of these variables, long-term debt negatively impacts a firm's performance (Greece). Macroeconomic variables such as gross domestic product (GDP), growth rate, and inflation rate were also used. The study concluded that these macroeconomic conditions are also considerations, alongside debt, to know what affects a firm's performance.

Prempeh et al. (2016) explored the force of debt policy (Short-term Debt, Long-term Debt, Total Debt) employed and its firm performance (Return on Asset, Tobin's Q Ratio, Gross Profit Margin) in Ghanian manufacturing companies listed on the Ghana Stock Exchange. The study attested that Short-term debt has a negative correlation between Return on Asset and Tobin's Q Ratio and no correlation between Gross Profit Margin. On the other hand, Long-term debt has a negative correlation between Return on Asset and Gross Profit Margin and a positive correlation between Tobin's Q Ratio. In general, total debt has a negative correlation with all of the key performance indicators. The researchers concluded that an intensification in liability would decline the organisation's performance as Ghanian manufacturing companies rely exceedingly on debt that increases their risk to potential and current debtors and investors.

Habib et al. (2016) also explored the relationship between debt and profitability using data from the non-financial sector of Pakistan. The study presents a negative relationship between levels of debt financing and the profitability of non-financial Pakistani firms as measured by return on assets (ROA). That is, leveraging a firm will drive profits down. Thus, the researchers' findings concur with the Pecking Order Theory. Habib et al. (2016) further assert that the negative correspondence between debt and profitability is primarily attributed to the costs associated with acquiring more debt.

1.2.4 No Impact on Firm Performance

Intrisano et al. (2019) endeavored to identify a relationship between capital structure and the performance of listed companies from Europe. Regression tests were used for the years 2015 to 2017 using ROA and ROE to gauge the performance of the firms. In several instances, the researchers displayed positive but weak significant relationships between the two when using ROE. Using ROA, however, revealed that the relationship remained positive and weak but became insignificant in some cases. In one instance, it showed that no relationship was discovered between the two. The researchers concluded that because of the weak interactions between the measures of capital structure and firm performance and that the R-squared values show that the measure of

capital structure explains only a lesser portion of the variability of firm performance, the capital structure does not influence the performance of companies (Intrisano et al., 2019).

1.2.5 Argument

The literature presented above has outlined the different determinants that contribute to a company's capital structure and the reported conclusions as to how debt financing affects firm profitability. Ideally, a higher level of debt provides bigger capital, allowing firms to expand their horizons and grab profit-making opportunities for their businesses. Despite the risks and challenges posed by debt accumulation, companies still choose this as one of the ways to sustain their operations. Thus, it is expected that the capital structure significantly impacts firm profitability, especially because, as Luna (2016) pointed out, several factors observed in Philippine firms influence their present debt levels. The possible impact that differing levels of debt have on profitability cannot be disregarded. However, as provided above, the mixed conclusions regarding debt affecting profitability positively or negatively, or not affecting it significantly, evidence that results may vary among different countries and even in various industries. Results may also vary due to the data analyzed covering either a period or a point in time. The underlying economic conditions during the period taken may also have affected the conclusions presented. One controversy is that some studies, such as that of Habib et al. (2016), used data that covered the 2008 global financial crisis. Therefore, it is not ascertained whether the phenomenon significantly affected the findings of the study or not.

The bulk of foreign literature regarding this topic may serve as a guide for local businesses. However, the mixed conclusions and controversies presented above may still render a different result for companies present in the country. Moreover, a shortage of empirical literature in the Philippines, especially about the real estate industry, has been noted. Therefore, the researchers argue that further investigation must be undertaken locally to explore the relationship between debt financing and the profitability of different publicly listed companies belonging to the real estate industry.

1.3 Conceptual Framework

Figure 1

Conceptual Framework

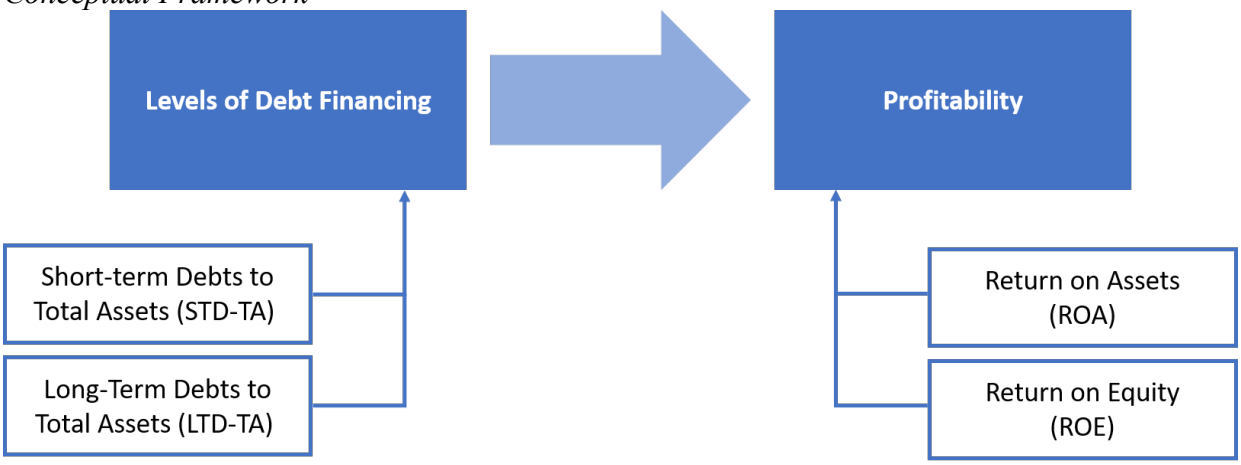

Figure 1 presents the presumed relationship between the key variables being studied, namely levels of debt financing as the independent variables and measures of profitability as the

dependent variables. The researchers aim to measure whether the levels of debt financing of listed real estate companies in the Philippines cause a significant effect on their profitability measures.

It is STD-TA, and LTD-TA measures a company's levels of debt financing. On the other hand, a company's measures of profitability are its ROA and ROE.

From these, the hypotheses of this study are presented in the next section.

1.4 Hypotheses and Regression Model

As previous studies focusing on the same matter yielded varying results, the relationship between debt financing and ROA in the Philippine real estate industry is yet to be established. The blind spot in this area of research necessitates the investigation as to the relationship between the two variables. In this study, the researchers aimed to ascertain the existence of a significant relationship between a company's level of debt financing and its profitability as measured by ROA. Thus, the first hypothesis is presented below:

H_{01}: There is no significant relationship between the levels of debt financing and Return on Assets.

To discover the existence of a significant relationship between the level of debt financing and its profitability as measured by the ROA, the researchers utilized the regression model presented below:

$$ROA_{i,t} = \beta_0 + \beta_1 STD\text{-}TA_{i,t} + \beta_2 LTD\text{-}TA_{i,t} + \varepsilon_{i,t} \quad (1)$$

Where,

ROA is net income divided by average total assets;
β is constant;
STD-TA is current liabilities divided by total assets;
LTD-TA is non-current liabilities divided by total assets;
ε is error term; and
i, t= for firm *i* on year *t*

The research likewise attempted to determine the relationship between a company's level of debt financing and its profitability in the context of the Philippine real estate industry as measured by the ROE. The said measure of profitability had been used for European countries (Intrasano et al., 2019), India (Das and Swain, 2018), and Rwanda (Harelimana, 2017) by studies that investigated its relationship with the capital structure of the selected companies in their respective industries. Thus, the second hypothesis is presented below:

H_{02}: There is no significant relationship between the levels of debt financing and Return on Equity.

To determine the existence of a significant relationship between the level of debt financing and its profitability as measured by the ROE, the researchers utilized the regression model presented below:

$$ROE_{i,t} = \beta_0 + \beta_1 STD\text{-}TA_{i,t} + \beta_2 LTD\text{-}TA_{i,t} + \varepsilon_{i,t} \quad (2)$$

Where,

ROE is net income divided by average shareholders' equity;
β is constant;
STD-TA is current liabilities divided by total assets;
LTD-TA is non-current liabilities divided by total assets;
ε is error term; and
i, t= for firm *i* on year *t*

2 Methodology

The study examined secondary data, consisting of numerical information from financial statements published in an online database, namely, the OSIRIS database. Financing theories, such as the Signaling and Pecking Order Theory, suggest that debt is connected to a firm's outlook to create profits. Therefore, a quantitative research design and descriptive-correlational analysis were employed to identify the magnitude of the presumed relationship between debt financing and profitability. The procedures are expounded in detail in the following sections:

2.1 Subjects

This study covered the publicly listed Philippine companies in the real estate industry from 2010 to 2019, which consisted of 52 companies. The study utilized the purposive sampling technique in choosing the sample of the research with the following sampling criteria:

1. The company is listed on the Philippine Stock Exchange and is open.
2. The company belongs to the real estate industry, as sorted by the OSIRIS database.
3. The company had financial reports published publicly from 2010 to 2019.
4. The company had debt during the study period.
5. The company's reporting period ends on December 31.
6. The shareholders' equity figures of the company from 2010-2019 are positive.

Based on the criteria from the above samples, the researchers trimmed down the population into 31 companies after excluding those that did not meet the given criteria from consideration.

2.2 Data Collection Procedure

The collection of data for the study involved the access of financial statements in the OSIRIS database. The researchers applied the filters into the database to acquire data related only to listed real estate companies in the Philippines.

After applying the necessary filters, information about each included company's current liabilities, non-current liabilities, and net income available in the database over the past ten years (2010 - 2019) and total assets and total equity over the past eleven years (2009 - 2019) were retrieved and compiled for further data analysis in a spreadsheet with the information chronologically arranged by year. The preceding inclusion criteria were considered during the data collection.

2.3 Data Analysis

The levels of debt financing mentioned in Section 1 of this paper were used as independent variables that influenced the dependent variables, the firms' profitability measures. These variables were subjected to statistical analysis to determine if a significant relationship existed, as suggested by the theories mentioned above. The computation of the variables and their description are shown below:

$$Short\text{-}term\ Debts\ to\ Total\ Assets\ (STD\text{-}TA) = \frac{Current\ Liabilities}{Total\ Assets} \qquad (3)$$

The STD-TA represents the percentage in which the company's assets are financed by debts that mature within a year.

$$Long\text{-}term\ Debts\ to\ Total\ Assets\ (LTD\text{-}TA) = \frac{Non\text{-}Current\ Liabilities}{Total\ Assets} \qquad (4)$$

A measurement represents the percentage in which the company's assets are financed by debts that last for more than a year. This ratio provides a measure of the long-term financial position of a company, as well as its ability to fulfill its outstanding financial obligations.

$$Return\ on\ Asset\ (ROA) = \frac{Net\ Income}{Average\ Assets} \qquad (5)$$

This financial ratio shows the ability of a company to generate profit from its assets. It also measures the efficiency of the company's management in using its assets to generate earnings.

$$Return\ on\ Equity\ (ROE) = \frac{Net\ Income}{Average\ Shareholders'\ Equity} \qquad (6)$$

This financial ratio shows the ability of a company to generate profit from its shareholders' investments in the company. It also measures the profitability of a corporation in relation to its shareholders' equity.

A panel least-squares regression analysis was performed to investigate the relationship between debt financing and profitability among the selected real estate companies. It was chosen as the data analysis technique based on the techniques that several literatures used in their analysis. Through this, the researchers ascertained the magnitude of influence or relationship of the levels of debt financing with profitability measures.

The first regression model shown in Section 1.4 represented the investigated impact of the independent variables on the firms' ROA. This assisted in rejecting or not rejecting the Null Hypotheses (H_{01}) concerning the relationship between the levels of debt financing and the ROA. Meanwhile, the second model presented the regression equation regarding the relationship between the independent variables and the firms' ROE. This assisted in rejecting or not rejecting the Null Hypothesis (H_{02}) regarding the relationship between levels of debt financing and the ROE.

