ISSN No:-2456-2165 https://doi.org/10.38124/ijisrt/25mar423

Communication and Mathematical Skills: Predictors of Students' Entrepreneurial Management Performance

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Publication Date: 2025/03/24

Abstract: This study presents how communication and mathematical skills predict students' entrepreneurial management performance. This study aimed to identify the level of communication and mathematical skills in terms of symbol use, intent, complexity, social action, vocabulary use, and comprehension; conceptual, computational, and problem- solving skills, respectively; and explored their relationships with students' entrepreneurial management performance. This is quantitative research where two research instruments were utilized such as the adopted survey questionnaire for communication skills and the researcher-made test questionnaire for students' mathematical skills. The research participants were second-year BSBA students at an identified private school in Molave, Zamboanga del Sur, for the academic year 2021-2022. Universal sampling was also used to gather significant data. Findings revealed that the levels of students' communication skills, mathematical skills, and entrepreneurial management performance are good, average, and approaching proficiency respectively, and a significant relationship existed between communication and mathematical skills towards students' entrepreneurial management performance which signified that communication and mathematical skills are predictors of students' entrepreneurial management performance. It was concluded that communication and mathematical skills were significantly correlated with students' entrepreneurial management performance. As the students' communication and mathematical skills increase, students' entrepreneurial management performance also increases and vice versa. This study suggests that teachers are encouraged to help and motivate the students to enhance and improve their communication and mathematical skills and integrate relevant concepts about entrepreneurial skills for life sustainability.

Keywords: *Communication Skills, Mathematical Skills, Entrepreneurial Management Performance.*

How to Cite: Isabel Prato Peras (2025). Communication and Mathematical Skills: Predictors of Students' Entrepreneurial Management Performance. *International Journal of Innovative Science and Research Technology*, 10(3), 756-768. https://doi.org/10.38124/ijisrt/25mar423

I. INTRODUCTION

To reduce the poverty level of a particular country, graduates and school leavers should not rely only on a specific job in line with what they have taken during their tertiary or vocational courses. They should devise ways of earning their living to cater to the needs of their families every day through developing their entrepreneurial skills, aside from their professions. It doesn't mean that only those studying business-related courses will be the ones capable of being self-employed, but also those who can acquire the related skills needed to become successful person in their workplace (Inah & Agbudu, 2021).

In molding young citizens, it is not just teaching academic or 21st-century knowledge and skills but a matter of fusing two or more of them. There should be an integration of those essential components to prepare them for the demands of their society and the global economy, which help the nation realize its goal (Muilenburg, Lin, & Berge, 2015). In this case, educators should teach every learner what is on the curriculum and include how to have good communication skills and mathematical skills to develop their entrepreneurial skills for self-sustainability (Swace Digital, 2021).

The most critical component in total quality management is communicating since it can lead to understanding and harmonious relationships with one another effectively. Good communication skills are considered one of the significant determinants of success in every workplace because everyone can perceive and talk to each other without hesitation about their companies' different concerns and issues. Poor communication can lead to poor quality services, weak productivity, and even a lack of trust in all organization members. In applying for a particular job, how you talk sometimes may determine if they will hire you because any job needs a public speaker employee. If someone is promoted, he will be exposed to the different occasions or events where he needs to speak. One

ISSN No:-2456-2165 https://doi.org/10.38124/ijisrt/25mar423

of the essential skills of a teacher is communication skills. He should know how to explain deeper, and further every concept presented so that every learner can understand and avoid misconceptions. Teachers' good communication skills are the basic needs for students' learning and motivation for their academic success in life (Khan & Khan, 2017). The act of communicating involves conveying and comprehending messages. A person's communication abilities can be illustrated in various ways. Often, if we consider communication, we often consider speech or sign language. Communication skills have six dimensions, namely, symbol use, intent, complexity, social action, vocabulary use, and comprehension (Mar & Sall, 1999).

Symbol use refers to the use of representations which can be a form of words, signs, images, or any other objects in the real world, raised-dot patterns, images, or other types of codes in any technique such as speech, print, tactual, or sound, which serve as illustrations that represent things, people, ideas, and events. Intent refers to the dimension of communication to gain attention, respond, convey a message, or even express a need or interest. It is also viewed as the social cause-and -effect in which someone understands how he/she can affect someone's behavior. The ability to mix symbols in accordance with syntactic rules or to order behaviors in meaningful ways to communicate messages is referred to as complexity. This dimension is also referred to the "length of speech" that furthers the discussion of a subject by mixing symbols or actions. Social action aims to socially engage or respond to another person. Social action is the capacity to interact with or socially react to others. How much one can contribute to a connection that is mutually beneficial and give-and-take in nature. There is an inherent grasp of turn-taking in communication. Flow and information exchange are two prime examples of social action. The use of appropriate words, signs, and communicative behaviors refers to vocabulary use dimensions. This also refers to the appropriate selection of words so the listener can absorb, understand, and internalize the message you want to convey. Understanding what someone else is saying is referred to as comprehension. This dimension enables someone to response wisely in any conversational processes for better understanding. Mathematics should not be seen solely as a computational or mathematical discipline since these are the bedrock on which entrepreneurial education can be developed and enhanced because these are important for self-reliance, self-sufficiency, and self-actualization. Communication and mathematical skills are crucial components in preparing and developing one's entrepreneurial skills and creating jobs (Inah & Peter, 2021).

Mathematics has become increasingly important in practically every element of human life in today's world. Its influence may be found in almost every facet of life, from mundane tasks like grocery shopping to more crucial ones like arranging and maintaining flight itineraries. It has evolved applications in various cultural and historical contexts, and as a result, it has become a critical component in defining the modern world's future. Mathematical knowledge continues to grow. It continues to expand and find new applications, particularly in engineering and technology. Mathematics plays a vital role in every human endeavor, especially in entrepreneurship. Mathematical skill is needed in organizing and communicating information since it serves as a way of explaining and predicting different concerns and issues of the world. It has various roles in entrepreneurship, especially in the planning phase, up to the implementation phase of a particular business, such as capitalization, marketing, and profit analysis (Malik & Malik, 2016).

Mathematics is considered the gateway and key to the success of entrepreneurial skills development for everyone since everyone needs it. Having mathematical skills serves as a springboard for preparing one's life's self-sustenance. That is why mathematics has become a compulsory core subject because of its crucial role in life. Mathematics curricula emphasize reorienting values, creating jobs, generating income, and eradicating poverty through mathematics education. Mathematics education has a significant role in developing entrepreneurial skills because it provides entrepreneurial skills and enhances an entrepreneur's innovation and creative skills (Blessing & Peter, 2019).

