Effectiveness of Virtual Work Immersion: A Descriptive-Correlational Study Among Extended Senior High School Graduates

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Abstract

The COVID-19 pandemic fundamentally altered the educational system and compelled schools to adopt an online teaching model. This study problem is designed to investigate the impact of virtual work immersion on University X-partnered Senior High School (SHS) graduates from SHS A, SHS B, and SHS C in terms of employability and choosing a college career. To achieve this, the researchers used a descriptive-correlation research design. From the mean interval of 3.41 to 5.00, the Likert scale revealed positive responses from respondents on the virtual work immersion's effectiveness. Based on ANOVA results, there is a significant difference in their ratings regarding virtual work immersion's reliability and comfort, as well as their employment status and track alignment. Moreover, their General Weighted Average (GWA) affected their ratings regarding their perceptions of the effectiveness, reliability, assistance, compliance, and comfort that virtual work immersion has, as well as their gained experiences, level of employability, and choosing a college program. Furthermore, the SHS graduates' virtual work immersion gained experience has a significant relationship with increasing their level of employability and level of selecting a college course. Enhancing students' engagement and participation, implementing face-to-face training, and improving calendar schedules are also recommended to help the institution strengthen the caliber of the work immersion program.

Keywords
Virtual Work Immersion, Senior High School, Likert Scale, Analysis of Variance, Pearson Correlation

1. Introduction
Gozun and Rivera (2017) stated that youth unemployment accounts for more than half of the Philippines' unemployed population. They claimed that even if the rate of young people without jobs decreased from 16.8% in April 2013 to 15.7% in April 2014, young people still made up more than half of the 2.9 million unemployed Filipinos. Businesses require skills that these young people still need to learn, despite millions of young people being out of school and ready for the workforce. One of the leading causes of young people's employment difficulties is the mismatch between jobs and the necessary skills (Wangmo 2012). As a result, it is essential to identify the variables and create policies that encourage young employment and entrepreneurship in the Philippines.

Work immersion is one of the SHS subjects in the Philippines that needs to be completed to graduate. Students in their senior year of high school must participate in a work immersion program in an area directly relevant to their chosen tertiary program. It is an opportunity for students to develop professionally by simulating real-world employment (Bernales et al. 2020). Hence, it is an essential component of their curriculum since it tests, evaluates, and prepares them to perform the assigned task effectively and consistently.

However, the COVID-19 pandemic had a particularly catastrophic impact on education. As a result, non-traditional learning methods have replaced conventional face-to-face training. The available learning modalities in the nation are online, modular, and a mix of these two. Education must continue to prepare students for a future in the workforce regardless of the situation. Hence, several schools (both private and public) are forced to continue and adapt to the new normal. On the other hand, the digital economy is creating new jobs in the Philippines, and the e-Conomy SEA 2019 says that by 2025, the country's digital economy will be worth more than PHP 1 trillion. But, due to COVID-19, the youth unemployment rate in the Philippines jumped from 12.9% in April 2019 to 31.6% in April 2020, putting young people at risk of significant disruptions in education and training, low earnings, limited career opportunities, and increased employment search constraints. Digital technology could aid continued education and training and emphasize youth's competitive advantage in using digital tools at work during the pandemic. Still, the Philippines falls behind other countries in accessibility, speed, and cost. Lack of access may worsen existing inequalities; therefore, more must be done to guarantee that no one is left behind in transitioning to the new normal in education and training. – (International Labour Organization or ILO, 2020)

In the 2020-2021 school year, the University X Community Extension Services Office (CESO) started to offer the said virtual program to SHS A. However, in 2021-2022, the school expanded its service and partnership with SHS B and SHS C. The Science, Technology, Engineering, and Mathematics (STEM), Technical-Vocational-Livelihood (TVL), Accountancy, Business, and Management (ABM), Humanities and Social Sciences (HUMSS), and General Academic Strand (GAS) training programs for participants are a series of training conducted in these school years with a total of 72 hours or more than for other strands through Zoom Cloud Meeting. The initiative intends to improve these three partnered communities' student development, soft skills, and technical skills. Participants in the training programs are designed to achieve college and employment preparedness. In line with this, the study problem is designed to investigate the effectiveness of virtual work immersion to University X partnered SHS graduates regarding their level of employability and choosing a college career. It is to determine if it offered essential work-related learning opportunities that enabled participants to broaden their knowledge and skills in preparation for their college level and desired future employment through the shared experiences and sentiments of senior high school students who participated in work immersion during the pandemic.

