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Senior high school students' self-assessment of employability skills proficiency: An exploratory study

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Abstract

To meet the demands of globalization, different countries revolutionized education curricula that aim to produce competent graduates who possess functional, technical, and work-related skills. In the Philippines, the Department of Education instigated the "K-12 Curriculum" to develop individuals who are prepared for tertiary education, entrepreneurship, and employment. Senior High School (SHS) graduates are expected to acquire employability skills required in the field of work. Thus, this descriptive-quantitative study explored the SHS students' perceived employability skills proficiency. Data were gathered by adapting and administering Orji's (2013) Student Employability Skills Questionnaire (SESQ) to 100 conveniently selected Grade 12 students. Data were analyzed using Descriptive Statistics (Mean). Results revealed that the students' perceived employability skills proficiency ranges from moderate to high. Information and Communications Technology skills garnered the highest rank ($\bar{x}$ = 3.39 - High Level of Proficiency) while Planning skills obtained the lowest rank ($\bar{x}$ = 2.65 - Moderate Level of Proficiency). In terms of specific skills, "Learning from mistakes and accepting feedback" had the highest rating ($\bar{x}$ = 3.53 - High Level of Proficiency) while "Solving real-life concepts using Math and Science concepts" obtained the lowest rating ($\bar{x}$ = 2.28 - Low Level of Proficiency). It was recommended that teachers, administrators, and curriculum planners shall continue devising approaches and strategies to scaffold the senior high school students' work-related skills. Schools should aim for a high level of proficiency in all areas of employability skills. This would ensure that the basic education graduates are fit for the field of work.

Keywords: employability skills, senior high school, descriptive-quantitative, exploratory, K-12 curriculum

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1. Introduction

To address the challenges of globalization, nations are revolutionizing education systems that will produce highly self-reliant, confident, and competent graduates. New curricula now focus on the development of functional and technical skills as well as work-related competency among the youth (Orji, 2013). Abas and Imam (2016, p. 119) argued that "the current age has created opportunities along with challenges and complexities that affect two of the country's sectors: education and employment." Thus, the Enhanced Basic Education Curriculum (EBEC), commonly known as the "K-12" Curriculum, was instigated by the Philippine Department of Education to develop individuals who are lifelong learners, prepared for tertiary education, middle-level skills development, employment, and entrepreneurship. Senior High School graduates are expected to possess the employability skills required in the field of work.

Although employability is a broad and abstract concept, several experts coined varied definitions of the term. Rothwell and Arnold (2007), defined employability as the ability to survive in a job. According to Pegg et al., (2012, p. 4) employability is having "a set of achievements – skills, understandings, and personal attributes – that makes graduates more likely to gain employment and be successful in their chosen occupations, which benefits themselves, the workforce, the community, and the economy." Similarly, Brewer (2013) contended that employability is a skill, knowledge, and competency that could improve an individual's ability to be employed quickly. Majid et al. (2020) and Nghia (2019) as cited in Ngulube (2020, p. 1) also averred that "employability is more than getting employment as it also relates to the development of one's attributes and experiences for life-long learning and knowing one's capabilities." The cited definitions highlight the concept of having the required "skills" and "ability." Chung and Yet (2009), emphasized that impressive credentials and an appropriate degree program do not guarantee employment. Employers prefer candidates who are adept with technical skills or "hard skills", and "employability skills" or "soft skills" (Buntat, 2013).

Various experts identified specific employability skills. Kearns (2001), listed skills such as availability of work and individual work capacity, knowledge in entrepreneurship, creative and innovative, interpersonal skills and thinking, and willingness to learn. Confederation of British Industry (2008) regarded employability skills as: positive attitude, self-management, team working, business and customer awareness, problem-solving, communication and literacy, application of numeracy, and application of information technology. Learner (2012), cited eight nationally agreed employability skills in Australia which are: communication; planning and organizing; teamwork, problem-solving; self-management; initiative and enterprise; technology; and learning.

Albeit the multitude of literature that discussed employability skills of students, the majority focused on the tertiary education context (Kearns, 2001; Rothwell & Arnold, 2007; Chung & Yet, 2009; Learner, 2012; Pegg et al., 2012; Brewer, 2013; Buntat, 2013; Orji, 2013; Abas & Imam, 2016; Ngulube, 2020). Despite these extensive researches conducted within the context of different universities and academic institutions, employability remains to be a complex and problematic area without much clarity or complete direction (Rae, 2007). Correspondingly, a scarce number of studies exist in the context of secondary education, especially in the Philippines. Thus, this study aimed at exploring the employability skills acquired by senior high school students in a Philippine university. Specifically, it sought to: (1) Identify the senior high school students' perceived level of employability skills proficiency; (2) Provide inputs for the improvement of the current basic education curriculum.