Problem-solving is very important in studying mathematics since its primary goal is to develop and enhance students' ability to solve wide and varied complex mathematical problems with real-life applications. It involves developing geometric constructions, doing word problems, creating patterns, interpreting figures, proving theorems, etc. It is a skill needed to accomplish learning basic facts, concepts, procedures, and goals for a problem within a problem context that has a day-to-day living integration. Students' conceptual and computational skills should be integrated into their problem-solving skills to answer any word problem. Mathematical abilities or skills encompass conceptual Understanding, procedural knowledge, and problem-solving skills. Conceptual Understanding reflects a students' ability to reason and comprehend mathematical concepts, operations, and relations. Procedural Understanding focuses on performing facts and algorithms (Al-Mutawah, M., Eid,A., Thomas,R. & Mahmoud, E., & Fateel, M., 2019). Mathematical relationships that are not isolated from one another are conceptual knowledge. When a student can explain, define, and apply the same concept in several contexts, it is assumed that they have conceptual comprehension. This further refers to an instance where a student can observe the fusion of ideas; understanding happens when mathematical ideas are not treated in isolation. In general, if we combine the ideas above, mathematical skills can be composed of the following components: number sense, computational skills, conceptual understanding, and problem-solving skills.

Having good communication skills helps them solve the given problems successfully since they can understand every concept presented. It helps them stay on track, which is also one way of communicating ideas to build a better understanding. Students in small groups could solve more complex problems by communicating with others. They can

ISSN No:-2456-2165 https://doi.org/10.38124/ijisrt/25mar423

share their thoughts about the problem rather than solve it individually because more ideas will generate if more heads think and work on a problem since more heads are better than one. Teachers should give every learner the opportunity to be exposed to a more complex task that lets them explore the problem situation and show and report the result by asking questions or explaining their findings (Mayo, 2007).

The United States focused on career-focused programs anchored on 21st-century workplace readiness, which applies project-based learning development to develop the students' entrepreneurial skills and be ready for future-life careers. Their study revealed that entrepreneurship education has statistically increased entrepreneurial skills, including communication and collaboration, critical thinking, opportunity recognition, and problem-solving skills. Communication, mathematical, and entrepreneurial skills may be significantly related (Rodriguez & Lieber, 2020).

Communication has a crucial role in bringing people together and has a pivotal role in entrepreneurship. Through this skill, the sustainability of human being becomes possible. It helps bridge people's relationships. The communication skills capacity largely determines an entrepreneur's success since they always spend time and effort communicating with their employees, customers, institutions, suppliers, and other stakeholders. The relationship between communication skills and entrepreneurship showed that communication skills significantly impact one's entrepreneurial behavior and performance. Communicating, listening, and writing are always required in many business enterprises, especially client and employee management and branding and promoting their products (Sood, 2017). Communication is considered a power that helps everyone succeed in every workplace. With its empowering tool, business organizations achieve their short and long-term goals, including customer satisfaction and loyalty (Muthia, 2012).

Entrepreneurial skills help students increase their critical thinking capacity in a real business context, successful decision-making, complex problem-solving, finding new ideas for a unique situation, and an openness and willingness to learn from successes and failures. Entrepreneurial skills development is still not fully developed in everyone's life (Igberaharha, 2020).

As a challenge, every educator and other stakeholders must take this task seriously because entrepreneurial skills enable everyone to become a good worker playing a crucial role in economic development. The idea of infusing the concept of entrepreneurship into education has become effective for the past few decades since this has had significant effects on economic growth, individual growth, increased school engagement and equality, societal resilience, and job creation. This doesn't mean students were encouraged to build their own businesses after their studies, but it signifies that educators must help them to become more creative, innovative, proactive, and opportunity oriented (Bejinaru, 2018).

As Covid 19 arose, the Philippines suffered an economic loss ranging from ₱276.3 billion and ₱ 2.5 trillion, which signifies that Filipinos are suffering from poverty. The pandemic crisis also leads people to find alternative ways to sustain their daily lives. Most people engage in e-commerce or online selling to earn money for life sustainability, even if they are not business-related graduates. They use social media to promote their products which need good communication skills to ignite viewers to buy their products. They also use their mathematical skills for computation purposes, especially in analyzing the ceiling prices of every product to gain profit (Albert et al., 2020).

Based on the previous point of view, findings, and conclusions, communication, and mathematical skills are crucial to one's entrepreneurial skills. But it was not stated whether communication and mathematical skills could be used to improve students' entrepreneurial skills. Still, there is a gap in studying the variables, namely, communication skills and mathematical skills as predictors of students' entrepreneurial management performance. This study aims to widen the relationships between communication, mathematical, and entrepreneurial management performance. In addition, this study wants to explore whether communication, mathematical, and entrepreneurial management performance are significantly related to each other and what enhancement plan is needed to develop students' entrepreneurial management performance.

- *Conceptual Framework*

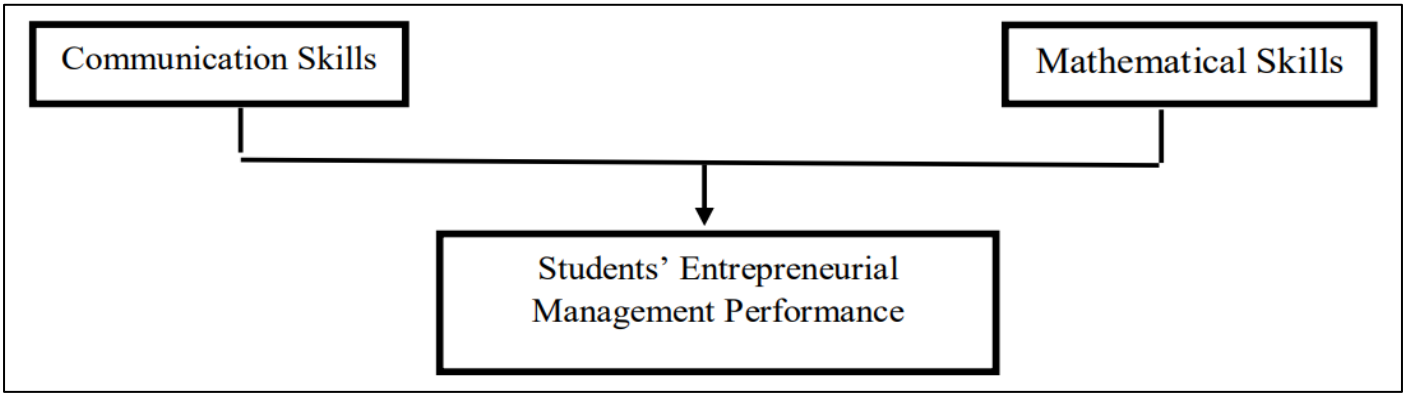

Fig 1 Illustrates the Study's Conceptual Framework

ISSN No:-2456-2165 https://doi.org/10.38124/ijisrt/25mar423

The figure above shows that this study explored the relationship between the three variables: communication skills, mathematical skills, and entrepreneurial skills. Communication and mathematical skills are the independent variables, and entrepreneurial skills are the dependent variable.