1.1 Objectives

The study aims to assess the impact of virtual work immersion on University X's partnered schools SHS graduates' level of employability and level of choosing the right college course. Specifically, the study aims to:

- Determine the SHS graduates' perceptions of the conducted virtual work immersion in terms of its effectiveness, reliability, assistance, compliance, and comfort;
- Analyze the SHS graduates gained learning experiences, level of employability, and level of choosing the right career path in college after taking the work immersion;
- Identify the difference between graduate students' mean in their gained experiences, perceptions, level of employability, and level of choosing of college course when categorized to their selected demographic profile (Age, Sex, GWA, and Strand);
- Assess the impact of the SHS graduates' age, sex, GWA, and strand on their perceptions to virtual work immersion, gained experience, level of employability, and level of choosing a college course; and
- Identify the relationship of virtual work immersion learning experience on the level of employability and college career path of the graduated senior high school students.

2. Literature Review

The lack of skilled workers is a threat to the Philippines' growth. De Castro et al. (2015) believe that education and skills mismatch are positively correlated, negatively impacting work satisfaction and productivity (cited in Roble 2021). According to the Philippine Statistical Authority's (PSA) Labor Force Survey (LFS), the country's total unemployment rate was 5.8% in January 2016, with 48.2% of unemployed being 18–24 (Cable News Network Philippines 2016, cited in Gozun and Rivera 2017). Roble (2021) stated that in response to these issues in the labor market and academic institutions, several government agencies and nonprofits have collaborated and developed a job-skills matching agenda to resolve employment issues in the long-term, such as K–12 Program integrated with the work immersion program for Senior High School graduates to be career-ready in college and employment. The work immersion program is the solution to the Philippine education system to thoroughly equip high school graduates with the 21st-century skills required for the ever-changing society and global competitiveness (Montes and Paño 2021).

Work immersion helped students apply classroom theories and ideas to real-life job circumstances, impacting their personalities and values (Catelo 2020). Garcia and Yazon (2020) also stated that the program benefits students eventually entering the tertiary level. It is regarded as one of the most efficient methods to improve their skills in their chosen specialized fields. Dela Cruz and Permejo's (2020) research findings also demonstrated that students have a high self-perceived work capacity, which gives them confidence in implementing strategies for managing work assignments. Furthermore, Borling et al. (2022) found that Sultan Kudarat Laboratory High School alums rated work immersion as highly beneficial in fostering their social development in leadership, self-efficacy, and communication. In Icban's (2019) study, partner institution supervisors evaluated students throughout their work immersion experience, following their skills, competencies, and employability. The results indicated favorable feedback from the supervisors wherein they stated that the students are proficient in relating to the essential, core, and common competencies, and being career-ready in the context of personal, interpersonal, self-management and initiative, and delivery (Icban 2019).