1.1 Research Objectives

This study aimed at exploring the employability skills acquired by senior high school students in a Philippine university. Specifically, it sought to:

- Identify the senior high school students' perceived level of employability skills proficiency;
- Provide inputs for the improvement of the current basic education curriculum.

2. Methodology

This study utilized a Descriptive-Quantitative Research Design which involves collections of quantitative information that can be tabulated along a continuum in numerical form. Subsequently, an exploratory approach is fitting for the study since limited literature relative to employability skills is available in the context of senior high school in the Philippines. Saunders, Lewis, and Thornhill (2012) stated that an exploratory research study provides a better understanding of the nature of the problem has limited or no prior studies. An exploratory approach does not aim to provide conclusive results but explores the research topic or problem with varying levels of depth to contribute an understanding of the particular concern. The data were gathered by adapting and administering Orji (2013) Student Employability Skills Questionnaire (SESQ) to 100 Grade 12 senior high school students. Convenience sampling was used to select the respondents. Based on the Post Hoc Power Analysis performed through the G Power software, the sample size of 100 yielded a .87 effect size. Experts state that statistical power is adequate if its value is 0.80 or above (Lougheed et al., 1999; Steidl et al., 1997). Since the study was conducted during the COVID-19 pandemic, Google Form was utilized to gather the necessary data.

The instrument enabled the respondents to identify and assess their employability skills, which are the following:

	Employability skills	Description
1.	Problem-solving	Analyzing facts and circumstances and applying creative thinking to develop appropriate solutions.
2.	Numeracy skills	Manipulation of numbers, general mathematical awareness, and its application in practical contexts.
3.	Communication skills	Application of literacy, ability to produce clear, structured written work, and oral literacy, including listening and questioning.
4.	ICT skills	Basic IT skills, including familiarity with word processing, spreadsheets, file management, and use of internet search engines; information retrieval skills.
5.	Teamwork/Working with Others	Respecting others, co-operating, negotiating, persuading, contributing to discussions. Self-motivation to learn new things, learning from mistakes, accepting criticism/feedback, identifying and accessing learning opportunities.
6.	Self/Time management Skills	Readiness to accept responsibility, flexibility, time management and prioritizing, readiness to improve own performance, Time consciousness, meeting work deadlines.
7.	Planning and organizing skills	Preparing for and coordinating tasks for self and others, taking initiation and making decisions, being resourceful.
8.	Creativity/innovation skills	Devising new and better ways to handle tasks, bringing creative, innovative ideas/products, brainstorming, and thinking outside the box.

The original instrument underwent content validation by experts as indicated in the study of Orji (2013). However, since some of the statements were rephrased and omitted in the present study, the adapted questionnaire was pilot tested on thirty (30) randomly-selected senior high school students to ensure its validity and consistency. The test yielded a Cronbach's alpha value of 0.90, which indicated a "Good" level of reliability. Descriptive statistics were used to analyze the data (Mean). Microsoft© Excel software was used to facilitate statistical procedures. The following scale with the corresponding verbal descriptor and interpretation was used to elucidate the results of the study.

Scale	Verbal Descriptor	Interpretation
0	Not at All	Not Proficient
1-1.75	Just a Little	Very Low Proficiency
1-76 - 2.59	Somewhat	Low Level of Proficiency
2.60 - 3.25	Very Well	Moderate Level of Proficiency
3.26 - 4.00	Excellent	High Level of Proficiency

The anonymity of the respondents, and confidentiality of data were observed all throughout the research process. The data were processed and analyzed in adherence to the Data Privacy Act of 2012.

3. Results and Discussion

3.1 Senior high school students' perceived level of employability skills proficiency

Table 1

Senior high school students' self-assessment of communication skills

Communication Skills	Mean	Grand Mean	Verbal Descriptor	Interpretation
1. I can speak and write clearly so that others will understand my ideas and thoughts	3.00	3.00	VERY WELL	MODERATE LEVEL OF PROFICIENCY
2. I can understand and analyze information in words, graphs, diagrams, or charts	2.79			
3. I listen and ask questions in order to understand instructions and other people's points of view	3.21			

As seen on Table 1, the respondents perceived that they have a moderate level of proficiency ($\bar{x}$ = 3.00) relative to verbal communication, analysis of information presented, and listening and questioning based on other people's points of view. In consonance, possessing good communication skills is crucial as graduates must be able to effectively express their achievements in a language that is understood by employers (Bunshaft et al., 2015).