3 Results and Discussion

3.1 Regression Analysis

This section shows the results from the regression models used in the analysis. The study utilized the panel least-squares regression analysis to determine the relationship between measures of debt financing and probability measures. Ten periods and 31 cross-sections were included, and 310-panel observations were used in both regression models.

3.1.1 Model 1: Impact of Levels of Debt Financing on the Firm's ROA

Table 1

Relationship between ROA and Independent Variables

Independent Variable	Coefficient	Std. Error	t-Statistic	Probability
Constant	0.0332	0.0083	3.9987	0.0001
STD-TA	0.0003	0.0276	0.0122	0.9902
LTD-TA	0.0532	0.0275	1.9299	0.0545*

Note. *significance at 0.10 alpha; **significance at 0.05 alpha; ***significance at 0.01 alpha
Durbin Watson Statistic: 1.7457
R-squared: 0.0121
Adjusted R-Squared: 0.0056
F-Statistic: 1.8749
Prob(F-statistic): 0.1551

Table 1 shows that the independent variable STD-TA had a positive coefficient, but an insignificant relationship was noted between the said independent variable and the dependent variable ROA. This meant that there is not enough evidence to show that the changes in STD-TA cause the changes in ROA. On the other hand, the independent variable LTD-TA had a positive coefficient, noting a positive significant relationship between the said independent variable and the dependent variable ROA. This meant that as LTD-TA increased, ROA increased correspondingly.

There was no auto-correlation error since the Durbin-Watson (DW) statistic was below 2.00. Thus, there was no identifiable relationship between the values of the error term. The adjusted R-squared value indicated that the variation in the independent variables had explained 0.56% of the variation in the dependent variable. The entire regression output was insignificant since the probability of the F-statistic, as shown in the notes to Table 1, was more significant than alpha. Therefore, the results have failed to reject the null hypothesis regarding the significance thresholds indicated above. The high probability value does not necessarily mean that the null hypothesis is true since hypothesis tests were designed to challenge the null. An insignificant result only indicates that there is not enough evidence found against it.

3.1.2 Model 2: Impact of Levels of Debt Financing on the Firm's ROE

Table 2

Relationship between ROE and Independent Variables

Independent Variable	Coefficient	Std. Error	t-Statistic	Probability
Constant	0.0197	0.0135	1.4627	0.1446
STD-TA	0.1139	0.0448	2.5416	0.0115**
LTD-TA	0.2148	0.0447	4.8024	0.0000***

Note. *significance at 0.10 alpha; **significance at 0.05 alpha; ***significance at 0.01 alpha
Durbin Watson Statistic: 1.7059

R-squared: 0.0932
Adjusted R-Squared: 0.0873
F-Statistic: 15.7755
Prob(F-statistic): 0.0000

Table 2 shows that the independent variables STD-TA and LTD-TA had positive coefficients, noting a positive significant relationship between the two independent variables and ROE. This meant that as STD-TA and LTD-TA increased, ROE increased correspondingly.

There was no auto-correlation error since the Durbin-Watson (DW) statistic is below 2.00. Thus, there was no identifiable relationship between the values of the error term. The adjusted R-squared value indicated that 8.73% of the variation in the dependent variable had been explained by variation in the independent variables. The whole regression output was significant since the probability of the F-statistic was less than alpha. The independent variables had probabilities of less than alpha as well. Therefore, the null hypothesis was rejected since there was a significant relationship between ROE and measures of debt financing.

3.2 Discussion

Based on the results presented, it is established that there exists no significant relationship between short-term debt and the first dependent variable, ROA. As emphasized in the preceding section, this asserts that evidence lacks to show that the changes in STD-TA cause the changes in ROA. As a firm in the real estate industry employs more short-term debt, it is not said to significantly impact its profitability as measured by its return on assets. Meanwhile, long-term debt is found to have a significant positive relationship with ROA. However, because the values of the independent variable coefficients in Table 1 are close to zero, it can be said that a real estate company's choice of debt only weakly affects its profitability, using ROA as its basis of measurement. This concurs with the conclusion of Intrisano et al. (2019), wherein their results also showed coefficients of close to zero and regression outputs with statistically insignificant results. The Pecking Order Theory supports this because companies primarily utilize internal financing sources, which are considered relatively cost-free (Corporate Finance Institute, 2020). However, the studies conducted by Habib et al. (2016), Prempeh et al. (2016), and Yazdanfar (2015) are in opposition with the result, which all concluded that there is a significant negative relationship between debt and performance, by measures of ROA. In addition, the report of Jepkorir and MwangiGichure (2019) concluded that there is a significant positive relationship between short-term debt with firm's growth.

On the other hand, the regression output when ROE is used as the dependent variable is statistically significant. Additionally, both levels of debt financing considered in the study have a positive relationship with its profitability, as evidenced by ROE. This proposes that leveraging a company in the real estate industry with short- and long-term debt will drive its ROE up to a certain extent. This concurs and contrasts simultaneously with the results of the study of Guo and Legesse (2020) and Forte and Tavares (2019), which likewise focused on the use of short- and long-term debt financing as drivers of performance. Both studies contend that employing short-term debt positively relates to firm performance while long-term debt relates negatively. However, as Forte and Tavares (2019) further assert, long-term debt may positively impact a firm's performance if institutional frameworks are considered. For a holistic analysis, attention is drawn to the Adjusted R-Squared value and coefficient values in Table 2. As in Intrisano et al. (2019), there is a weak relationship between the independent variables and the ROE because their values are close to zero.

Further, because the levels of debt financing explain only 8.73% of these firms' ROE, both short-term and long-term debt has limited explanatory capacities as drivers of profitability of listed real estate firms in the Philippines. This suggests that much of their profitability is affected by other factors not included in the scope of the study.

Based on the previous discussion, it can be said that a firm in the real estate industry should focus on utilizing more equity-sourced financing, especially its internal retained earnings as espoused in the Pecking Order Theory, because debt is shown to significantly affect its profitability to a minimum extent only. Despite this, employing debt may still prove beneficial, as shown in the results for ROE. Because the coefficient of LTD-TA is higher than that of STD-TA, should firms decide to employ debt financing in their capital structure, they should opt to leverage themselves with long-term debt financing. This is supported by the Trade Off Theory, as the costs of borrowing associated with debt financing can be claimed as deductions for tax purposes. For all instances, the Signaling Theory is not applied to the study. The results present little evidence of a significant relationship between levels of debt financing employed by the listed companies in the real estate industry in the Philippines and their measures of profitability. This implies that investors, creditors, and outside parties cannot use the changes in debt financing made by a company's internal management as a signal concerning its current profitability, which is significant for their decision-making.

4 Conclusion and Recommendations

4.1 Conclusion

To finance or not finance with debt is a decision that managers of firms in the real estate industry can evaluate to potentially influence their financial performance, more specifically concerning profitability. Because of the financial interest in real estate firms, managers must make well-informed and contributive decisions. Thus, the study sought to determine the effect that debt has on the profitability of real estate firms by identifying their present levels of debt financing, their current measures of profitability, and the significance of the relationship between these two. The study also aimed to contribute to the existing research gap in this field of study. The results of this study confirmed that an insignificant relationship existed between levels of debt-financing and a real estate firm's profitability when using ROA as the measure of the latter. In contrast, a significant relationship existed between these when ROE was used instead. Despite the significance of this relationship, it was only weak due to the small values of the coefficients and the Adjusted R-Squared. Employing debt may still prove to be beneficial. These results can be helpful for managers of real estate companies to assist them in formulating appropriate capital structure policies to help maximize the profitability of their firms.

4.2 Recommendations

As the results of the study suggest, it was discovered that an insignificant relationship existed between the levels of debt and ROA and that the independent variables could explain only 8.73% of the variation in ROE. This indicates the limited explanatory capacity of debt as a driver of a real estate firm's profitability. Other variables used to gauge firm performance and profitability may be used by future researchers to explore this area further. Moreover, other factors, such as firm size, management of resources, institutional frameworks, legal systems, and other economic conditions, may also be considered.

Based on the study results, it would be misleading to say that companies in the real estate industry should not employ debt in their capital structure because this can still contribute to their

profitability if utilized correctly. However, companies must be careful in choosing the optimal balance between short-term debt and long-term debt. In making this decision, managers must consider several factors. As Luna (2016) stated, different factors, such as firm size, firm age, retained earnings, interest expense, and tangibility, should be considered in determining the optimal balance between short-term debt and long-term debt and, consequently, between total debt and total equity. Emphasis should also be placed on the Trade-Off Theory, where borrowing costs play an essential role in this determination. Moreover, as the regression analysis showed that the coefficient of LTD-TA is higher than that of STD-TA when using both ROA and ROE, it is suggested that managers of real estate companies should look more into employing more levels of long-term debt in their capital structure.

Future research is also recommended to explore how the advent of the COVID-19 pandemic could impact this relationship and challenge the assumptions and results presented in this study.

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Sustainability Reporting Compliance Of Publicly-Listed Companies Under The Finance Industry In The Philippines

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Abstract – The need for transparency by stakeholders and the global call for corporate responsibility in the promotion of economic, social and environmental wellbeing of society, increases the demand for sustainability reporting among companies across the globe. Prior to 2019, sustainability reporting in the Philippines was on a voluntary basis. However, starting 2019 the Securities and Exchange Commission (SEC) has mandated all publicly listed companies to submit their sustainability reports on a comply or explain basis in the next three years. This study was conducted to assess the level of compliance of publicly listed companies in the finance industry with the sustainability reporting requirements as mandated by the SEC who allows the use of the SEC-designed reporting framework or any globally accepted sustainability reporting framework such as the GRI (Global Reporting Initiative). A scoring system which scored 1 for present and 0 in the absence of the disclosure was used. Measure of central tendency, test statistic and inferential statistics was utilized in the study. The study has 25 companies as subjects, 12 of which used SEC-based sustainability reporting guidelines while the other 13 were GRI-based. Findings showed that economic dimension was at a compliance level of 70.56%, then social dimension at 57.41%, and environmental dimension at 24.91%. Further results indicated that compliance was higher for companies that adopted the SEC-based reporting, and lower for reports that are GRI-based.

Keywords: *Sustainability Reporting, Economic Dimension, Environmental Dimension, Social Dimension*

1. Introduction

As stated in the SEC Memorandum Circular No. 4 in 2019, considering the emergence of sustainability reporting practice globally, only fifty-eight (58) out of two hundred seventy (270) publicly traded companies in the Philippines were able to publish their sustainability reports according to the disclosures made by the publicly traded companies on their Integrated Annual Corporate Governance Report (I-ACGR). With that being said, it shows that companies do not give importance to sustainability reporting.

The focal objective of the study is to determine the level of compliance of firms listed in the Philippine Stock Exchange (PSE) under the finance industry on the sustainability reporting mandate of Securities and Exchange Commission (SEC). Specifically, this study aims to focus on the assessment of the economic, social, and environmental dimension of the company disclosures.

Thus, the level of compliance per company disclosure will be ascertained. In addition, we also determined the sustainability reporting disclosure that is majority and least complied by finance industries.

Conducting this study is beneficial for the existing publicly listed finance firms as it promotes the practice of sustainable activities. Through this study, both existing and future publicly listed finance industries would be guided suitably in providing financial services that are influenced by the global sustainability policy and management. This will enable the investing public to measure and monitor the contributions of the PSE-listed finance industry in achieving universal goals of sustainability. It will serve as a factor in the decision making and future investing activity of potential investors, creditors, and intended users. Moreover, it could be a paradigm in determining aspects and causative factors that companies under the finance industry should consider to improve and increase the level of compliance of their sustainability reports in accordance with the mandate of the SEC.