Rosabeth Arturo and Rey Arturo's (2020) findings show that the learners have outstanding interpersonal and teamwork abilities and excellent personal traits and attitudes. They also have perfect work readiness regarding fundamental academic and higher-order thinking skills. Acut et al. (2019) found that most students' performance surpasses the necessary standard. Also, the students, in choosing a professional path, can use the experiences and skills they acquired during work immersion as a foundation for assessing decision-making about careers to feel more fulfilled in their subsequent courses (Bernales et al. 2020). It is also supported by the study of Rodriguez (2019), where senior high school students undertake work immersion within a business organization or company with responsibilities connected with the specialized field. She stated that the exposure of students to work immersion allowed them to be acquainted with and understand the company's usual protocols, working environment, and regulations, which was also supported by the study of Favila et al. (2019). Rodriguez (2019) also argued that students obtain practical and relevant skills in the industry under the supervision of workers and experts. It also strengthens their technical knowledge and abilities, recognizes the value of applying the concepts and ideas learned in class, and is better equipped after graduation to handle the requirements and difficulties of the job, entrepreneurship, or postsecondary learning. Cabrera (2020) also recommended more research into the broader concept of work readiness rather than focusing on individual characteristics and behavior to better understand the various aspects of work readiness and ultimately create a more valuable and relevant assessment measure.

However, many high schools and college graduates still need to gain the necessary knowledge and skills (Roble 2021; Konstantinou and Miller 2021). More than half (22 over 26) of the companies asked in a 2018 survey by the Philippine Institute for Development Studies (PIDS) agreed that graduates from the secondary school level lacked the necessary skills for employment (Añago 2021). It prompted Patacsil and Tablatin (2017) to propose a skills gap approach that measures the significance of the Information Technology (IT) skills gap as viewed by IT students and the industry by using the internship experiences of respondents. With this, Patacsil and Tablatin's (2017) study suggests that the school should strengthen its soft skills and entry-level hard skills curriculum (e.g., computer operations and maintenance). On the other hand, Vecino and Doromal (2020) have found various conflicts arising during the implementation of work immersion, namely limited partner industries, students' working attitudes, limited time tracking students' progress, wrong supervision time for immersion teachers, and not sustainable learners' financial support. It was also found by Figueras and Mendoza (2020) that the absence of students from their work immersion, the absence of partner institutions for work immersion, and the lack of funding for SHS students' transportation are some of the issues that schools encounter when implementing work immersion.

On the other hand, the traditional setup of work immersion changed when the COVID-19 pandemic happened globally in January 2020. Due to the pandemic, the work immersion was conducted online since the quarantine in the community was implemented (Insorio et al. 2021). The immersion in a virtual setup is designed to give participants a flexible, time- and money-efficient option for face-to-face interaction with other participants, teachers, and subject matter experts (Insorio et. 2021). The instructor's availability to answer queries during the online immersion helped to assure team proficiency and encouraged individual participation in the team environment. Students could concentrate on the task and work effectively because of the clear objectives and timelines (Leslie et al. 2018). According to Arcayera (2021), participants provided the implementation with a solid approval rating, suggesting that it was carried out effectively despite the risk of the COVID-19 pandemic. According to Flores et al. (2021), having excellent partnerships with community members, a class culture built on humility and adaptability to change, and a dedication to open communication allowed the program to go online. However, Amper (2022) discovered that during the new normal, there are various student perspectives on work immersion through business simulation experiences,

including having a challenging experience. Due to pandemic restrictions, the student must buy several school materials online. Another challenge during preparation is group involvement owing to inter-agency task force (IATF) constraints; students cannot meet because of pandemic restrictions.

In conclusion, work immersion is vital in preparing students before entering the tertiary level and the corporate world. It helps the students hone their capability and teaches them to apply theoretical study from classroom learning. Although work immersion benefits the student, challenges and conflicts arise during its implementation due to a lack of affiliated companies, insufficient technology and experts aligned with the student's specialized field, lack of transportation funds for SHS students, and short training hours. Some students are unwilling to participate in the practice application during work immersion due to absences and learning environment issues. Studies suggested more preparation to provide students with the essential skills after graduation from grade 12, including orientation, training, and industrial relationships. The time must also depend on the industry the students will be in so they may get in-depth information, use their abilities, and be sufficiently prepared for the work. However, related studies show that COVID-19 affected the sustainability of work immersion since the education system was transitioned to an online setup, negatively impacting SHS graduates' performance and employability. Despite virtual work immersion's flexibility, related studies show that it still poses challenges, such as restricting students' movements and limiting them from exploring their full potential outside their homes. Thus, there is still a need to analyze the effectiveness of school virtual work immersion programs offered to SHS students. Schools must evaluate the existing solutions and guidelines to maintain students' learning and skills and still give the best quality education they need to be career-ready.