Table 2

Senior high school students' self-assessment of problem-solving skills

Problem-Solving Skills	Mean	Grand Mean	Verbal Descriptor	Interpretation
1. I can assess situations, identify problems and evaluate solutions	2.89	2.73	VERY WELL	MODERATE LEVEL OF PROFICIENCY
2. I recognize the many dimensions of a problem and can determine its root cause	2.58			
3. I'm not afraid to be creative when solving a problem.	2.72			

Based on Table 2, it can be seen that the students generally possess a moderate level of proficiency relative to Problem-Solving Skills ($\bar{x}$ = 2.73). The respondents have the skills to identify problems and provide solutions. Moreover, the students are not afraid to integrate creativity when solving problems. On the other hand, statement 2, which deals with "recognizing dimensions and the root cause of a certain problem" obtained a Mean value of 2.58, which translates to "Low Level of Proficiency." As emphasized by McGunagle and Zizka (2020), problem-solving skills is one of the five highest-ranking job skills being given importance by Manufacturing HR professionals. Additionally, problem-solving skills go conjointly with communication skills. HR professionals seek candidates who are capable of solving problems and communicating verbally the solutions they are suggesting.

As shown in Table 3, the respondents generally have a moderate level of proficiency with regard to Teamwork skills ($\bar{x}$ = 3.16). Statement #5, which deals with learning from mistakes and accepting feedback

gained the highest Mean value of 3.53, while statement #2, which deals with leading a team in collaborative work at school obtained the lowest Mean value of 2.58, which can be interpreted as "Low Level of Proficiency." Sreehari (2021) averred that the ability to work in teams is a pivotal skill in modern workplaces. Effective teams could produce better results than individuals working unaided. Butterfield (2018) also stated that successful teams can accomplish more tasks and produce higher quality outcomes than a person working alone.

Table 3

Senior high school students' self-assessment of teamwork skills

Teamwork/Working with Others	Mean	Grand Mean	Verbal Descriptor	Interpretation
1. I work/cooperate well with other students and team leaders	3.22	3.16	VERY WELL	MODERATE LEVEL OF PROFICIENCY
2. I can lead a team in a collaborative work at school	2.58			
3. I know how to negotiate and persuade other people	2.63			
4. I like to learn new things	3.52			
5. I learn from my mistakes and can accept feedback	3.53			
6. I can identify and access learning opportunities	3.04			
7. I place much value on respect for others	3.6			

Table 4

Senior High School Students' Self-assessment of Planning Skills

Planning Skills	MEAN	GRAND MEAN	VERBAL DESCRIPTOR	Interpretation
1. I am good at managing time and priorities – setting timelines	2.58	2.65	VERY WELL	MODERATE LEVEL OF PROFICIENCY
2. I am good at taking initiative and making decisions	2.60			
3. I am a good at being resourceful	2.77			

Based on the data shown in Table 4, it can be concluded that the learners are generally adept at Planning. Based on the grand mean ($\bar{x}$=2.65), students have a moderate level of proficiency in connection with their Planning skills. This suggests that students are somehow able to take initiative, and make decisions. According to Wendover (2017), employees who can make astute, consistent, and broad-minded decisions that result in gainful outcomes play a crucial role in the workplace. However, statement #1, which refers to managing time and setting priorities, garnered a Mean value of 2.58. This suggests that the students only obtained a "Low Level of Proficiency" on the particular skill. Time management is of utmost importance in the workplace. If every employee in an organization possesses good time management skills and therefore is more productive, then the organization becomes highly efficient and productive (Orlikowsky & Yates, 2002).

Table 5

Senior High School Students' Self-assessment of Creativity and Innovation Skills

Creativity and Innovation Skills	Mean	Grand Mean	Verbal Descriptor	Interpretation
1. When doing a task, I often devise new ways to do it faster and better	2.93	2.94	VERY WELL	MODERATE LEVEL OF PROFICIENCY
2. I usually come up with creative and innovative ideas during group work	2.58			
3. I like trying out things myself	3.3			

As divulged in Table 5, the students obtained a "Moderate Level of Proficiency" in Creativity and Innovation Skills ($\bar{x}$=2.94). The learners are capable of devising new ways to accomplish tasks. Moreover, they are also fond of trying out new things. Statement #2 got a mean value of 2.58, which reveals that the respondents only acquired a "Low Level of Proficiency" in being creative and innovative during group tasks. It seems that the respondents are more creative when performing individual tasks.

As argued by Sokół and Figurska (2021) creativity is a significant aspect of innovation, competitiveness, and better performance of an organization. Moreover, the ability to process and apply knowledge creatively is much more important than the amount of knowledge one possesses.