This study was anchored on Super's Theory of Career Development, which states that learners must develop vocational maturity for their lifetime career choices, including five developmental stages: growth stage, exploratory stage, establishment stage, maintenance stage, and decline stage. Essential skills for lifetime career choices should be imparted to the learners, such as communication skills, mathematical skills for enhancing their problem-solving abilities and making wise decisions, and entrepreneurial skills for leadership, innovativeness, and life sustainability (Long, 2012).

This study was also supported by Mezirow's transformative learning theory, which states that old ways cannot always be applied to new learning situations. There is a need to acquire and use a unique perspective to understand the change or educational needs. Transformative learning theory arises to address the community's divergent interests and help learners equip themselves with those essential skills for life sustainability (Schrage & Lenglet, 2016).

➢ *Statement of the Problem*

This study aimed to explore the relationship between communication and mathematical skills as predictors of the entrepreneurial management performance of the second year BSBA college students at an identified private school in Molave, Zamboanga del Sur, for the academic year 2021-2022.

➢ *Specifically, this study answered the following questions:*

- What is the level of students' communication skills based on the following dimensions:

✓ symbol use;

✓ intent;

✓ complexity;

✓ social action;

✓ vocabulary use; and

✓ comprehension?

- What is the level of students' mathematical skills based on the following components:

✓ Conceptual skills;

✓ Computational skills; and

✓ Problem-solving skills?

- What is the level of students' entrepreneurial management performance based on their entrepreneurial management final grade?
- Is there a significant relationship between the students' communication skills and entrepreneurial management performance?
- Is there a significant relationship between the students' mathematical skills and entrepreneurial management performance?
- Do communication skills and mathematical skills significantly predict students' success in entrepreneurial management performance?

➢ *Statement of the Hypotheses*

The following null hypotheses were tested at a significance level of 0.05.

- There is no significant relationship between the students' communication skills and entrepreneurial management performance.
- There is no significant relationship between the students' mathematical skills and entrepreneurial management performance.
- Communication skills and mathematical skills don't predict students' success in entrepreneurial management performance.

➢ *Significance of the Study*

The importance of this study will be manifested in its capability to bring focus to the relations between the three skills, namely, communication, mathematics, and entrepreneurship. Generated insights from this study will help every educator and learner develop, improve, and enhance their communication, mathematical, and entrepreneurial skills.

- *Administrator:* This study will help every administrator understand the importance of communication and mathematical skills towards students' entrepreneurial skills. This will help them organize a plan for developing the said skills for the students and the teachers through training, seminars, and other means.
- *Teachers:* This study will help every teacher realize the importance of communication and mathematical skills for every learner to develop their entrepreneurial skills. By that, every teacher will find other ways and alternatives to develop further the communication, mathematical, and entrepreneurial skills of every learner.
- *Learners:* This study will help every learner inform and understand the relationship between the three identified skills: communication, entrepreneurial, and mathematical skills. In this case, they will be encouraged to develop and enhance the said skills for their future life purposes.
- *Community:* This study will help community members to understand the importance of having good communication and mathematical skills for their entrepreneurial skills.
- *Future Researchers:* This study can be one of the references of the future researchers for their future studies related to communication and mathematical skills as predictors of one's entrepreneurial skills and study

ISSN No:-2456-2165 https://doi.org/10.38124/ijisrt/25mar423

each relationship further.

- Definition of Terms:

➢ *In this study, key terms were frequently used and defined operationally below:*

- *Conceptual Skills.* This is the ability to understand mathematical fundamental ideas and concepts.
- *Communication Skills.* These are essential skills for giving and receiving information, including listening, speaking, observing, and empathizing.
- *Complexity.* This is the ability to mix symbols in accordance with syntactic rules or to order behaviors in meaningful ways to communicate messages.
- *Comprehension.* This is the ability to understand what someone else is saying.
- *Computational Skills.* This is the ability to compute mathematical problems with the use of various methods and tools to compute, which include paper and pencil, mental arithmetic, estimation, calculators, and computers.
- *Entrepreneurial Management Performance.* This is evaluated from the Entrepreneurial Management final grade of the students.
- *Intent*. This is a dimension of communication to gain attention, respond, convey a message, or even express a need or interest.
- *Mathematical Skills.* Mathematical skills are viewed as a distinct category encompassing verbal and nonverbal components such as number knowledge, counting, computation, reasoning, mathematical notation, reasoning in time and space, and computation, respectively.
- *Predictors.* Variables or something which is to predict some other variables or outcomes.
- *Problem-solving Skills.* This is the ability to recognize that a problem exists, identify, or define the problem, propose ways how to solve the problem, act on the proposed solutions, and determine that the problem is solved.
- *Symbol Use*. *This* refers to the use of representations which can be a form of words, signs, images, or any other objects in the real world, raised-dot patterns, images, or other types of codes in any technique such as speech, print, tactual, or sound, which serve as illustrations that represent things, people, ideas, and events.
- *Social Action. Refers to* the capacity to interact with or socially react to others.
- *Vocabulary Use.* Refers to the used of appropriate words, signs, and communicative behaviors.

II. RESEARCH METHODS

This chapter presents the research method of the study. It includes a discussion on the research design and research methods covering the research environment, research participants, research instrument, data gathering procedure, data analysis, and ethical consideration in conducting research.

➢ *Research Design*

This study is a quantitative correlational study used to identify and establish a statistical relationship between the students' communication skills, mathematical skills, and entrepreneurial management performance.

The correlational study helps researchers identify whether one or more variables will be affected by the other variables. The correlation of the variables can be positive, negative, or zero. Positive correlation if both variables will change together in a specific direction. Negative correlation if the variables have opposite directions as they change together. Zero correlation if the variables have no relationship. A correlational research study provides static pictures and assesses the relationship of two or more variables to uncover their systematic relationships with one another (Tan, 2004).

Correlational research examines two or more characteristics of the study participants whose purpose is to establish and identify whether these characteristics are related to each other. This is used to investigate the statistical relationships among the variables. In a correlational research study, the researcher will use a statistical correlation test to identify the degree of relationships among variables (Williams, 2007).

➢ *Research Environment*

This study was conducted in one of the private institutions of the Municipality of Molave, Zamboanga del Sur, which offers different college courses, including Bachelor of Science in Business Administration.

➢ *Research Participants*

The study's research participants were second year BSBA students of the identified school of the school year 2021- 2022.

➢ *Sampling Techniques*

The study used universal sampling in choosing all the second year BSBA college students for the academic year 2021-2022. The researcher selected all the second year BSBA college students among all levels, from first to fourth. Universal sampling is a sampling technique where not all the sample of the population has a chance to be selected because the probability of being selected is unknown (Kabera, 2009).