In preparation for the objectives of this study, the researchers utilized the measure of central tendency, particularly the mean of sampling distribution for determination of level of compliance, percentages and test statistic for ranked data for confirmation of the majority and least complied disclosure, and inferential t-test to validate the possible significant differences.

Subsequently, this research has the following hypotheses:

H1: There is a significant difference in the level of compliance among the economic, environmental and social dimensions of sustainability;

H2: There is a significant difference between the SEC-based and GRI-based level of compliance.

The independent variable of this study is the sustainability reports which encompasses the economic, environmental, and social dimensions as mandated by the Securities and Exchange Commission (SEC). On the other hand, the dependent variable is the level of compliance of companies under the finance industry to the 2019 sustainability reporting mandate of Securities and Exchange Commission (SEC).

1.1 Theoretical Framework

This paper is theoretically anchored on Triple Bottom Line (TBL) , Global Reporting Initiative (GRI), Corporate Sustainability and Legitimacy theories.

Triple Bottom Line

Three bottom lines are considered namely, social, economic and environmental dimensions in assessing company performance. This framework focuses on comprehensive investment results thus, becoming one of the main systems being used today as a marker of sustainable performance and profitability of a business.

Global Reporting Initiative

The Global Reporting Initiative (GRI) is a globally recognized reporting framework that that takes into account the economic, social and environmental dimensions of company operations. The framework has been designed to have an impact in the credibility and consistency of reporting of organizations that will help the stakeholders understand financial and the nonfinancial performance of a company. More importantly, it will help the researchers assess the level of compliance of publicly listed companies because the GRI strengthened the SEC mandate to encourage companies to report comparable economic, environmental and social information that

will escalate the transparency level and accountability of a company based on sustainability practices.

Corporate Sustainability

A company that promotes good corporate social responsibility is an opportunity for them to manifest their good corporate citizenship while growing profits and making a positive impact to the economy, environment and society. CSR activities can promote healthy relationships with stakeholders by manifesting the companies' patronage to responsible business practices (Jain & Winner, 2016).

Legitimacy Theory

According to this theory, organizations can only survive if their actions are considered legitimate by external stakeholders (Rossi & Tarquinio, 2017). Thus, it has become a useful tool in managing and attaining the organizational legitimacy to perform its activities in consensus with stakeholders' interests (Suchman 1995). This profound definition captures the role of the legitimacy concept in deciphering the behavior of firms in administering and undertaking social and environmental disclosure of information to the public. It is substantial for this research to acknowledge the legitimization of the firms' operations in order to properly investigate the disclosures under the different indicators and aspects of social and economic dimension. This theory is paramount also in understanding the concept of firms disclosing their sustainability reports to minimize the pressure from society.

1.2 Literature Review

Publicly listed companies are required to submit sustainability reports following the guideline the SEC has provided. The guidelines launched by SEC were from the existing principles from GRI 10 Standards, SASB Standards, TCFD Recommendation and other internationally accepted standards for nonfinancial reporting. SEC required the disclosure of the economic, environmental, and social activities done by the firm.

According to the World Bank (2020), financial development contributes to economic growth. The finance industry provides different wealth-generating opportunities such as pooling savings, facilitating capital accumulation and diversifying investments. One of the major components of the finance industry is financial institutions such as commercial banks, insurance and investment companies. Banks greatly influence economic development by transforming money in terms of spatial location, duration and risk (Alam, 2017).

In a similar study of finance and telecommunication companies in Lithuania by Kavaliauske and Stancikas (2014), it was emphasized that being in an industry providing non-tangible products and services, social and environmental responsibility are the least prioritized corporate aspects because it was not determined if they are noticed and perceived positively by consumers. However, a study of selected financial institutions in Malaysia by Darus et al. (2015) revealed that there is an increasing trend within the operations of financial institutions in managing their environmental impact, more concerned about social responsibility by reaching out to the community and to provide a conducive workplace .

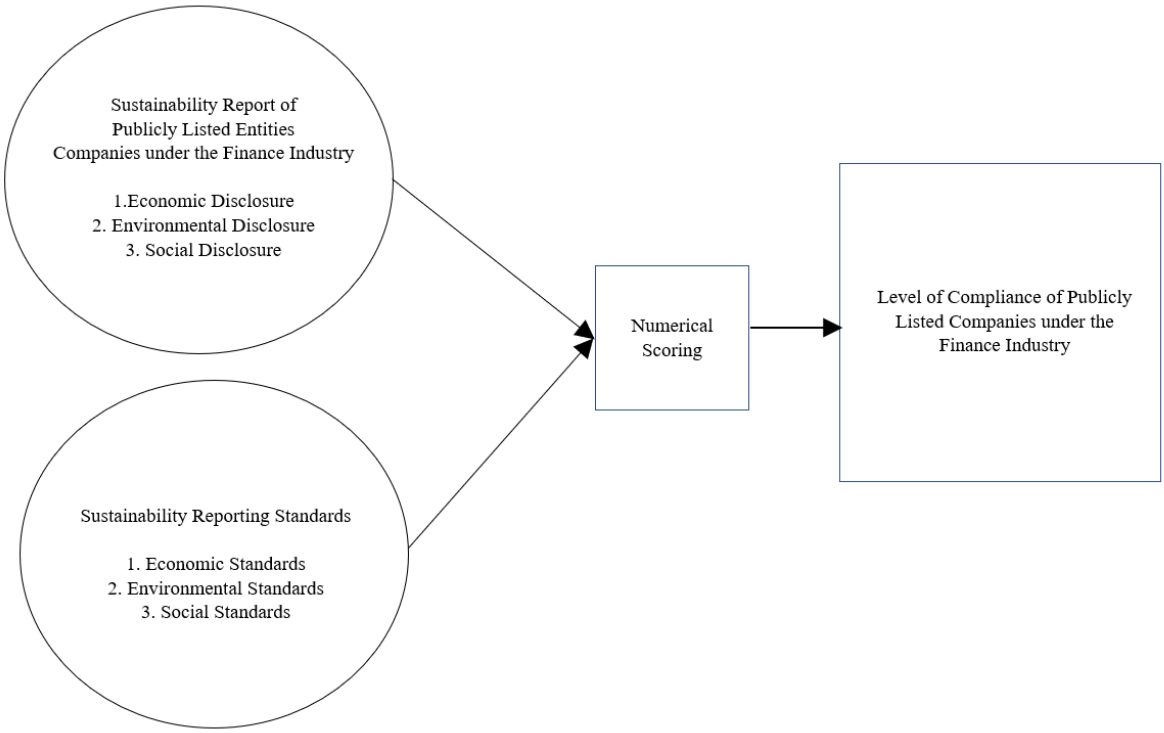
A study entitled "Banks and Environmental Sustainability: Some Reflections from the Perspective of Financial Stability" states that financial stability seeks for a systematic approach to assess potential risks due to environmental factors. A recommendation of full disclosures of both financial and nonfinancial information should be designed to solicit useful forward-looking

information. The disclosed organization's goal must focus also on the transition to a lower-carbon economy.

According to the study of Davidson and Wilson (2006), the economic dimension of sustainability reporting leans towards the economic interaction of the organization to its stakeholders. The economic emphasis to these indicators are the direct performance of the firm, specifically the monetary flows between the organization and to its key stakeholders. As provided by the GRI and the AGL sustainability report, indirect indicators consider the externalities that the firm creates to its society as well as direct indicators such as the internal management, growth strategies and business model. However, the research suggests that further research must be done in reporting these externalities because they have an impact on the society that are capable of being measured and disclosed in relation with the environmental dimension. Issues regarding the economic disclosure of sustainable reporting such as employee relations are included in the key indicators that can affect the productivity of the organization. Its financial contribution to the society can also be an indirect measurement for its effectiveness under the economic dimension because the investment is seen to be a positive externality to the community. This goes in line with the social component as it generally draws upon the productivity and human relationship measurements of sustainability reporting.

1.2 Conceptual Framework

Figure 1
Conceptual Graphical Framework



This figure describes the conceptual framework of the study wherein the independent variable is the sustainability reports and the sustainability reporting standards which encompasses the economic, environmental, and social dimensions as mandated by the Securities and Exchange Commission (SEC). The report required by the SEC has specific guidelines that Philippine Stock

Exchange listed companies have to follow. The guidelines launched by SEC were from the existing principles from GRI 10 Standards, SASB Standards, TCFD Recommendation and other internationally accepted standards for nonfinancial reporting. The disclosures reflect the impacts of the companies' economic, environmental, and social activities that are quantifiable and measurable based on the guidelines provided.

On the other side, the dependent variable of the study is the level of compliance of companies under the finance industry to the 2019 reporting mandate of Securities and Exchange Commission (SEC). As stated in the memorandum, the sustainability report of publicly listed companies must be made in accordance with the guidelines since the mandate was based on internationally recognized frameworks mainly the Global Reporting Initiative, the level of compliance of finance firms were assessed through a numerical scoring system. Every GRI performance indicator in each of the economic, social and environmental dimensions were given scores based on the extent of disclosure. This numerical scoring system is adapted from the study of Owoloabi and Iyoha (2017) in the Nigerian banking sector.

2.0 Method

This study utilized a descriptive quantitative research design to gather accurate data that is relevant to the assessment of compliance level of the finance industry to SEC mandate in preparation of its sustainability reports. Quantitative research is substantially employed to outline the processes and strategies that focus on collecting and analyzing quantifiable data. With this, the study implemented a quantitative design as the researchers attempted to assign scores of 0 and 1 by evaluating each disclosure needed per dimension of sustainability reporting. Subsequently, the following information was quantified to generate results that generalized the level of compliance of the finance firms with regard to SEC mandate. Relatively, this approach interprets the collected data and assists the researchers in delineating the assigned scores for each disclosure.

2.1 Subjects

The study was conducted in the Philippines where the subjects were located. The aspects looked into is limited on the economic, social and environmental guidelines and information of sustainability reports. A population of thirty (30) companies under the subcategory of the finance industry that are publicly listed in the Philippine Stock Exchange as of the end of December 2019 were considered. With the aid of a non-probability purposive sampling, a sample of twenty-five (25) companies were chosen that adequately represent the population due to its on-going operational status and availability of sustainability reports publicly. This sampling technique is suitable to the study since business firms under the finance industry were intentionally selected that effectively addressed the research problem. Companies excluded from the sample are those having sustainability reports that were not available, had suspended operational status, only a fiscal period covered in their annual reports, lack of substance in their reports due to parent-subsidiary relationship and reports that cannot be assessed in accordance with the SEC mandate.

2.2 Instruments

The 2019 sustainability reports of publicly listed firms under the finance industry were utilized in this study from their official websites and from the PSE edge portal. These reports reflect the firms' significant economic, environmental, and social impacts and performances. The SEC reporting mandate was used as a guideline in these reports. For the assessment of the compliance of these reports, a scoring system was employed.

2.3 Data Collection Procedure

Secondary data that were readily available, accessible to the general public and published through the official websites of companies and from PSE edge were used by the researchers as the data for this study. Sustainability reports that cover the year 2019 from companies under the finance industry listed in the Philippine Stock Exchange was assessed and collected. There were thirty (30) publicly listed companies under the finance industry however only twenty-five (25) sustainability reports were available as of December 2019.

2.4 Techniques for Data Analysis

The SEC sustainability reporting mandate in 2019 was used as a guideline in this study. The researchers assessed each 2019 sustainability report which consists of three (3) dimensions: economic, environmental and social. The scoring was adopted from the research of Owoloabi and Iyoha (2017) in which the presence of a disclosure is coded 1 and the absence of the disclosure is coded 0. In order to avoid bias and for the reliability to be guaranteed, two researchers were assigned per company to assess the quality of sustainability reports.