Table 6

Senior high school students' self-assessment of numeracy skills

Numeracy Skills	Mean	Grand Mean	Verbal Descriptor	Interpretation
1. I can use basic mathematical functions of addition, subtraction, multiplication, and division	3.44	2.86	VERY WELL	MODERATE LEVEL OF PROFICIENCY
2. I can solve real-life problems using math and science concepts	2.28			

Table 6 showed that the learners have generally a "Moderate Level of Proficiency" for Numeracy Skills with the grand mean value of 2.86. On the other hand, looking closely into the data, statement #2, which pertains to the application of math and science concepts in solving real-life problems, obtained a Mean value of 2.28 with a verbal descriptor of "Somewhat". This implies a "Low Level of Proficiency." Dearing (1997, p. 133) regarded numeracy skills as the "key to the future success of graduates whatever they intend to do in later life." Similarly, research by Hoyles et al. (2002) acknowledged that there is a growing demand from employers for mathematically literate graduates. In a survey conducted by the Institute of Directors (2007), numeracy skills was also ranked as the sixth most vital, out of a list of twenty-eight employability skills.

Table 7

Senior high school students' self-assessment of ICT Skills

ICT Skills	Mean	Grand Mean	Verbal Descriptor	Interpretation
1. I am familiar with the use of basic computer applications such as MS Word, MS PowerPoint, MS Excel	3.21	3.39	EXCELLENT	HIGH LEVEL OF PROFICIENCY
2. I know how to browse the internet to look for necessary or relevant information	3.50			
3. I know how to properly send and receive e-mails	3.45			

Data in Table 7 showed that the respondents have a high level of proficiency with a grand mean of 3.39 for Information and Communications Technology (ICT) skills. This is somehow consistent with the notion that Generation Z students are digital natives, therefore it is not surprising that they possess remarkable ICT skills (Muthmainnah et al., 2022). A study by the European Commission (2016) highlighted that the use of ICT tends to augment the speed, flexibility, and independence of work. ICT tools enable time-consuming work processes to be done at increased speed. Also, ICT tools enable the employee to perform tasks faster, more efficiently, and independently.

Table 8

Senior high school students' self-assessment of time/self-management skills

Time/Self-management Skills	Mean	Grand Mean	Verbal Descriptor	Interpretation
1. I know how to manage different tasks and responsibilities	3.09	3.00	VERY WELL	MODERATE LEVEL OF PROFICIENCY
2. I know how to properly set my goals and objectives in different tasks and responsibilities	3.20			
3. I know how to properly set my priorities	3.16			
4. I am able to meet task deadlines	2.88			
5. I can manage/do several tasks at once	2.69			

Table 8 revealed that the respondents possess a moderate level of proficiency, with a grand mean of 3.00, in Time/Self-management Skills. The students expressed proficiency in managing different tasks and responsibilities, properly setting goals and objectives, setting priorities, beating deadlines, and multi-tasking. Lombardo and Eichinger (2008) contended that for employees to excel, not merely to survive, time must be managed well and priorities must be established.

4. Conclusion and Recommendation

This research aimed at exploring the senior high school students' perceived level of proficiency toward employability skills. The following conclusions were formulated based on the results of the present study:

- The respondents generally perceived their employability skills proficiency as moderate to high.
- In terms of ranking based on the obtained grand mean, Information and Communications Technology skills got the highest rank (Grand Mean = 3.39). This validates the idea that Generation Z students as "Digital Natives" are well-adept in using technology. On the other hand, Planning skills got the lowest rank (Grand Mean = 2.65) which still implies a moderate level of proficiency.
- Looking closely into specific skills implied in the given statements on the research instrument, solving real-life problems using Math and Science concepts got the lowest rating (Mean = 2.28) which shows a low level of proficiency. This may be caused by a highly-abstract approach to teaching Math and Science concepts. Conversely, "learning from mistakes and accepting feedback" got the highest rating (Mean = 3.53) which translates into a high level of proficiency. This suggests that the students possess a positive attitude toward learning. They are open to constructive criticisms and are able to capitalize on their mistakes as a form of learning.

Anchored on the findings of the study, it is recommended that:

- Teachers, administrators, and curriculum planners shall continue devising new approaches and strategies for further enhancement of senior high school students' employability skills. Schools should aim for a high level of proficiency in all areas of employability skills. This would ensure that the graduates of basic education are fit for the highly-demanding field of work.
- ICT integration in developing the senior high school students' employability skills must be maximized as the present study showed that learners are highly inclined and proficient in the use of technology.
- More real-life and practical applications must be integrated into the teaching of Math and Science subjects as results showed that the respondents have low proficiency relative to solving real life problems using Math and Science concepts.
- Giving feedback must be maximized as the results suggest that the respondents highly learn from their mistakes and accept feedback.
- The results of the present study may be used as baseline data for further studies on the same topic. It is also recommended to conduct a similar study on larger sample size. An in-depth qualitative exploration may also be carried out.

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