➢ *Research Instrument*

The researcher used self-made questionnaire for mathematical skills and an existing-validated questionnaire for the communication skills, which had undergone content validity and test of reliability before they were distributed to the participants. The questionnaires were used to measure the communication and mathematical skills of the students, respectively. For their mathematical skills, the researcher was selecting basic concepts related to business mathematics subject and created questions from the business mathematics concepts. The research participants were given forty items multiple choice test questionnaire with four options (A- D).

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Mean percentage scores were calculated and interpreted using the institutional scale or grading system of the school of the identified school which follows; *95 - 100 % Very Superior, 90 - 94 % Superior, 85 - 89 % Above Average, 80 - 84 % Average, 75 - 79 % Passing, 75 and below failed.* The standard deviation was also calculated to identify the spreaders of their scores. For the communication skills, the researcher revised the instrument tool made by Barkman & Machtmes (2002) and integrated the six dimensions of communication skills made by Mar & Sall (1999). The research participants checked the scale from 0 to 4 since the research instrument was composed of 5 - Likert scale; *0 = never, 1 = rarely, 2 = sometimes, 3 = often, 4 = always*, and the mean scores were calculated and interpreted using the scale; *3.24 - 4.00 Very Good; 2.41 - 3.20 Good; 0.61 - 2.40 Average; 0.81 -1.60 Poor ; 0.00-0.80 Very Poor. The mean score of every dimension was calculated and interpreted using the scale mentioned above.* Students' final grades on their Entrepreneurial Management were the bases for measuring their entrepreneurial management performance. Mean GPA was calculated and interpreted using the institutional scale of the identified school which follows; *95 - 100 % Very Superior, 90 - 94 % Superior, 85 - 89 % Above Average, 80 - 84 % Average, 75 - 79 % Passing, 75 and below failed*.

➢ *Data Gathering Procedure*

The researcher of this study secured a formal letter asking permission from the School Administrator of the identified private school to conduct the study. Next, a formal letter addressed was given to the Dean of the BSBA Department. Once the letters addressed to the School Administrator and Dean of the BSBA Department was approved, the researcher provided a letter to inform the target participants about the study before selecting the target participants and administering instruments used to gather data. After that, the researcher asked permission from the school registrar to retrieve the participants' grades in Entrepreneurial Management for the basis of their entrepreneurial skills.

➢ *Data Analysis*

The data was analyzed using the mean score, standard deviation, and mean percentage score for the levels of communication skills, mathematical skills, and entrepreneurial skills. The researcher used a Spearman's Rho and Pearson Correlation r to test the significant relationship between variables and multiple regression analysis to identify the statistical connections or relationships of the students' communication, mathematical, and entrepreneurial skills.

Predictive Modeling Test is a process with statistical model application to predict new accurate future observations or outcomes which help to detect relationship between variable's outcome and predictors. The dependent and independent variables' relationship is estimated and examined using regression analysis. Multiple regression is used when regression model has one dependent variable and two or more independent variables (Uyanik & Guler, 2013).

➢ *Ethical Considerations of the Study*

The researcher ensures that the conduct of this study must not be the cause of any mischief or disruption of the research participants upon participating. The researcher will observe ethical management practices below and conduct research that attains the scientific standards in the field of Education to ensure that the study will be carried out as thoroughly and ethically as possible. The following considerations are given importance before the conduct of the study:

- *Consent/Permission.* The approval of the School Administrator, Dean of the BSBA Department, and School Registrar is the primary step before the study will be conducted.
- *Voluntary Participation.* Research participants will always consider whether they want to be a part of the study or not. They are accessible to opt-in or out of the study at any point in time. Participants' refusal to participate doesn't have any threat or harm. Their choices are being valued.
- *Informed Consent.* The willingness and voluntary participation of the participants are signified by a written and signed consent letter.
- *Anonymity and Confidentiality.* Participants' identities are always kept confidential and will not be written in the study to protect their private personal information and rights.
- *Results communication.* The researcher will ensure that the study is free of plagiarism or research misconduct. The identified authors related to the study should be appropriately cited, and the results will be presented accurately.

III. RESULTS AND DISCUSSIONS

This chapter presents the results and discussions about the relationship between communication and mathematical skills as predictors of students' entrepreneurial management performance.

Level of Students' Communication Skills. The table below shows the students' level of communication skills based on the survey questionnaire's results, under the six dimensions, which were interpreted based on the scale given.

Table 1 Level of Students' Communication Skills

Test	Dimensions of Communication Skills	Mean Score	SD	Descriptive Equivalent
	symbol use	3.11	0.54	Good
	intent	2.93	0.43	Good
Communication Skills	complexity	2.95	0.42	Good
	social action	3	0.28	Good

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	vocabulary use	2.87	0.38	Good
	comprehension	2.91	0.42	Good
Overall		2.96	0.41	Good

Scale: 3.24 - 4.00 Very Good; 2.41 - 3.20 Good; 0.61 - 2.40 Average; 0.81 - 1.60 Poor ; 0.00-0.80 Very Poor

The result above shows that students' communication skills in the six dimensions are good. This implies that the students have good communication skills.

Communication skills are one of the essential tools for students to accomplish any task in their studies. It is one of the 21st-century skills of a learner to become globally competent. This skill helps the students to build a better understanding of one another, in which emphatic listening is integrated to create awareness and concerns about the feelings and emotions of other people.

It has a significant role in the students' future careers because every profession or job needs good communication skills, one of the components for a harmonious workplace, productive organization, and economic stability. Teachers play a crucial part in developing and improving students' communication skills. In this case, teachers must also have a strong communication foundation and effective ways to help students enhance this skill (Asrar, Tariq, & Rashid, 2018).

Proficiency in communication skills can help improve students' academic performance in different ways. It enables the students to build self-confidence in dealing with many people because they can talk and convey messages precisely so that the listeners can absorb the ideas, they want them to understand. This communication skill can be verbal or non-verbal, using symbolic language to emphasize what they want to say. Through good communication skills, students also learned to become good listeners, where reflections on what to say must be done before uttering any words. Enhancing students' communication skills is a good start in preparing them to become an employee or employer someday since everywhere and everyday communication skill has a significant role in one's life (Mahmud, 2014).

- *Level of Students' Mathematical Skills.*

The table below shows the students' level of mathematical skills based on the survey conducted under the three components.