Each disclosure was assessed by a scoring system under each dimension. A score of 0 was given if the disclosure cannot be found, no data available, not applicable, immaterial to the company and not presented in accordance with the requirement of mandate. On the other hand, a score of 1 was given to disclosures that provide information in compliance to the required data needed which can be presented through descriptive or numerical data.

The SEC Mandate states that the submission of sustainability reports that are prepared in accordance with internationally recognized frameworks and standards such as GRI is considered compliant. For this reason, similar disclosures from the SEC and GRI, which can be found in Appendix A, were reconciled by the researchers.

The scores were tallied in each disclosure. However, items disclosed as "not applicable" and "immaterial" were excluded in the total score. From the scores tallied, the mean and standard deviation were computed to summarize percentage of compliance of the companies in each dimension. The percentages were inspected and rank to determine sub-dimensions which were mostly complied and least complied.

In order to ascertain if there is a significant difference among the mean percentage of compliance on the three different dimensions of sustainability report disclosures, a one-way analysis of variance using the F-ratio test was done. It is a one-way inferential assessment of variances for a variable calculated for two or more groups. Some statistical tests assume that homogeneity of variances across samples exist. Among the assumptions of this test of difference were equality of variance which was evaluated using Levene's test and normality, which was assessed by examining the Q-Q plot. Brown-Forsythe Homogeneity Correction was applied since results of the Levene's test indicated that the assumption of equality of variances was not satisfied. An examination of the Q-Q plot indicated that the assumption of normality was satisfied.

Since results of the one-way analysis of variance supported the alternative hypothesis that at least one mean percentage compliance was significantly different, a post hoc test was likewise conducted to detect which pair of groups had significantly different means. The Dunnett's Post Hoc comparison was deemed appropriate since the variances cannot be assumed equal. Moreover, it was used to compare a group with other groups wherein the researchers intended to examine comparisons between economic-environmental and economic-social areas of sustainability reporting.

To determine if there is a significant difference between the percentage compliance on the different sub-dimensions of the sustainability reports, a paired sample test, specifically, the non-parametric Wilcoxon-signed rank test was used.

Additionally, an independent sample t-test for equality of means was done in order to determine if there is a significant difference between the levels of compliance of the firms with SEC-based and GRI-based reports.

2.5 Ethical Considerations

Throughout the process of conducting this study, the researchers possess a high level of objectivity and integrity to prevent any biases and manipulation of the data. The data assessed and presented is only used for the purpose of achieving the objectives of the study. With this, only credible literature was reviewed and reliable information results were presented. Information and other data that are relevant and necessary for this study was publicly accessible and mainly acquired from the internet. Journals, articles and documents from official websites were properly cited using the American Psychological Association (APA) format.

3. Results

A total of 25 publicly-listed firms under the finance industry were included in the analysis. Based on the examination of the sustainability reports, 12 (48%) used the SEC guidelines while the rest used the GRI guidelines. The subsequent tables present the percentages of the firms (level of compliance) which presented the indicators in their respective reports.

Table 2 (Appendix T-2) presents the level of compliance with respect to economic dimension. We observe that among the different disclosures, SEC-based, the most reported were direct economic value generated revenue (100%), anti-corruption communication to employees (100%), training for employees (100%), taxes given to government, communication to business partners, training for directors, incident of corruption directos are all at (91.67%) and incident of corruption employees (90.91%). On the other hand, the proportion of spending on local suppliers (55.56%). For GRI-based reports, Payments to suppliers, other supplying cost, taxes given to government, and communication to employees (84.62%) while the least reported was proportion of spending on local suppliers (30.77%).

Table 3 (Appendix T-3) presents the level of compliance on environmental disclosure in terms of resource management under the environment dimensions. The most reported disclosure with SEC-based sustainability reports were the energy consumption with regard to electricity (90.91%), water consumption (80%), water withdrawal (50%), water recycled and reused (50%), material used by weight or volume of renewable (50%), and materials used by weight or volume of nonrenewable (50%). Whereas the percentage of the recycled input materials used to manufacture the organization's primary products and services were the least reported with a percentage of 14.29. For GRI-based sustainability reports, water consumption (66.67%) was the most reported while the energy reduction of electricity (7.69%) was the least complied.

Table 4 (Appendix T-4) presents the level of compliance with respect to the aspect of impact management under environmental dimension. We observe that among the different disclosures, SEC-based, the most reported is noncompliance with environmental laws and regulations total amount of monetary fines for noncompliance with environmental laws and/or regulations (90%), no. of non-monetary sanctions for non-compliance with environmental laws and regulations total amount of monetary fines for noncompliance with environmental laws and/or regulations (80%), and no. of cases resolved through dispute resolution mechanisms (77.78). On

the other hand, NOx, SOx, persistent organic pollutants, volatile organic compounds, hazardous air pollutants, emissions of ozone-depleting substances, particulate matter seemed to be the least reported, 25%.

For GRI-based reports, energy indirect (scope 2) ghg emission was the most reported (66.67%) while the least reported were incinerated, total weight of hazardous waste transported, total volume of water discharges, and percent of wastewater recycled (8.33%).

Table 5 (Appendix T-5) presents the level of compliance with respect to employee management under social dimension. For the SEC-based companies, we noticed that the top 3 most reported disclosures were the total number of female employees, total number of male employees, attrition rate, ratio of lowest paid employee against minimum wage, SSS employee benefits, Philhealth employee benefits, Pag-ibig employee benefits, diversity and equal opportunity percentage of female workers in the workforce, diversity and equal opportunity percentage of male workers in the workforce with a percentage of 100%; parental leaves, vacation leaves, sick leaves, medical benefits aside from Philhealth, housing assistance aside from Pag-ibig, retirement fund aside from SSS, further education support and flexible-working hours with a percentage of 90.91; and number of employees from indigenous communities and/or vulnerable sector (90%). On the other hand, the other employee benefits seemed to be the least reported with 54.55%.

For GRI-based reports, the total number of female employees, total number of male employees, diversity and equal opportunity percentage of female workers in the workforce, diversity and equal opportunity percentage of male workers in the workforce with 92.31% were the most reported. To the contrary, the least reported was the number of consultations conducted with employees concerning employee-related policies and telecommuting employee benefits with 15.38%.

The table above presents the compliance level of SEC-based and GRI-based finance companies with regard to disclosures under the social dimensions that correspond to workplace conditions, labor standards, and human rights. For the SEC-based, the number of legal actions or employee grievances involving forced or child labor (80%), number of work-related fatalities (72.73%), number of work-related ill-health (72.73%), number of work-related injuries (72.73%) and number of safety drills (70%) were the most reported. The least reported were the supplier accreditation policy with forced labor (36.36%), child labor (36.36%), human rights (36.36%), and bribery and corruption (36.36%).

For the GRI-based, the most reported was the number of work-related fatalities (53.85%) number of safety drills (50%) and number of work-related ill-health (46.15%) while the least reported were safe man-hours(15.38%) and bribery and corruption (15.38%).

Table 7 (Appendix T-7) presents the level of compliance with respect to relationship with community and customer management under social dimension. We observe that among the disclosures, SEC-based, the most reported were the number of data breaches, including leaks, thefts, and losses of data (90.91%), number of substantiated complaints on customer privacy and number of complaints addressed (90.00%), and the number of substantiated complaints on product or service health and safety number of complaints addressed (85.71%). On the other hand, disclosures with regards to certificates such as FPIC and CP seemed to be the least reported, 12.50%.

For GRI-based reports, disclosure with regards to the operations with significant on local communities and its location were the most reported (69.23%) while the least reported were

disclosures with regards to the number of substantiated complaints on product or service health and safety and its number of complaints addressed (16.67%)

Table 8 (Appendix T-8) shows the overall summary regarding the level of compliance on economic dimensions. We observed and ranked the different disclosures under the economic dimension and the most reported sustainability disclosures tend to be communication to employees (92%), taxes given to the government (88%) and training for employees (84.00%). On the other hand, the proportion of spending on local suppliers was the least reported with a percentage of 40.91.

Table 9 (Appendix T-9) presents the summary regarding the level of compliance with respect to environmental dimension in the resource management aspect. We observe that among the different disclosures, the most reported were energy consumption of electricity (75%), water consumption (72.73%), and energy consumption with regard to diesel (38.10%). On the other hand, operational sites adjacent to protected areas, IUNI7 red list and national conservation list species with habitats in areas affected by operations seemed to be the least reported, 5.88%.

Table 10 (Appendix T-10) presents the summary regarding the level of compliance with respect to environmental dimensions-impact management. We observe that among the disclosures, the most reported were energy indirect (Scope 2) GHG emissions (65%), Direct (Scope 1) GHG emissions (55%), and those pertaining to the total amount of monetary fines for non-compliance with environmental laws and/or regulations (54.55%). On the other hand, disclosures about air pollutants such as NOx. SOx, POPs, VOCs, HAPs, and PM seemed to be the least reported, 6.25%.

Table 11 (Appendix T-11) presents the summary regarding the level of compliance on social dimensions specifically under Employee Management. The most reported disclosures were the total number of female employees and total number of male employees (96%), percentage of females in the workforce and percentage of male in the workforce (95.83%), SSS, Philhealth and Pag-ibig (91.67%). On the other hand, the number of employees from indigenous communities and/or vulnerable sectors (39.13%) turned out to be least reported.

The table 12 (Appendix T-12) presents the summary of compliance on social dimensions under workplace conditions, labor standards and human rights, supply chain management, relationship with community and customer management. The most reported disclosures were operations with significant impacts on local communities (76.19%), number of work-related fatalities (66.67%), and the number of substantiated complaints on customer privacy, its number of complaints addressed and the location of the operations in local communities (65.22%). On the other hand, disclosures relating to certificates turned out to be least reported with 4.76%.

The ANOVA F-test results in Table 13 (Appendix T-13) show that there are statistically significant differences in percentage of compliance among the 3 areas, $F(2,110.68) = 57.006, p < .001$. The omnibus effect size for the sample data is $\eta^2 = 0.433$, which indicates that the 43.3% of the variance in % of compliance is accounted for by the differences among the 3 areas.

Since a statistically significant difference in the mean level of compliance among the 3 areas was found, a post hoc test was conducted. Since the variances are found to be unequal, Dunnett's Post Hoc comparison test was used. Results in Table 13 indicate that the mean % of compliance in economic indicators having a mean of 70.56% and a standard deviation of 12.70% was significantly higher than the mean % compliance in environmental indicators with a mean of 24.91% and a standard deviation of 18.88% since $p_{dunnett} < .001$. Also, the mean % of compliance in economic indicators of 70.56 was significantly higher than the mean % compliance

in social indicators of 57.41% with a standard deviation of 22.98%, since $p_{dunnett} < .05$. See appendix C to S.

To determine if there is a significant difference between the mean level of compliance in the different sub-dimensions, total sub-dimension was 118, of SEC-based and GRI-based reports, a paired samples test was used. The nonparametric Wilcoxon-signed rank test was used since normality test indicates that there was a significant deviation from normality, Shapiro-Wilk's test of normality, $W = 0.970, p < .05$.

Results in Table 15 (Appendix T-15) indicate that considering the 118 sub-dimensions of the sustainability reports, the mean level of compliance in SEC-based reports having a mean of 64.09% and a standard deviation of 25.96% was significantly higher than the mean level of compliance in GRI-based reports of 36.94% and a standard deviation of 28.05%, $Wilcoxon = 6353, p < .001$.

Table 16 (Appendix T-16) shows the level of disclosures of the sample banks in their 2019 sustainability reports, under the 3 dimensions and over-all. Over-all, I-remit Inc. had the highest level of disclosure at 98.25%, followed by Rizal Commercial Banking Corporation, 92.23% and The Philippine Stock Exchange, Inc., 90.36% which also had a SEC-based report.