3. Methods

This study uses a descriptive-correlation research design to understand how SHS graduates' virtual work immersion experience impacts their employability and decision-making in choosing a college course. For it to be successful, the quantitative approach was integrated into the research instrument. Moreover, the researchers include a qualitative approach to gather their ideas on the issues encountered during their online virtual work immersion to understand and create relevant suggestions for improvement. The researcher also employed a non-probability sampling technique to collect data, specifically judgmental and snowball samplings. Judgmental sampling is an approach in which situations, people, or events are chosen purposefully to provide relevant information. The researcher decided to include a specific set of graduated senior high school students from the adopted schools (SHS A, SHS B, SHS C) in the sample, such as those participating in virtual work immersion in the school year 2021–2022. Snowball sampling is used, where the study participants are asked to assist researchers in recruiting other potential subjects. Of the total enrolled students from the said adopted schools of the previous school year, 390 participants attended. The researchers used Slovin's formula to calculate the required sample size for the study to provide a confidence interval of 95% (with a 5% error margin). The formula was written as:

$$n = \frac{N}{(1 + N(e^2))} \quad (1)$$

The n in the formula is the number of samples, while N is the total population and e is the error tolerance (level). This formula allowed the researchers to select a sample size of 197 target participants from the total population (390) of students who attended the virtual work immersion for the school year 2021-2022. The researchers used descriptive and inferential statistics for quantitative data analysis, while content analysis was used for qualitative data. Descriptive statistics are used to describe the data in terms of its composition and attributes (e.g., mean). On the other hand, inferential statistics are used to compare groups to identify the potential relationship and difference between variables. Pearson's correlation tests were used to analyze and interpret the degree of relationship between the variables through the correlation coefficient (Pearson's r) and level of significance (P-value < 0.05). The Analysis of Variance (ANOVA) was used to assess the significant effect or difference between variables by using the P-value (0.05 level of significance), which was used to reject the null hypothesis. While content analysis is used to deeply understand the qualitative data, which is the perceptions of respondents on the issues and concerns they have encountered during the virtual work immersion. The data are analyzed using Microsoft Excel and Minitab software.

4. Data Collection

The researchers deployed an online survey through Google form composed of quantitative and qualitative questions to gather and analyze data concerning the virtual work immersion program's impact on the SHS graduates' employability level and choosing of college course. The survey was conducted from August 15 to May 23, 2023.

5. Results and Discussion

This section contains an analysis and interpretation of the data gathered from the online survey (Google Form).

Likert-Scale of SHS Graduates' Perceptions, Level of Employability, and Level of Choosing a College Course

The researchers used the frequency of the respondent's average mean score from all statements in each variable under the SHS graduates' perceptions, level of employability, and level of choosing a college course to summarize the overall Likert scale results. Likert scale scores were also used to interpret each variable's results with different statements under each. The overall means (OM) were interpreted as follows: strongly disagree between 1.00 and 1.80, disagree between 1.81 and 2.60, neutral between 2.61 and 3.40, agree between 3.41 and 4.20, and strongly agree between 4.21 and 5.00. – (Pimentel 2010, cited in Nyutu et al. 2021)