Table 2 Levels of Students' Mathematical Skills

Test	Components of Mathematical Skills	Mean Score	SD	MPS	Descriptive Equivalent
	conceptual skills	11.48	1.08	88.33%	
					Above Average
Mathematical Skills	computational skills	12.55	1.35	83.67%	Average
	problem- solving skills	10.42	1.32	86.81%	Above Average
Overall		11.48	1.25	86.27%	Above Average

Total Items: 40

Scale: 95 - 100 % Very Superior, 90 - 94 % Superior, 85 - 89 % Above Average, 80 - 84 % Average, 75 - 79 % Passing, 75 and below failed

The result shows that students' mathematical skills on the components, namely, conceptual, and problem-solving skills, are above average level. This implies that students have good mathematical skills in terms of conceptual, computational, and problem-solving.

Mathematics is one of the most challenging and interesting subjects in all learning areas. Mathematical skills must be developed at the start of the students' early childhood with the basic foundations of early math and numeracy skills. This is one way of preparing the child to succeed in math classes at a higher level and in those other areas which use mathematics as its language. Essential mathematical skills are necessary for preparing every child's critical thinking skill and problem-solving skills, which are very important for their academic success, life choices, and career goals. In this case, teachers and parents have crucial roles in helping the students to develop and improve their mathematical skills through giving differentiated activities where the students can explore and learn the beauty of mathematics and by applying varied strategies which can help students to love and appreciate the essence of mathematics in their lives (Guhl, 2019).

Educational agencies and other related agencies emphasize the importance of the level of students' proficiency, especially in computational skills and problem-solving skills, because one of the fundamental subjects which involve arithmetic and logical reasoning is mathematics, the basis for science and technology. Students may find difficulties in more complicated problems because they have not mastered the basic numeracy skills, which are the prerequisite for higher mathematics. Suppose the students feel these difficulties. In that case, there is a need to have interventions to cope with those difficulties so that the problem can be solved early. In this case, as the students go to higher education, a better math foundation to be able to succeed in every mathematical challenge and other higher math classes (Yeh, Cheng, Chen, Liao & Chan, 2019).

This suggests that the teachers and all other school personnel, including its stakeholders, have significant roles in developing, improving, and maintaining students' mathematical skills for success as they continue their academic journey.

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➢ *Entrepreneurial Management Performance.*

The table below shows the Entrepreneurial Management Performance of the students based on their Entrepreneurial Management final grades, which was interpreted using the institutional scale used by the identified school.

Table 3 Level of Students' Entrepreneurial Management Performance

Test	Mean GPA	SD	MPS	Descriptive Equivalent
Entrepreneurial Management Grades	89.8	3.13	94.53%	Superior

N = 60

Scale: 95 - 100 % Very Superior, 90 - 94 % Superior, 85 - 89 % Above Average, 80 - 84 % Average, 75 - 79 % Passing, 75 and below failed

The result shows that the students' overall entrepreneurial management performance is at a superior level. This implies that students are performing well in their entrepreneurial management subject.

In entrepreneurship, the importance of educating the people, especially in entrepreneurial management, plays a crucial part in supporting the country's economic growth, which has been recognized by entrepreneurs as one of the top priorities of developing countries. In this case, public universities are encouraged to implement entrepreneurship education to convey students to venture into entrepreneurship as one of their career choices or even if they have other professions. For the young citizens' generation to support and face the current issues and trends in the industrial revolution and maintain economic sustainability, entrepreneurial education must be strengthened and implemented or integrated into some learning areas (Mahmood, Rosman, Zahari, Ahmad, Ibrahim, Norlaila, Jaafar, NikYaacob, & Najihah Marha, 2021).

Teachers' entrepreneurial orientations, seminars, and workshops significantly influence the students' entrepreneurial mindset since they are the nurturers of the students' young minds. Innovativeness, risk-taking ability, and pro-activeness are some indicators to describe students' entrepreneurial mindset, which is molded and mentored by teachers with mastery of the basic concepts of entrepreneurship and in developing entrepreneurial management (Sharma, 2022). Through this process, the students may be guided and prepared to become independent in economic sustainability by any valid means.

➢ *Test of significant relationship between students' communication skills and entrepreneurial management performance.*

The table below shows the significant relationship between students' communication skills and entrepreneurial management performance using the Pearson correlation r and was interpreted using the scale given.

Table 4 Test of significant relationship between students' communication skills and entrepreneurial management performance.

Variables	Pearson r	Interpretation	p-value	Interpretation
Communication skills and Entrepreneurial Management grades	.372	Moderate Linear Relationship	.003	With Significant Relationship
Scale:	*0.01 – ± 0.19*	= *No or negligible Linear*		*Relationship*
	± 0.20 – ± 0.29	= *Weak Linear Relationship*		
± 0.30 – ± 0.39		= *Moderate Linear Relationship*		
± 0.40 – ± 0.69		= *Strong Linear Relationship*		
≥ ± 70		= *Very Strong Linear Relationship*		

The result shows a moderate linear relationship between the students' communication skills and entrepreneurial management performance based on the students' entrepreneurial management grades. This implies that if the students' communication skills are enhanced and developed well, there is a more significant possibility that their performance in their entrepreneurial management subject will increase. On the other hand, if their communication skills are poor, there is a possibility that their performances in entrepreneurial management subject are also poor. In addition, the result implies that there is a significant relationship between the two variables, communication skills, and entrepreneurial management performance. Thus, the null hypothesis stating that there is no significant relationship between the student's communication skills and entrepreneurial management performance is rejected.

Communication is vital in any business-related activities for better understanding and the success of the organization's management. There must be an understanding between the superior and subordinates so that all the issues and concerns in a certain organization will be planned and resolved through proper communication. Through good communication, clarification of ideas and thoughts, policies and procedures, grievances- hearings, suggestions, and other business matters are clearly and precisely discussed with the consensus agreement. Poor functioning of business activities is caused by poor communication or communication gap. Good communication skills significantly impact the success and survival of any business organization. Effective communication is essential in motivating employees to strive harder for better productivity, raising morale within the workplace, maintaining, and building a good rapport and positive and harmonious relationships with colleagues, and influencing others to build and develop their self-

ISSN No:-2456-2165 https://doi.org/10.38124/ijisrt/25mar423

confidence or self-esteem. Listening skills, body language, and verbal or nonverbal communication to emphasize the message make eye-to-eye contact with whom he is talking, and make reading a habit to improve communication skills, especially in the field of comprehension. They must have empathy to understand the feelings or emotions of someone who talks (Bucăţa & Rizescu, 2017).

Quality communication skills can influence the productivity of any business group, especially in managing the organization, running their business, and producing quality products and services. The essence of good communication skills is one way of achieving the organization's vision and mission in accordance with their business objectives and long-term goals which means that leaders and members of the organization should have better communication with one another to achieve their plans. There are challenges that they might encounter, but because of communication, understanding arises, which can make them tighter and work as a family (Haris et al., 2019).

- *Test of significant relationship between students' mathematical skills and entrepreneurial management performance.*

The table below shows the significant relationship between students' mathematical skills and entrepreneurial management performance using Pearson correlation r and was interpreted using the given scale.