For economic dimension, MEDCO Holdings, Inc., Rizal Commercial Banking Corporation, Philippine Business Bank, and The Philippine Stock Exchange, Inc. had the highest level of disclosure at 100%. The highest disclosures were from companies that were SEC-based. In contrast, the least complied company for the said dimension is East-West Banking Corporation at 36.84% which is SEC-based.

For environmental dimension, First Abacus Financial Holdings Corporation and I-Remit, Inc. were the highest compliant at 100%, followed by Rizal Commercial Banking Corporation with 81.48%, and Filipino Fund, Inc. at 75%. On the other hand, the least compliant company is East-West Banking Corporation at 5%. The reports of these companies were all SEC-based.

For social dimension, the highest compliant firms were I-Remit, Inc. (98.25%), Rizal Commercial Banking Corporation (92.23%), and The Philippine Stock Exchange, Inc (90.36%). The reports of these companies were all SEC-based. On the other hand, Philippine Savings Bank was the least compliant at 19.49% which had a GRI-based report.

Difference between the level of disclosures of firms grouped according to basis of reports

To determine if there was a difference between the level of disclosures of the firms which used SEC-based and GRI-based reports in the 3 dimensions and over-all, independent sample tests for equality of means were done. Results are presented in Table 17 (Appendix T-17).

Results in Table 17 (Appendix T-17) compare the levels of disclosures of firms with GRI-based and SEC-based reports.

In terms of the economic dimension, the mean level of disclosure in GRI-based reports (M = 60.33%, SD = 23.598%) was significantly lower than the mean level of disclosure in SEC-based reports (M = 83.693%, SD = 21.347%), $t(23) = -2.589, p < .05$.

In terms of the environmental dimension, the mean level of disclosure in GRI-based reports (M = 14.686%, SD = 11.696%) was significantly lower than the mean level of disclosure in SEC-based reports (M = 55.024%, SD = 33.063%), $t(13.523) = -4.002, p < .05$.

With respect to social dimension, the mean level of disclosure in GRI-based reports (M = 43.925%, SD = 17.938%) was significantly lower than the mean level of disclosure in SEC-based reports (M = 77.373%, SD = 20.650%), $t(23) = -4.333, p < .05$.

Over-all, the mean level of disclosure in GRI-based reports (M = 37.883%, SD = 14.554%) was significantly lower than the mean level of disclosure in SEC-based reports (M = 71.652%, SD = 20.879%), $t(23) = -4.723, p < .05$.

4. Discussion

As shown in Table 13 (Appendix T-13), the level of compliance of PSE-listed firms under the finance industry that comply with the SEC mandate in terms of economic dimension is at 70.56%. In addition, it was stated that the level of compliance of PSE-listed finance firms which conform with the social aspect of sustainability reporting was 57.41%. It was also presented that the compliance level of PSE-listed firms in terms of environmental dimension was 24.91%. The overall results with regard to the determination of the level of compliance were anchored to triple bottom line theory. We strove to measure level of compliance with sustainability reporting disclosure by encompassing the interrelated dimensions of economic, social, and environmental. In the same table, the standard deviation of economic dimension is 12.70%, the environmental dimension 18.88%, and the social dimension 22.98%. The standard deviations implies that the data from the economic dimension has a lesser variation in data and it is closer to the mean average with a more consistent data compared to the social and environmental dimension. The finance industry challenges to see beyond the traditional measures and strive to adhere with the mandate to properly prepare their sustainability reports.

The level of compliance with economic dimension is supported by the fact that economic disclosures enhance a company's value and reputation. As claimed by Caesaria & Basuki (2017), the economic dimension can affect a wide range of stakeholders, specifically it helps in establishing good relations with investors and creditors that will transact with companies. For the compliance level of PSE-listed firms in terms of environmental dimension, this conforms with the previous studies of Owoloabi and Iyoha (2017) where financial institutions do not find materiality to environmental practices due to the nature of business. They are indirectly related to any environmental activities that involve environmental risk and practices. It was also mentioned in the sustainability reports of the companies such as Banco de Oro (BDO), Bank of the Philippine Islands (BPI), and China Bank that they start to emerge with digital and modern banking which features paperless transactions for a fast and more convenient negotiation . With that being said, engaging in paperless transactions and online banking would lessen their involvement in the environment which implies the reason why companies are less compliant with sustainability disclosure when it comes to the environmental dimension.

In line with the results shown from the significant difference, the economic dimension is significantly higher in compliance compared to the social and the environmental dimensions. Economic dimension is the most complied, following that would be the social dimension and least complied is the environmental dimension based on Table 13. In view of these results, the researchers accept the alternative hypothesis; H1: There is a significant difference in the level of compliance among the economic, environmental and social dimensions of sustainability. Previous study from Owoloabi and Iyoha (2017) in the Nigerian banking sector, social and economic dimensions were also found to be frequently complied compared to the environmental dimension. Along with this, a study of finance and telecommunication companies in Lithuania by Kavaliauske and Stancikas (2014) also found out that social and environmental dimensions are the least prioritized. It was emphasized that finance industries which focus on non-tangible services have a pattern of least prioritizing the social and environmental dimension.

Based on the overall assessment of SEC and GRI based companies, it was shown in Table 8 that communication to employees (92%), taxes given to government (84%), and disclosure regarding employee trainings (84%) are the top three (3) most complied sustainability reporting disclosure under the economic dimension. With regards to the environmental dimensions, it was shown in Table 9 and 10 that the energy consumption of electricity (75%), water consumption (72.73%), and energy indirectly to GHG emissions (65%) were the majority reported disclosures. Moreover, disclosures with regards to the total number of female and male employees (96%), the percentage of females and males in the workforce (95.83%), and disclosures regarding employee benefits specifically SSS, Philhealth and Pag-ibig (91.67%) were the majority disclosures reported under the social dimensions. This result is supported in Table 11 and 12 of this study.

Regardless of economic, environmental, and social dimensions, results revealed that the top three (3) most reported disclosure from the sustainability reports can all be found under the social dimension. These were the total number of female and male employees (96%), percentage of females and males in the workforce (95.83%), and disclosures with regards to anti-corruption training communication to employees (92%). From the sustainability reports of publicly listed companies, the majority of disclosures with regard to the information related to social dimensions was more evident. This shows that most companies were in line with the transparency of their internal and external stakeholders (Fernandez, 2015). The results were supported by the research of Ramdhony (2015) of the banks in Mauritius wherein the greater the visibility was disclosed, the more social information was provided in their reports. This means that the disclosure of employee-related information in the social dimension proves that there were more disclosures on human resources than on any other social indicator.

Among all of the social aspects, employee management and diversity, and equal opportunity were the most disclosed information which was also evident in the study of Öztürk and Marşap (2018), where telecommunication companies in the UK, US and Turkey reported that their business operations are community and environment sensitive. Therefore, the importance was given to the workforce by providing them equality among the workers, pleasant working environment and work-life balance. The overall results was also in line with the research of Öztürk and Marşap (2018), wherein the disclosure of each dimension was focused on business ethics, customer satisfaction, care for employees, giving importance to stakeholders involvement, care for the environment, community projects support and long-term goals and awards.

Based from the SEC-based and GRI-based sustainability reports examined in this study, the overall least likely reported in the economic dimension was the proportion of spending on local suppliers (40.91%) which can be found in Table 8 while the operational sites adjacent to protected areas, IUNI7 red list and national conservation list species with habitats in areas affected by operations (5.88%) which can be found in Table 9 and 10 was the least reported in the environmental dimension. On the other hand, the disclosure relating to certificates namely Free, Prior and Informed Consent (FPIC) process still undergoing and Certification Precondition (CP) secured turned out to be least reported in the social dimension with 4.76% based on Table 11 and 12. Due to the low level of compliance regarding the overall least likely reported in the environmental and social dimension, these findings is in line with the study of Kavaliauske and Stancikas (2014) stating that social and environmental responsibility are the least prioritized corporate aspects because it was not determined if they are noticed and perceived positively by consumers.

Regardless of economic, environmental, and social dimensions, results revealed that the least reported disclosure from the sustainability reports belonging to the finance industry was under

social dimension which is under the relationship to communities pertaining to certificates namely, Free, Prior and Informed Consent (FPIC) process still undergoing and Certification Precondition (CP) secured. Based on the overall results of 25 companies, only 4.76% complied with regards to the certificates mentioned. These may mean that not all community-related projects done by the finance industry are needing these kinds of certificates relating to the approval of the indigenous community when utilizing an ancestral domain. These findings are in line with the study of Harun et al. (2013) stating that social disclosure relating to labour practices and decent work is given more attention compared to disclosure on human rights.

Overall, it may be said that the majority of the most reported disclosure came from the social dimension. This would come in line with a good corporate sustainability report. Most companies have a positive relationship with their stakeholders, especially with their employees, which means that they are inclined to have good business practices while having a positive impact on society. On the other hand, the least complied sustainability reporting disclosure is also from the social dimension which means that not all aspects pertaining to CSR activities were given attention. Therefore, companies in the finance industry should increase the efforts of their external stakeholders in order to achieve their goals to improve good corporate citizenship.

In determining if there is a significant difference when it comes to the level of compliance with firms who are SEC-based and GRI-based, a nonparametric Wilcoxon-signed rank test was used. Results showed in Table 15 that SEC-based sustainability reports are significantly higher in terms of mean level of compliance compared to the firms that are GRI-based. The standard deviation results also showed that there is a lower standard deviation for SEC-based reports compared to the GRI-based reports. The standard deviation implies that the SEC-based has a lesser variation and is more consistent with the data which also implies a consistency in the reports. In view of these results, the researchers accept the alternative hypothesis; H2: There is a significant difference between the SEC-based and GRI-based level of compliance.

GRI Standards has a comprehensive reporting requirement covering economic, environmental, and social topics. On the other hand, the SEC guideline was crafted for PLCs operating in the Philippines and has a goal of making sustainability reporting value-adding and relevant for companies. Due to the complexity of the GRI standards, GRI-based companies tend to not meet the minimum guidelines by the SEC. It is very evident in Table 16 which showed that the overall highest compliant companies are those reports which are SEC-based. The results for the specific dimensions also showed that the highest compliant firms for economic, environmental, and social were companies that were SEC-based.

By means of complying with sustainability reporting disclosures, the more transparent a company would be, especially to its stakeholders and investors, it would mean that compliance with sustainability reporting would improve the company's credibility of operations due to its disclosure of information. It gives the public an overview that organizations abide by the norms and standards set by the society. One good example is the employee benefits in which there are statutory benefits that the companies should be able to provide to their employees. With that being said, abiding by the norms, traditions and standards would give validation to the eyes of the public.

5. Conclusion

Sustainability reporting has become widespread among companies in the Philippines over the years in providing greater disclosure of their economic, environmental, and social responsibilities. In this study, we recognized the significant impact of publicly-listed companies under the finance industry in fulfilling their corporate social responsibility. The study is only

limited to the sustainability reports available to the public covering the year 2019 where sustainability reporting is at the comply or explain phase except those companies whose sustainability reports are not available and cannot be assessed. The results of the study will reflect the efforts of the industry in achieving sustainable development goals and in upholding their corporate social responsibilities through participating in economic, social, and environmental activities. It also brings awareness for companies to participate in sustainable development.