Table 5 Test of significant relationship between students' mathematical skills and entrepreneurial management performance.

Variables	Pearson r	Interpretation	p-value	Interpretation
Mathematical skills and Entrepreneurial Management Grades	.260	Moderate Relationship	.045	With Significant Relationship
Scale:				
0.01 – ± 0.19	=	*No or negligible Linear Relationship*		
± 0.20 – ± 0.29	=	*Weak Linear Relationship*		
± 0.30 – ± 0.39	=	*Moderate Linear Relationship*		
± 0.40 – ± 0.69	=	*Strong Linear Relationship*		
≥ ± 70	=	*Very Strong Linear Relationship*		

The result shows a moderate relationship between the student's mathematical skills and entrepreneurial management performance. This implies that if the students' mathematical abilities are enhanced and developed well, the more significant possibility is that their performance in their entrepreneurial management subject will increase. On the other hand, if their mathematical skills are poor, there is a possibility that their performances in the entrepreneurial management subject are also poor. In addition, this implies a significant relationship between the two variables, namely, mathematical skills and entrepreneurial management performance, which signifies a significant relationship between the student's mathematical skills and entrepreneurial management performance. Hence, the null hypothesis is rejected.

Mathematics has a vital role in entrepreneurship, especially in managing the organization and balancing and maintaining the profitability and productivity of the business. Mathematical skills are essential in the planning phase of building a business, especially in selecting the appropriate place, market target, price of the product, and product promotion. Self-reliance, self-sufficiency, and self-actualization have been acquired through developing these skills, which are significant in creating a successful business. Mathematics education has an essential role in acquiring entrepreneurship skills and job creation since this opens the mind of young citizens to the different opportunities around them, which will help them for self-sustainability (Inah & Peter, 2021). Mathematics is the mother of all sciences, which plays a vital role in science management, commerce, economics, entrepreneurial management, entrepreneurship, marketing, and salesmanship. In this case, students must master basic mathematics concepts, especially their conceptual, computational, and problem-solving skills, to be prepared for economic trends and issues.

The concept of entrepreneurship can be integrated with mathematics class so that the students can apply the characteristics of being an entrepreneur, which can help them to build wise decision-making, critical thinking, and problem-solving skills (Palmer & Johansson, 2018).

The table below shows a significant relationship between the students' communication skills and their entrepreneurial management performance; their mathematical skills and entrepreneurial management performance using regression analysis.

Table 6 Regression Analysis Determining Predictors of Students' Entrepreneurial Management Performance

Model	R	R^2	Adjusted R^2	SE	F-value	p-value
1	.372[a]	.138	.123	2.923	9.300	.002[a]
2	.444[b]	.197	.169	2.846	6.995	.003[b]

a. Predictors: (Constant), Communication Skills

b. Predictors: (Constant), Communication Skills, Mathematical Skills

c. Dependent Variable: Entrepreneurial Management Grades

ISSN No:-2456-2165 https://doi.org/10.38124/ijisrt/25mar423

The table above shows that both communication and mathematical skills are contributors to the success of students' performance in their entrepreneurial management subject. This implies that if the students' communication and mathematical skills are good, they will perform better in their entrepreneurial management subject. On the other hand, if the students have poor communication and mathematical skills, then their performance in their entrepreneurial management subject also becomes poor. In addition, this implies that communication skills and mathematical skills are statistical predictors of students' entrepreneurial management performance.

R^2 statistics signifies that model 2 is the better model for predicting students' entrepreneurial management performance because model 2 has a higher value compared to model 1, which signifies the dependent variable's (Entrepreneurial Management Performance) proportion of variance and the variance that also appears in both independent variables (Communication and Mathematical Skills) can be used to explain these. Approximately 20 % of the Entrepreneurial Management Performance's variation can also be described based on the variation in students' Communication and Mathematical Skills.

Communication skills and mathematical skills play crucial roles in the field of entrepreneurial management or entrepreneurship. These skills are the great pillars of sustaining an organization's stability, productivity, and profitability. If poor mathematical skills exist, then there is the possibility that the organization will collapse due to financial instability. Mathematical skill plays an integral part in the student's academic success and job-creation or career-readiness since it involves conceptual skills, computational skills, problem-solving skills, and critical thinking skills, which help them become aware and ready to face any form of challenges (Abdelhamid, 2022).

Students' mathematical and communication skills significantly impact their entrepreneurial management since this subject helps them develop the management of their future careers or business in terms of financial stability, customer satisfaction, customer loyalty, productivity, and quality of products and services. These skills are great contributors to the student's successful performance in their entrepreneurial management subject because these enable them to do different tasks successfully. Mathematical and communication skills are elements for a successful entrepreneur, especially in managing or setting up a business. On the other hand, even though students will not take entrepreneurial courses, the concept of entrepreneurship, especially in entrepreneurial management, can be integrated into their Mathematics and English class because in the Mathematics syllabus, they are already existing basic concepts about entrepreneurship, such as problem-solving involving money calculations, buying and selling concepts, shared capital, profits, dividends, loss, ratio and proportions, and many others, especially on the Senior High School. In English subject, the teacher can also integrate the concept of entrepreneurial management or entrepreneurship into their oral communication and other related activities (Mahmud, et al., 2022).

The table below shows that the unstandardized beta coefficients of communication and mathematical skills directly correlate with students' entrepreneurial management performance.

Table 7 Statistics Associated with the Predictors of Students' Entrepreneurial Management Performance in the Multiple Regression Analysis

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig	Collimearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
Constant	36.436	14.259		2.555	.013		
Communication Skills	.399	.129	.360	3.031	.004	.998	1.002
Mathematical Skills	.212	.104	.243	2.044	.046	.998	1.002

a. Model Dependent Variable: Entrepreneurial Grades

b. Regression Model: Entrepreneurial Management Performance = 36.436 + 0.392 Communication Skills + 0.212 Mathematical Skills

The table above implies that as the communication and mathematical skills of the students increase, their entrepreneurial management performance will also increase. This implies further that communication and mathematical skills significantly predict students' entrepreneurial management performance. Collinearity statistics show that the variables are not correlated, meaning multicollinearity doesn't exist. Variance Inflation Factor (VIF) and Tolerance values indicate that there is no correlation between the independent variables, namely, communication and mathematical skills. Hence, multicollinearity is not a problem.

The line of the regression can be plot using the equation $Y^1 = a + b_1X^1 + b_2 X^2$. So, in this case, the equation of the regression analysis is Entrepreneurial

ISSN No:-2456-2165 https://doi.org/10.38124/ijisrt/25mar423

Management Performance = 36.436 + 0.392 Communication Skills + 0.212 Mathematical Skills which signifies that students' communication and mathematical skills significantly predict their performance in entrepreneurial management.