Based on the results of this study, the study concludes that the most complied dimension by finance companies is the economic dimension. Following in rank would be the social dimension being the second most complied and making the environmental dimension being the least complied. Results concluded are also in line with previous studies mentioned having similar results when it comes to the order of frequently complied dimensions of companies. Companies under the finance industry are least likely to be engaged in environmental and social activities making them less compliant to the environmental and social dimensions of sustainability reporting. It is evident as the nature of business of the subject companies does not coincide with the majority of environmental and social indicators. The researchers concluded that the disclosures under the economic dimension are considered to be most essential in every sustainability report due to the fact that the nature of business activities under the financial industry deals with money that plays a significant role in the satisfaction of human needs and heightens investment opportunities to sustain the overall well-being of our country. Results of overall percentage compliance per company also concluded that I-remit Inc. had the highest level of disclosure, followed by Rizal Commercial Banking Corporation, and The Philippine Stock Exchange,Inc. These companies have SEC-based sustainability reports. SEC-based sustainability reports have a higher level of compliance compared to those companies using a GRI-based sustainability report.

The researchers recommend the companies under the finance industry to disclose quantifiable data that is strictly in accordance with the required unit of measurement for uniformity in the SEC mandate. Disclosing the rationale for amounts and units indicated as zero (0), not applicable (NA), hyphen (-) and explanation in each item of disclosure needed that would clarify uncertainties and misinterpretations for the users of sustainability reports. A comprehensive and detailed disclosure of the benefits given to the employees by the publicly-listed companies under the finance industry is also recommended to better compare the specified employee benefits listed in the SEC mandate. Moreover, we recommend the SEC to hold seminars in order to disseminate information about the proper way to present, disclose and classify information about their sustainability practices based on the guidelines provided by the SEC. This will encourage the companies to engage in sustainable activities in all dimensions. In addition, they can impose penalties on those companies not complying with the mandate.

The researchers further recommend to the companies under the finance industry to move beyond the figures and look into the implications of the results of the evaluation. See what can be retained, what needs to changed and adjusted in their corporate strategies to bring about a profitable company that intentionally looks for ways to care for people and the natural environment.

A recommendation to the academe at the post-secondary level to incorporate sustainability reporting in their curriculum, specifically in the Business Ethics courses. This is to value the uncompromising impact of globally recognized nonfinancial risks in identifying new opportunities.

The researchers recommend that different industries should be considered when assessing the level of compliance of publicly listed companies by having a specified reporting template and index for a more accurate assessment of disclosures applicable only to a specific industry. As this

study opens for further research areas development, further studies that highlight the improvement of publicly listed finance companies in disclosing the economic, environmental, and social dimension through an examination of their sustainability reports in two different comparative periods is recommended.

Further research with regard to the significant difference between SEC-based and GRI-based sustainability reports can be explored so that assessing the compliance of these reports in future studies can be more accessible and convenient. In connection with this, a recommendation for companies using GRI-based sustainability reports to at least comply with the disclosures found in the reporting template of SEC-based sustainability reports to lessen the likelihood of GRI-based companies being less compliant than SEC-based companies.

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Liquidity Risk Management of Multi-Purpose Cooperatives in Southern Isabela

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Abstract – This qualitative-quantitative study investigated the liquidity risks the cooperative is exposed to, the effectiveness of liquidity risk management activities and the challenges faced by these selected multi-purpose cooperatives in Southern Isabela in managing its liquidity risks. This locale includes five towns where the twelve multi-purpose cooperatives under research are strategically located. Primary data were gathered through a four-point likert scale survey questionnaire and open and close-ended interview questionnaire. On the other hand, the secondary data were obtained through document scanning using information from annual reports and financial statements. The data were presented through figures, charts and tables indicating mean scores, standard deviations, frequencies, percentages and trends. The results of the study revealed that all multi-purpose cooperatives are exposed to liquidity risk at low level and carry out their business to members' and non – members' satisfaction. It further revealed that all cooperatives have implemented liquidity risk management activities to minimize liquidity risk through liquidity risk identification, liquidity risk evaluation and liquidity risk mitigation. Cooperatives under research made sure that there are actions in every risk management phase. Moreover, cooperatives face various challenges in the implementation of liquidity risk management even though most of the cooperatives practice an effective liquidity risk management. The study recommends that multi-purpose cooperatives in Southern Isabela should continue to emphasize and utilize liquidity risk management activities more effectively and to further investigate various financial risk management for all types of cooperatives

Keywords: *Multi-purpose Cooperatives, Liquidity Risk, Liquidity Risk identification, Liquidity Risk evaluation, Liquidity Risk mitigation*

1. INTRODUCTION

A volatile, uncertain, complex and ambiguous (VUCA) environment exists in today's very dynamic corporate world. Accordingly, to be competitive in their field of expertise in today's highly diverse business world, organizational leaders must think seriously and innovatively. Moreover, technology is evolving at such a rapid pace that what succeeded in the past could no longer be applicable or can even be harmful to current issues (Bunker, K., et.al, 2012). Although critical thinking can seem to be a "soft ability" from afar, it is a critical component for a leader to possess, not a privilege but a necessity. Organizations do not exist in isolation, since they must deal with the external factors that contribute to the threats they face. A risk-free environment is both difficult to accomplish and undesirable that its survival comes from a combination of experience, learning to survive, and exploiting the risks that surround us. Even though there is a presence of risk management activities, majority of business entities still face challenges (Mwaniki & Wamiori, 2018).

The introduction of new financial offerings and the expansion as well as intensified competition, have necessitated the need for financial institutions to implement efficient and

organized financial risk management (Saunders & Cornett, 2018). One of the risks faced by an entity is liquidity risk, which occurs if the cooperatives fail to pay obligations on time. Although it is difficult to eliminate, an entity should make a plan for it to be minimized and handled.

A very good example of risk management utilized by an organization is liquidity risk management. It is defined as the process of identifying, evaluating and mitigating financial institutions' inability to meet its future obligations. Effective liquidity risk control ensures that a bank can satisfy its liabilities, which are inherently unpredictable due to external developments and other agents' actions (Basel Committee on Banking Supervision, 2019).

Cooperatives have faced different types of liquidity risks that must be properly managed in order for them to achieve their objectives. Cooperatives are commonly acknowledged as having a significant role to play in the development of economically deprived areas. Cooperatives are recognized by Philippine government as one of the institutions that play an important role in the country's economic and social growth (Jimenez, 2015). It's also worth mentioning that, now that most cooperatives have opened up mutual bonds, members are free to enter those that they believe will provide them with more affordable and better goods, as well as a competitive return on their contributions (Mutua, R, 2016).

As such, the significant contribution of the cooperative sector cannot be ignored. However, cooperative development encompasses a wide range of individual and economic development issues. Not only does the sector lead to thriving trade in local communities with its collective assets of P382.5 billion (CDA 2018 annual report), but it also provides employment opportunities for marginalized residents through loan programs, training, and a variety of other services. The CDA keeps track of how many direct jobs the cooperatives provide. In 2018, 378,100 Filipinos were employed directly by cooperatives.

In the province of Isabela, some of the financial cooperatives are multi-purpose cooperatives which contribute to the economic development of the province. A multipurpose cooperative is one which combines two or more of the business activities of different types of cooperatives. In 2018, it is estimated that there are 305 compliant and active cooperatives in Isabela, 20 of which were multi-purpose cooperatives located in Southern Isabela. According to the Cooperative Development Authority – Region 2, this area generated a net income of P31,019,793 during 2018. This region has total assets of P930,646,271 and total liabilities of P583,524,976 which may be expose to liquidity risk.

Any cooperative that uses funds in their operations may possibly be unable to recover all those funds used and this exposes the institution to operational risks. As much as possible, all financial institutions should avoid, ignore or eliminate the risk. To be successful, the risk that financial institutions encounter must be managed efficiently and effectively. When funds dry up, a cooperative will not be able to meet its financial goals and social objective of providing services to members needing money. Worse, the cooperative's operation will discontinue (Yegon, Sang & Cheruiyot, 2014).

These facts led the researcher to further investigate the effectiveness of the multi-purpose cooperatives in Southern Isabela in managing liquidity risks. This current study aimed to find evidence of effectiveness of the activities such as liquidity risk identification, evaluation and mitigation activities utilized by cooperatives provided by literature and previous studies. Unlike previous studies regarding this topic, this research investigated the liquidity risk management of cooperatives in Southern Isabela not only using survey technique, but also utilizing documents such as financial statements and annual reports. Under this premise, the researcher determined that it was necessary to investigate the liquidity risk management of multi-purpose cooperatives

in Southern Isabela in order to provide recommendations and to ascertain the various risk management practices that could be implemented to help those charged with governance in improving the cooperative's value.

1.1 Statement of the Problem

In light with the above discussion, this study, in general, is conducted to find evidences on the liquidity risk management of multi – purpose cooperative in Southern Isabela. Furthermore, the study would like to find the answers to the following specifications:

1. Are the cooperatives exposed to these following liquidity risks?

1.1. Funding liquidity risk

1.2. Asset liquidity risk

2. What liquidity risk management activities were implemented along the following areas?

2.1. Risk identification

2.2. Risk evaluation 2.3. Risk mitigation

3. What are the challenges of an effective liquidity risk management and what recommendations can be proposed to address these challenges?

1.2 Research Framework

Liquidity risk is closely linked to financial intermediation, maturity transition, and the conversion of capital from creditors to debtors (Scannella, 2016). Liquidity risk refers to the vulnerability of an entity's financial conditions to a sudden demand for cash triggered by an irregular or unpredictable influx of financial capital into the financial institution. Moreover, liquidity risk exists in two ways in financial institutions: funding and asset liquidity risk.

Liquidity risk management is a method of dealing with the risks associated in meeting current and future obligations. It entails analyzing an organization's liquidity risks and establishing management plans that are in line with corporate goals and policies. Taking early steps to address liquidity risks might provide a company a competitive edge. It also guarantees that liquidity risk concerns are agreed upon by management, operational employees and the board of directors (Horcher, K., 2005).

Furthermore, liquidity risk management is a method with a three-step procedure (Purdy, 2010). The first step is to determine the cause of the risk, which includes determining the leading variables that contribute to the risk. If a risk is not identified well, the subsequent phase in the risk management process will not be executed for that risk (Dinu, 2012). Furthermore, formulas and templates are used in risk management to identify risk.

Liquidity risk evaluation is the second step which involves making a decision about the level of risk. Various liquidity risk evaluation methodologies and criteria are used by financial institutions which include cash flow forecast, financial ratios, presence of contingency and sources of funds (Scannella, 2016).

Liquidity risk mitigation, the last step in risk management is used to formulate methods for quantifying risk using statistical models in order to comprehend the instrument's risk profile. It is important for multi-purpose cooperatives to provide a robust risk management system because there is an increasing awareness that developing a comprehensive risk management framework is critical to long-term growth (Meiryani, 2018).

Specifically, this study assessed the data from liquidity risk management to determine their effectiveness in the context of the cooperative industry in Southern Isabela. This risk management is connected with other risk management since management of liquidity risks will

affect the management of the other risk. Thus, any result from liquidity risk management would impact the operations of the cooperative industry.

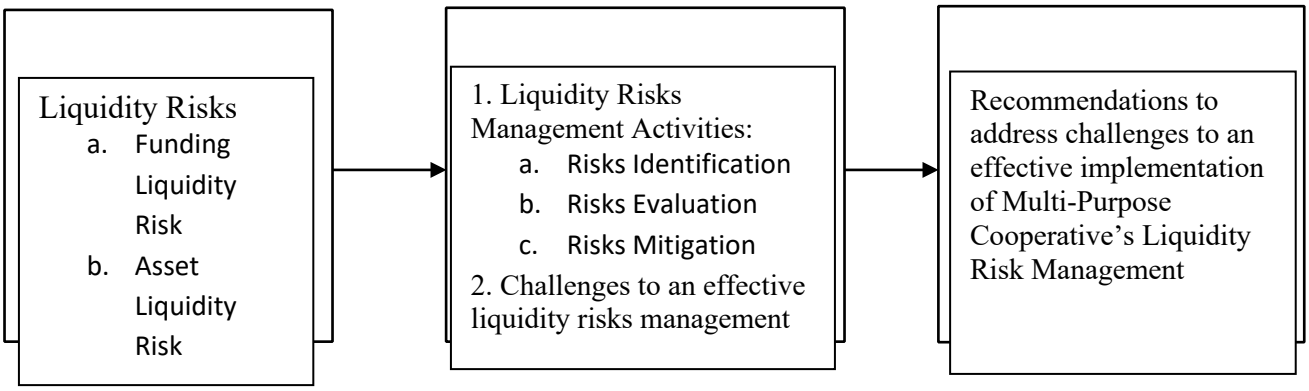

Figure 1. Research Paradigm of the Study.

This research was conceptualize on the basis that cooperatives are naturally exposed to a variety of liquidity risks (funding and asset liquidity risk) due to the nature of their business operations and transaction volume. As a result, the organizations have implemented liquidity risk management measures. Liquidity risk management activities include risks identification, risks evaluation and risks mitigation. Though cooperatives' liquidity risk management systems are present, challenges are still encountered because they are inherent to the organizations' operations.

A risk-free environment is impossible especially if the cooperatives are continuously developing. The impossibility of a risk-free environment is caused by numerous challenges faced by the cooperative, which includes challenges to liquidity risk management. The lack of implementation of liquidity risk management activities and the presence of challenges will increase the risk exposure of the cooperatives.

2. RESEARCH METHOD

2.1 Research Design

To find the answers to the problems of this study, the researcher used descriptive-quantitative research design with a survey technique. This is commonly used to explore the opinions of respondents who represent a certain population. Survey research design is suitable to this research undertaking because it adequately addresses the major objectives and research questions proposed in this study.

Furthermore, interview with some cooperative managers as well as document scanning were also used to substantiate the results of the survey. Document scanning included information and review from facts gathered through annual reports, financial statements and policies of the multi-purpose cooperatives.

2.2 Research Environment

This study was conducted to assess the liquidity risk management used by multi–purpose cooperatives in Southern Isabela, the second biggest area in Isabela in terms of land area. Southern Isabela region includes the towns of Alicia, Cordon, Echague, Jones, Ramon, San

Agustin, San Isidro and Santiago City where there are a lot of cooperatives some of which were recipients of best performing cooperatives recognized by the Isabela Province's Cooperative Council in 2018. This district ranks first in Isabela in terms of number of cooperatives, where 106 cooperatives were identified as compliant and active. Twenty (20) of these are multi-purpose cooperatives. In fact, numerous cooperatives such as consumer cooperatives, credit cooperatives, agricultural cooperatives, multi–purpose cooperatives and many other financial institutions abound in this area.

All cooperatives under research are primary cooperatives in which members are natural persons. The numbers of the multi–purpose cooperatives per town where the cooperatives are strategically located include two multi – purpose cooperatives in Alicia, two in Echague, one in Jones, one in Ramon, one in San Isidro and six in Santiago City. These cooperatives provided documents including three-year (2017 – 2019) financial statements. The final sample comprised 12 participants corresponding to 80% of the targeted 15 respondents.

2.3 Research Respondents

The respondents of the study were the employees of the cooperatives specifically the heads or managers involved in the identification, evaluation and mitigation of liquidity risk. Because most of the data needed were financial in nature, the respondents were selected based on the completeness of the documents they provided. There were twelve (12) multi-purpose cooperatives that provided documents (financial statements and annual reports). Moreover, 12 cooperative managers answered the survey and responded the interview.

2.4 Research Instruments

Survey and interview questionnaire were utilized as data collection instrument of this study. The first part was used to establish the liquidity risks the cooperatives are exposed to. The employees were asked to indicate their assessment on liquidity risk using four- point likert scale with 4 described as "high risk", 3 categorized as "moderate risk" while 2 and 1 labelled as "low risk" and "not a risk", respectively. The second part were intended to gather the cooperatives' liquidity risk management activities, where the participants were asked to evaluate the activities with 4 assigned as "extremely practiced", 3 as "moderately practiced", 2 as "slightly practiced" and 1 as "not practiced". The last part was used to collect information about the challenges to effective liquidity risk management, in which the respondents were asked if they, 4 "strongly agree", 3 "agree", 2 "disagree" and 1 "strongly disagree" to the challenges presented in the questionnaire. Nonetheless, the instrument was modified to meet the needed specifications in line with the objectives and to ensure the validity and reliability of the questionnaire, cronbach's alpha was used to measure the internal consistency which resulted to 0.931.

The last instrument used was interview guide. Through one-on-one and phone interview, cooperative heads were asked to provide evidences. The interview questions were closed-ended, in which the interviewees were required to answer whether the institutions practice effective liquidity risk management or not and if the challenges were encountered by the cooperative or not. Open-ended questions were also used in which the respondents had the right to give whatever response they wanted to the questions given.

2.5 Treatment of Data

The quantitative data were analyzed using descriptive statistics. Frequencies, percentage, mean, and standard deviation were used to determine liquidity risk management activities utilized by the multi–purpose cooperatives including its challenges. Mean and standard deviation were

used to describe the types of liquidity risks, liquidity risk management activities and challenges of effective liquidity risk management. The mean presented the average of the variables as rated by the respondents and the standard deviation measured the spread of data from the mean.

Table 1. Rating scale for types of liquidity risks

Scale	Description
1.00 – 1.49	Not a risk
1.50 – 2.49	Low risk
2.50 – 3.49	Moderate risk
3.50 – 4.00	High risk

Table 2. Rating scale for liquidity risk management activities

Scale	Description
1.00 – 1.49	Not practiced
1.50 – 2.49	Slightly practiced
2.50 – 3.49	Moderately practiced
3.50 – 4.00	Extremely practiced

Table 3. Rating scale for challenges of effective liquidity risk management

Scale	Description
1.00 – 1.49	Strongly Disagree
1.50 – 2.49	Disagree
2.50 – 3.49	Agree
3.50 – 4.00	Strongly Agree

3. RESULTS AND DISCUSSION

3.1 Liquidity risks multi – purpose cooperatives are exposed to.

Table 4 shows multi-purpose cooperatives' exposure to liquidity risks. It can be gleaned from the table that multi-purpose cooperatives are exposed to low level of liquidity risk (over all mean of 1.66 and standard deviation of 0.608). This indicates that the cooperatives have enough cash and non – cash assets available to pay their obligations on time.

Table 4. The liquidity risks the multi–purpose cooperatives are exposed to.

Types of risks	N	Mean	Standard Deviation	Description
Funding liquidity risk. Cooperative's inability to settle its maturing obligations (deposits, debts, etc.) with immediacy.	12	1.75	0.722	Low risk

Asset liquidity risk. Cooperative's risk arising from an inability to sell or pledge assets at, or near, their carrying value when needed.	12	1.58	0.493	Low risk
Overall Mean	**12**	**1.66**	**0.608**	**Low risk**

Legend: 3.50 – 4.00 = high risk; 2.50 – 3.49 = moderate risk; 1.50 – 2.49 = low risk; 1.00 – 1.49 = not a risk

It can be gleaned from table that multi-purpose cooperatives in Southern Isabela are exposed to funding liquidity risk at low level. With a mean of 1.75, cooperatives were not threatened by funding liquidity risk since they had enough resources to pay the maturing obligations including the deposits of the members or depositors on time. With regards to the asset liquidity risk, a mean of 1.80 was generated. Most of the respondents reacted that they are exposed to low level of this risk. The uncertainty of asset returns and the uncertainty of liquidity are the two primary sources of asset liquidity risk and may be strongly correlated at any time (Scannella, E., 2016).

3.2 Liquidity risk management activities

The second objective of this study was to determine the liquidity risk management activities that were implemented along the areas of liquidity risk identification, evaluation and mitigation. The result was presented in tables 5, 6 and 7.

Liquidity risk identification activities

Table 5 shows the responses of cooperative managers to the activities used by cooperatives to identify liquidity risks. The identified activities are moderately practiced by multi-purpose cooperatives as presenter in the table (overall mean of 3.39 and standard deviation of 0.66). Furthermore, cooperative managers were interviewed regarding the activities implemented by cooperatives to identify liquidity risks.

Table 5. Liquidity risk identification activities

Liquidity risk identification activities	**N**	**Mean**	**Standard Deviation**	**Description**
Cash Flow Forecasting (Budgeted Cash Flows)	12	3.42	0.64	Moderately practiced
Financial Ratio Analysis	12	3.33	0.745	Moderately practiced
Assessment of funding facilities	12	3.25	0.595	Moderately practiced
Overall Mean	**12**	**3.39**	**0.66**	**Moderately practiced**

Legend: 3.50 – 4.00 = extremely practiced; 2.50 – 3.49 = moderately practiced;
1.50 – 2.49 = slightly practiced; 1.00 – 1.49 = not practiced

As shown in Table 5, cooperatives prepare cash flow forecast (mean of 3.42) as indicated in their statement of cash flow budget. According to the managers asked, they prepare an operational budget annually which is tied up to the cooperatives' cash flows. This implies that in practicing this activity moderately, it ensures that the cooperatives identify the profitable and unprofitable activities or services by comparing which services make the most income which can

be converted easily to cash. Cooperative employees often identify key areas of liquidity risk through financial ratio analysis (mean was 3.33). Identifying emerging problems and initiating timely corrective action, as well as identifying potential opportunities for increased profit, are some of the obvious benefits of financial analysis. Most of the respondents interviewed stated that through the preparation of financial ratios, the cooperative will have a clue to its wealth and could determine their liquidity position. Lastly, with a mean of 3.25, assessment of funding facilities is moderately practiced by the cooperatives. It was specified by the managers interviewed that a thorough assessment of available funding may identify risks to the cash position of the entity. This indicates that most of them moderately assess share capital, savings and time deposits and credit delivery and collection control as their funding facilities.

Liquidity risk evaluation activities

The cooperative managers' responses to liquidity risk evaluation activities were presented in Table 6. According to the table, multi-purpose cooperatives moderately practiced the identified activities (overall mean of 3.31 and standard deviation of 0.679).

Table 6. Liquidity risk evaluation activities

Liquidity risk evaluation activities	N	Mean	Standard Deviation	Interpretation
Cash Flow forecasting is regularly prepared by the cooperative.	12	3.33	0.624	Moderately practiced
Preparation of Financial ratios (liquidity ratios, leverage, etc.)	12	3.33	0.745	Moderately practiced
Contingency fund to cover withdrawals during financial stress is available.	12	3.25	0.722	Moderately practiced
Sources of emergency funds to cover liquidity problems are present.	12	3.33	0.624	Moderately practiced
Overall Mean	**12**	**3.31**	**0.679**	**Moderately practiced**

Legend: 3.50 – 4.00 = extremely practiced; 2.50 – 3.49 = moderately practiced; 1.50 – 2.49 = slightly practiced; 1.00 – 1.49 = not practiced

It is notable in Table 6 that cooperative employees moderately practiced preparation of cash flow (mean was 3.33). All managers responded that the cashier prepares cash collection summary that will be used for future disbursements. This implies that in cooperative entity, cash flow forecasting is very important and moderately practiced as a technique to evaluate liquidity risk through complete figure of inflows and outflows of cash. Employees further indicated that they prepare financial ratios (mean was 3.33). According to the managers, current ratio, which is prepared annually, is one of the ratios that is moderately practiced to evaluate liquidity. Through this financial ratio, liquidity risk is evaluated and its impact to the cooperative as a whole is measured. Contingency fund to cover withdrawals during financial stress is often available as presented in Table 6 (mean of 3.25). The cooperative managers confirmed that they moderately maintain a contingency fund in case they need cash. This implies that through the availability of

contingency fund, the cooperative can evaluate its liquidity position. Sources of emergency funds to cover liquidity problems are present (mean of 3.33). According to managers interviewed, they evaluate the sources of their funds which come from members' deposits, contributions and share capital, cooperative union/ federation and other private financial institutions. This activity is moderately practiced and implies that through this evaluation activity, they can determine where to obtain funds if liquidity problems arise.