Mathematics has a significant role in individual life's development. It helps them solve day-to-day problems, builds individuals' self-confidence, and encourages them to get involved in entrepreneurship activities. This is one of the vital ingredients in becoming successful in entrepreneurship (Olukemi & Gbenga, 2016). School institution's goal is to produce graduates who are not only good at academic achievement but also competitive in the global market so that they will be equipped with the skills needed to face the new economic trends and issues around them (Iksan, Karia, Meerah, Osman, Lian, Mahmud & Krish, 2011). Merging these two skills will always provide globally competent graduates and job creation opportunities.

IV. SUMMARY OF FINDINGS, CONCLUSION, AND RECOMMENDATIONS

This chapter presents the summary of findings, conclusions and recommendations of communication and mathematical skills as predictors of students' entrepreneurial management performance. The conclusion and the recommendations are based on the result of the findings and its outcome, respectively.

Summary of Findings

➢ *The following are the result findings based on the analysis and interpretation of data:*

- What is the level of students' communication skills based on the following dimensions: symbol use, intent, complexity, social action, vocabulary use, and comprehension?
- The level of students' communication skills based on the following dimensions: symbol use, intent, complexity, social action, vocabulary use, and comprehension is good.
- What is the level of students' mathematical skills based on the following components: conceptual, computational, and problem-solving?
- The level of students' mathematical skills based on the following components: conceptual, computational, and problem-solving is average.
- What is the level of students' entrepreneurial management performance based on their entrepreneurial management final grade?
- The level of students' entrepreneurial management performance based on their entrepreneurial management final grade is approaching proficiency.
- Is there a significant relationship between the students' communication skills and entrepreneurial management performance?
- A significant relationship existed between students' communication skills (independent variable) and entrepreneurial management performance (dependent variable).
- Is there a significant relationship between the students' mathematical skills and entrepreneurial management performance?
- A significant relationship existed between students' mathematical skills (independent variable) and entrepreneurial management performance (dependent variable.
- Do communication skills and mathematical skills significantly predict students' success in entrepreneurial management performance?

Communication and mathematical skills significantly predict students' success in their entrepreneurial management performance.

➢ *Conclusion*

Based on the findings of the study, the researcher concluded that communication and mathematical skills were significantly correlated with the students' entrepreneurial management performance, which means that these variables have a positive correlation. If the students' communication and mathematical skills increase, their entrepreneurial management performance also increases. If both students' communication skills and mathematical skills decrease or one of them decreases, then students' entrepreneurial management performance decreases.

➢ *Recommendations*

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

- Students are encouraged to develop, improve, and enhance their communication skills and mathematical skills by constant reading and practice on mathematical word problems.
- Teachers and students are encouraged to help one another to improve their communication and mathematical skills.
- Teachers are encouraged to integrate some basic concepts of entrepreneurial management in their Mathematics and English classes.
- Future researchers are encouraged to study further the said study to test the reliability of the study and to test the significant correlation of communication and mathematical skills as predictors of students' entrepreneurial management performance.

REFERENCES

[1]. Abdelhamid, M. (2022). Entrepreneurship Education Relation to Mathematical Proficiency Amongst Secondary Youth, STEM Education & Professional Studies, Old Dominion University. https://digitalcommons.odu.edu/stemps_etds/126

[2]. Albert, J., Abrigo, M., Quimba, F., & Vismanos, J.(2020, August). Philippine Institute for Development Studies. https://pidswebs.pids.gov.ph/CDN/PUBLICATIONS/pidsdps2022.pdf

[3]. Al-Mutawah, M., Eid,A., Thomas,R. & Mahmoud, E., & Fateel, M.(2019).Conceptual Understanding,

ISSN No:-2456-2165 https://doi.org/10.38124/ijisrt/25mar423

Procedural Knowledge and Problem-Solving Skills in Mathematics: High School Graduates Work Analysis and Standpoints. https://eric.ed.gov/?id=EJ1239165

[4]. Asrar, Z., Tariq, N., & Rashid, H. (2018, June 30). The Impact of Communication Between Teachers and Students: A Case Study of the Faculty of Management Sciences, University of Karachi, Pakistan. European Scientific Journal, ESJ. https://doi.org/10.19044/esj.2018.v14n16p32

[5]. Barkman, S. & Machtmes, K.(2002): Communication Scale:Youth Life Skills Evaluation Project at Penn State. Instrument https://www.calameo.com/read/005851438b9e32df2cad2

[6]. Bejinaru, R. (2018). Assessing students' entrepreneurial skills needed in the knowledge economy. Management & Marketing, Challenges for the Knowledge Society, 13(3), 1119-1132. https://doi.org/10.2478/mmcks-2018-0027

[7]. Blessing, O., & Peter, N. (2019). The role of Mathematics Education in the Development of Entrepreneurial skills among Secondary school students in Ika South l.g.a of Delta State. Abacus (Mathematics Education Series), Vol. 44, No. 1. https://www.man-nigeria.org.ng/issues/ABA-EDU-2019-31.pdf

[8]. Bucăţa, G., & Rizescu, A. (2017, March 1). The Role of Communication in Enhancing Work Effectiveness of an Organization. Revista Academiei Forţelor Terestre. https://doi.org/10.1515/raft-2017-0008

[9]. Das, P. K. (2023, February 1). Ratio analysis for decision making, a study. Brazilian Journal of Science. https://doi.org/10.14295/bjs.v2i5.297

[10]. Duerden, M. D., Witt, P., Fernández, M., Bryant, M. J., & Theriault, D. (2012, March 1). Measuring Life Skills: Standardizing the Assessment of Youth Development Indicators. Journal of Youth Development; University Library System, University of Pittsburgh. https://doi.org/10.5195/jyd.2012.155

[11]. Ginsburg, L., Manly, M., & Schmitt, M. J. (2009, September 16). The Components of Numeracy. ResearchGate. https://www.researchgate.net/publication/267565484_The_Components_of_N umeracy

[12]. Guhl, P. (n.d.). The Impact of Early Math and Numeracy Skills on Academic Achievement in Elementary School. NWCommons. https://nwcommons.nwciowa.edu/education_masters/155/

[13]. Haris, A., Barliana, M. S., Saripudin, D., & Abdullah, A. G. (2019, January 1). Effectiveness of Entrepreneurship Communication Skills in Business Group: Ethno-Andragogy Approach to Technical Vocational Education and Training (Ethnographic study: Processed snacks in Sumbawa). Proceedings of the 5th UPI International Conference on Technical and Vocational Education and Training (ICTVET 2018). https://doi.org/10.2991/ictvet-18.2019.40

[14]. Igberaharha, O. C. (2020, May 31). Developing Entrepreneurial skills through Business Education https://www.researchgate.net/publication/341781331_DEVELOPING_ENTREPRENEURIAL_SKILLS_THROUGH_BUSINESS_EDUCATION