Liquidity risk mitigation activities

Table 7 presents cooperative managers' response to liquidity risk mitigation activities practiced by cooperatives. The following activities were moderately practiced by multi-purpose cooperatives, according to the table (overall mean of 3.33 and standard deviation of 0.683).

Table 7. Liquidity risk mitigation activities

Liquidity risk mitigation activities	N	Mean	Standard Deviation	Interpretation
Cash Flows (Actual and Forecast) are strictly monitored.	12	3.42	0.759	Moderately practiced
Provision for reserves are observed and implemented.	12	3.50	0.764	Extremely practiced
Contingency fund to cover withdrawals during financial stress is available or liquidity buffer.	12	3.50	0.764	Extremely practiced
Past due accounts are controlled.	12	3.33	0.745	Moderately practiced
Optimization of working capital	12	3.33	0.471	Moderately practiced
Sources of emergency funds to cover liquidity problems are present.	12	3.25	0.595	Moderately practiced
Overall Mean	**12**	**3.33**	**0.683**	**Moderately practiced**

Legend: 3.50 – 4.00 = extremely practiced; 2.50 – 3.49 = moderately practiced; 1.50 – 2.49 = slightly practiced; 1.00 – 1.49 = not practiced

It is shown in Table 7 that cooperatives strictly monitor cash flows (actual and forecast) (mean of 3.42). All of the managers agreed that cash flow monitoring is moderately practiced by the cooperatives (monthly, quarterly, etc). This denotes that through monitoring, this will highlight the variances of actual cash usage from what is being budgeted and corrective actions will be planned and implemented to minimize or eliminate the unfavorable trends in the availability of cash. Furthermore, provision for reserves is extremely observed and implemented (mean of 3.50). As presented in their financial statements, all cooperatives allot statutory funds to cover the unexpected cash outflows and this fund includes general reserve fund, cooperative education and training fund, due to union/ federation, community development fund and optional fund. The cooperatives maintain liquidity buffer (mean was 3.50). This means that most of the cooperatives have available funds in case of financial crisis. In addition to risk mitigation, the objective of the liquidity buffer is to generate stable earnings for the institution.

Moreover, it can be gleaned from table 7 that past due accounts are controlled (mean of 3.33,). All of the managers noted that they have a collection process on past due accounts and this is incorporated in their collection policy. One of the policies moderately practiced includes a provision that a delinquent borrower who has settled his/her past due loan can avail of a new loan provided that the maximum loan he/she can avail is equal or lower than his/her share capital or subject to the discretion of manager. With a mean of 3.33, cooperatives optimized their working capital as seen in table 7. One way to test the effectiveness of liquidity risk management is to identify the optimization of working capital. These results complement the study of Nobanee & Haijar (2014) that more accurate measures of the efficacy of working capital management where optimal levels of inventory, receivables, and payables are identified, and total holding and opportunity costs are minimized. Lastly, sources of emergency funds to cover liquidity problems are present (mean was 3.25). According to the managers interviewed, sources of their funds come from members' deposits, contributions and share capital, cooperative union/ federation and other private financial institutions. This suggests that this activity is moderately practiced, and that liquidity problem can be solved through internal and external sources.

3.2 Challenges of Effective Liquidity Risk Management

The third and final objective of this study is to determine the challenges of effective liquidity risk management and what recommendations can be proposed to address the problems on liquidity faced by the cooperative industry.

Table 8 shows cooperative managers' response to the challenges of effective liquidity risk management. Since most of the Multi-purpose cooperatives had an effective liquidity risk management, heads of multi-purpose cooperatives in Southern Isabela, as indicated in the table, disagreed and responded no to most of the challenges to effective liquidity risk management (overall mean of 1.98 and standard deviation of 0.590).

Table 8. Challenges of Effective Liquidity Risk Management

Challenges of Effective Liquidity Risk Management	N	Mean	Standard Deviation	Description
Poor internal control	12	1.58	0.493	Disagree
Inadequate cash flow management system	12	2.67	0.624	Agree
Increase in operating costs	12	1.75	0.722	Disagree
Unanticipated decrease in revenue and profitability	12	2.67	0.471	Agree
Absence and inadequate financial facilities	12	1.83	0.687	Disagree
Mismanagement of working capital	12	1.83	0.553	Disagree
Mismatching of the maturity profile of debts to the assets which they are funding	12	2.50	0.500	Agree
Unplanned Capital Expenditure	12	1.67	0.624	Disagree
Future debt repayments	12	1.58	0.640	Disagree
Overall Mean	**12**	**1.98**	**0.590**	**Disagree**

Legend: 3.50 – 4.00 = Strongly agree; 2.50 – 3.49 = Agree; 1.50 – 2.49 = Disagree; 1.00 – 1.49 = Strongly disagree

With a mean of 1.58, cooperatives disagreed that liquidity risks arise from poor internal control as indicated in table 8. This implies that cooperatives developed and practiced internal control to safeguard cooperative's resources and produce accurate, reliable financial statements. This was confirmed by most of the managers interviewed that they maintain a system of accounting and reporting which provides and monitor its internal control system often and adjusting it to be most effective to protect the institution from possible threats. The table shows that respondents agreed that liquidity position of the cooperatives was hindered by an inadequate cash flow management system (mean of 2.67). This was confirm by some managers which stated that they don't have good cash flow management because of uncertainty of collection.

The cooperatives' employees disagreed that increase in operating costs will result to liquidity problem as shown in table 8 (mean was 1.75). Since all of the cooperatives prepare operational budget annually, they can monitor their operating costs. This is confirmed by the managers that cooperatives always track their operating costs as much as possible to lessen the outflow of cash and liquidity risk will be minimized. Moreover, one of the causes of cash flow problems or liquidity risk is an unanticipated decrease in revenue that leads to a devastating effect on the profitability. For the managers of MPCs in Southern Isabela, they see this as a challenge as shown in table 8 (mean of 2.67). This implies that most of the cooperatives were threatened by liquidity risk due to decrease in revenue. Based on the financial statements provided, nine (9) of twelve (12) cooperatives have an increasing net surplus (loss) in their 2017-2019 statement of profit or loss, however three of them had decreasing net profit. The cooperatives' managers disagreed that the absence and inadequate financial facilities is one of the causes of liquidity problems (mean was 1.83). This means that most of the cooperatives are not hindered since they often assess their financial facilities including members' share capital and deposits, federation of cooperatives and private financial institutions. Furthermore, cooperative managers disagreed that mismanagement of working capital is a challenge to an effective liquidity risk management (mean of 1.83). Most of the managers stated that they manage their working capital well since it is important to the success of cooperative financial stability and profitability.

As presented in table 8, respondents further agreed that mismatching of the maturity profile of debts to assets which they are funding is a challenge to an effective liquidity risk management (mean of 2.50). This was confirmed by the interviewed managers who stated that the terms of the loan do not match with the useful life of the acquired property, plant and equipment. With a mean of 1.67, the cooperatives' employees disagreed that unplanned capital expenditure is a challenge to the cooperatives. This was confirmed by the managers since all of the cooperatives set aside seven percent at least of annual net surplus for optional fund purposely for acquisition of land and building. Lastly, respondents disagreed that future debt repayments (mean was 1.58) is a problem to an effective liquidity risk management. Since the cooperatives prepare operational budget annually, future debt repayment is incorporated in such budget. In fact, all cooperatives are required by law to allocate 70% of their net surplus intended for the payment of interest on share capital and members' patronage refund. This signifies that future debt repayments are not a hindrance to cooperatives' liquidity position.

Proposed recommendations to address the challenges of an effective credit and liquidity risk management

Heads of multi-purpose cooperatives in Southern Isabela, as indicated in the table, disagreed and responded no to most of the challenges to effective liquidity risk management. This implies that managing liquidity risk is not a problem for most of the cooperatives. However, for some cooperatives that experience challenges in managing liquidity risk, proposed recommendations are presented in table 9 to address such challenges.

Table 9. Proposed recommendations to address the challenges of an effective liquidity risk management.

Challenges of an Effective Liquidity Risk Management	Proposed Recommendations
Inadequate cash flow management system	The cooperatives should keep track and update its cash flows regularly. They should prepare a report showing cash collection and cash disbursement in order to manage their cash position.
Unanticipated decrease in revenue and profitability	The cooperatives must devise ways to increase their revenues and eventually, the cash inflows as these are the indicators of a cooperative's financial health. The cooperatives should use effective marketing strategies to improve sales and boost revenue. Offering discounts and incentive system may also be used to encourage members to patronize the product and services of the cooperatives. As much as possible, expenses must be minimized without sacrificing the quality of the service to increase the profit of the cooperative.
Mismatching of the maturity profile of debts to the assets which they are funding.	The cooperatives should have knowledge on matching the debts to assets which they are funding. The financial officer of the cooperative must carefully monitor loans or liability maturity schedules. As much as it is prudent, they must align predicted cash flows with future payment commitments for liabilities. Therefore, capital expenditures should not be funded with a short–term loan.

4. CONCLUSIONS AND RECOMMENDATIONS

4.1 Conclusions

The following conclusions were derived based on the findings of the study:

1. The study concluded that the multi–purpose cooperatives in Southern Isabela are exposed to low level of liquidity risk. It is concluded that liquidity risks (funding and asset liquidity) are not a threat to most of the multi–purpose cooperatives since they have enough current resources to cover their current liabilities. Furthermore, excellent cash flow management and the availability of funding facilities in the event of financial crisis do not increase asset and funding liquidity risk.

2. That multi–purpose cooperatives practice effective liquidity risk management as these are important in business operations. This includes three phases, namely, risk identification, risk evaluation and risk mitigation. Every phase of liquidity risk management involves numerous activities which are moderately practiced to minimize the existence of liquidity risks.
3. A risk-free environment is impossible especially if the cooperatives are continuously evolving. The impossibility of a risk-free environment is caused by numerous challenges faced by cooperatives. However, the study concludes that most of the cooperatives have an effective liquidity risks management, since they disagreed with most of the challenges as shown in the presentation. However, it is also concluded that some cooperatives identified challenges in managing liquidity risks.

4.2 Recommendations

1. Even though the cooperatives have an effective liquidity risk management, they must continue to perform in order to maintain their strong liquidity standing and to manage liquidity risks they encounter.
2. Despite the fact that cooperatives have a strong liquidity risk management system in place, they should not be complacent because cooperative operations are always evolving and liquidity risks are inherent in every organization.
3. Moreover, some cooperatives face challenges in controlling liquidity risk. It is therefore recommended that they should prepare cash collection and cash disbursement report regularly in order to manage their cash position effectively. In addition, the cooperatives must devise ways to increase revenue and decrease their expenses in order to increase the profit. Lastly, their financial officers must carefully monitor the loan or liability maturity schedules. They must connect expected cash flows with future payment commitments for obligations.
4. In the world of financial organizations like cooperatives, the study of liquidity risk management has become even more significant. Because the scope of this study was limited to southern Isabela, the findings are not enough to generalize liquidity risks and liquidity risk management in the cooperative industry as a whole. As a result, it is recommended that future research should consider examining multiple-purpose cooperatives across the province or country.
5. Furthermore, the scope of this research was confined to multi-purpose cooperatives. It is recommended that future studies should cover different types of cooperatives, such as agricultural cooperatives, credit cooperatives, consumer cooperatives, and so on.
6. In addition, future researchers are also encouraged to incorporate various types of risks in their studies, such as credit risks, operational risks, pure risks, speculative risks, and so on.

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