[15]. Iksan, Z. H., Zakaria, E., Meerah, T. S. M., Osman, K., Koh, D., Mahmud, S. N. D., & Krish, P. (2012, October 1). Communication Skills among University Students. Procedia - Social and Behavioral Sciences; Elsevier BV. https://doi.org/10.1016/j.sbspro.2012.09.247

[16]. Inah, L. I., & Peter, A. (2022, January 6). Relevance of Mathematics Education in the Attainment of Entrepreneurial Skills for National Development. ResearchGate. https://www.researchgate.net/publication/357636195_Relevance_of_Mathematics_Education_in_the_Attainment_of_Entrepreneurial_Skills_for_National_D evelopment

[17]. Joynes, C., Rossignoli, S., & Fenyiwa Amonoo-Kuofi, E. (2019). 21st Century Skills: Evidence of issues in definition, demand, and delivery for development contexts. Brighton, UK: Institute of Development Studies. https://rb.gy/96vvy6

[18]. Kabera, L. (2009). The use of Accounting ratios in decision making: National University of Rwanda https://rb.gy/9sl3fx

[19]. Khan, A., & Khan, S. (2017, January 1). Communication Skills of a Teacher and Its Role in the Development of the Students' Academic Success. ResearchGate. https://www.researchgate.net/publication/315836040_Communication_Skills_of_a_Teacher_and_Its_Role_in_the_Development_of_the_Students'_Academ ic_Success

[20]. Long, D. (2012). Theories and models of student development. In L. J. Hinchliffe & M. A. Wong (Eds.), Environments for student growth and development: Librarians and student affairs in collaboration (pp. 41-55). Chicago: Association of College & Research Libraries. https://www.coursehero.com/file/17888508/Theories-and-Models-of-Student- Development/

[21]. Mahmood, Rosman, Zahari, Ahmad, Ibrahim, Norlaila, Jaafar, NikYaacob, & Najihah Marha. (2021). The Impact of Entrepreneur Education on Business Performance. Asian Journal of University Education. 16. 171. 10.24191/ajue.v16i4.11947.

[22]. Mahmud, M. M. (2014, May 1). Communication Aptitude and Academic Success. Procedia - Social and Behavioral Sciences. https://doi.org/10.1016/j.sbspro.2014.04.230

[23]. Mahmud, M. S., Maat, S. M., Rosli, R., Sulaiman, N. A., & Mohamed, S. B. (2022, March 23). The Application of Entrepreneurial Elements in Mathematics Teaching: Challenges for Primary School Mathematics Teachers. Frontiers in Psychology. https://doi.org/10.3389/fpsyg.2022.753561

[24]. Malik, A., & Malik, A. K. (2016, October 15). The role of Mathematics in Entrepreneurship. ResearchGate.

ISSN No:-2456-2165 https://doi.org/10.38124/ijisrt/25mar423

https://www.researchgate.net/publication/314006440_The_role_of_Mathemati cs_in_Entrepreneurship

[25]. Mar, H., & Sall, N. (1999). Dimensions of Communication: United States.https://documents.nationaldb.org/products/dimensions-of- communication.pdf

[26]. Mayo, R. (2007, July 1). Connections Between Communication and Math Abilities. ResearchGate.https://www.researchgate.net/publication/300035102_Connections_Between_Communication_and_Math_Abilities

[27]. Muilenburg, Lin, and Zane Berge (2015). Revisiting Teacher Preparation: Responding to Technology Transience in the Educational Setting. Quarterly Review of Distance Education, Information Age Publishing, 16(2), 93. https://www.proquest.com/scholarly-journals/revisiting-teacher-preparation-responding/docview/1705959047/se-2

[28]. Muthiah, K. (2012, September 1). Global Importance of Communication Skills. ResearchGate.https://www.researchgate.net/publication/331773463_Global_Importance_of_Communication_Skills

[29]. Olukemi, O. M., & Gbenga, O. E. (2015, June 1). Relevance of Mathematics Education to Entrepreneurship Skills Acquisition towards the Realization of Vision 20:2020. International Journal for Cross-Disciplinary Subjects in Education. https://doi.org/10.20533/ijcdse.2042.6364.2016.0377

[30]. Palmér, H., & Johansson, M. (2018) Combining entrepreneurship and mathematics in primary school – what happens?, Education Inquiry, 9:4, 331-346, DOI: 10.1080/20004508.2018.1461497

[31]. Rodriguez, S., & Lieber, H.(2020). Relationship Between Entrepreneurship Education, Entrepreneurial Mindset, and Career Readiness in Secondary Students. Journal of Experiential Education, 1–22. https://doi.org/10.1177/1053825920919462

[32]. Schrage, J. & Lenglet, F (2015, July 7). Mainstreaming Education for Sustainable Development in Botswana: A Case Study Research of Teacher. ResearchGate. https://www.researchgate.net/publication/285574490_Mainstreaming_Education_for_Sustainable_Development_in_Botswana_A_Case_Study_Research_of_Teacher_Education_Institutions

[33]. Sharma, G. (2017, June 24). Pros and cons of different sampling techniques. https://www.allresearchjournal.com/archives/2017/vol3issue7/PartK/3-7-69-542.pdf.

[34]. Soleymani, M. R. (2014, January 1). Investigating the relationship between information literacy and academic performance among students. PubMed; National Institutes of Health. https://doi.org/10.4103/2277-9531.139677

[35]. Sood, R. (2017). Communication and Entrepreneurship: A Relationship. https://wwjmrd.com/upload/communication-and-entrepreneurship-a- relationship.pdf

[36]. Swace Digital. (2021). Entrepreneurship focused Socio-Emotional Skills Learning | Save the Children's Resource Centre. Save the Children's Resource Centre. https://resourcecentre.savethechildren.net/document/entrepreneurship-focused- socio-emotional-skills-learning-students-manual/

[37]. Tan, L. (2014, December 1). Correlational Study. ResearchGate. https://www.researchgate.net/publication/305082512_Correlational_Study

[38]. Uyanık, G. K., & Güler, N. (2013, December 1). A Study on Multiple Linear Regression Analysis. Procedia - Social and Behavioral Sciences. https://doi.org/10.1016/j.sbspro.2013.12.027

[39]. Williams, C. S. (2011, February 7). Research Methods. Journal of Business & Economics Research; Clute Institute. https://doi.org/10.19030/jber.v5i3.2532

[40]. Yeh, C. Y., Cheng, H. N., Chen, Z. H., Liao, C. C., & Chan, T. W. (2019, March 11). Enhancing achievement and interest in mathematics learning through Math- Island. Research and Practice in Technology Enhanced Learning; Springer Nature. https://doi.org/10.1186/s41039-019-0100-9