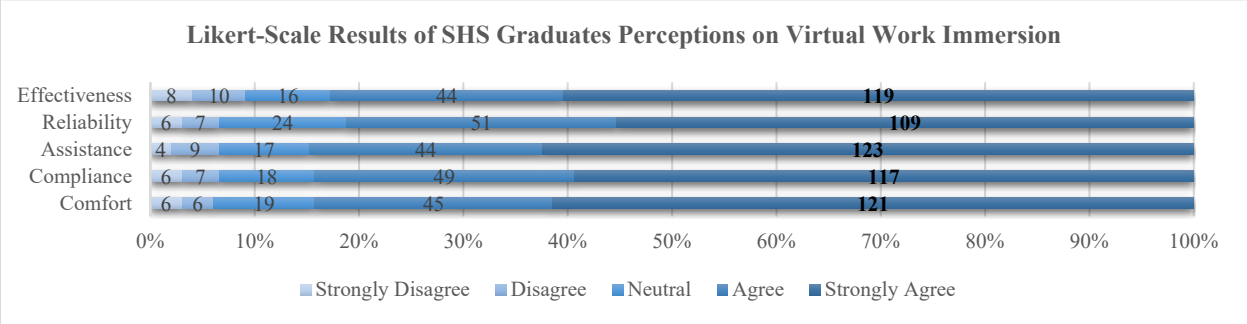

Figure 1. Likert-Scale Results of SHS Graduates Perceptions on Virtual Work Immersion

Figure 1 shows that most of the respondents strongly agree with the statements regarding the virtual work immersion's effectiveness (60.41%, OM = 4.12), reliability (55.33%, OM = 4.10), assistance (62.44%, OM = 4.23), compliance (59.39%. OM = 4.20), and comfort (61.42%, OM = 4.13). Most claim that, although the work immersion was conducted online, University X was still able to offer them top-notch instructions, giving them adequate knowledge and support on improving their capabilities in operating facilities and equipment relevant to their chosen career, wherein the instructors ensured that no student is left behind during discussions. All were assisted in their professional development, indicating that the school administrator successfully implemented the program. Regarding compliance, University X successfully implemented the virtual work immersion by giving them prior knowledge about the online program, such as discussing requirements, schedules, policies, rules, and clear objectives, and providing a suitable online venue and training for their growth development. Additionally, the majority expressed that through virtual work immersion, they can make the most of their time while being equipped with the knowledge needed in the field and feel safe with this setup. However, not all of them have the same internet connection and home environment where they can do their online training comfortably, significantly affecting their ratings. Nonetheless, the comfort of the virtual work immersion still gathered an overall positive response, denoting that most respondents find it safe and convenient due to the pandemic.

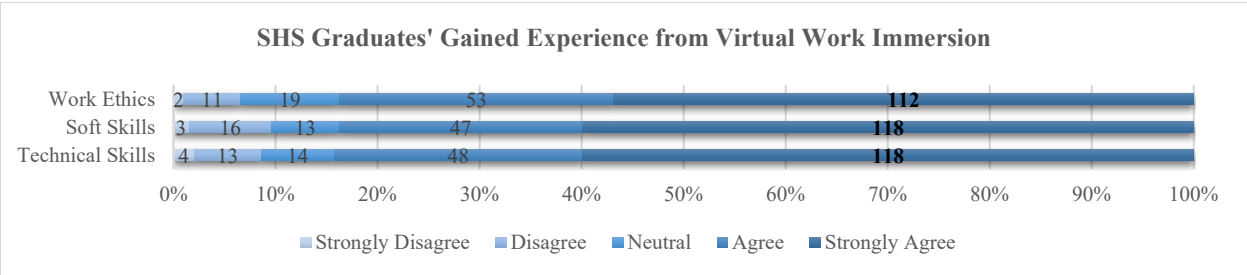

Figure 2. SHS Graduates' Gained Experience from Virtual Work Immersion

Figure 2 indicates that most of the respondents strongly agree that they improved from their gained experience in terms of work ethics (56.85%, OM = 4.12), soft skills (59.90%, OM = 4.09), and technical skills (59.90%, OM = 4.13). They have agreed that their gained experiences in terms of work ethics enhance their understanding, punctuality,

independence, confidence, and commitment to their tasks. They also gained soft skills, improving the graduates' communication, emotion, decision-making, and adaptability. The finding proved the claim of Borling et al. (2022) that work immersion is beneficial in fostering social development in leadership, self-efficacy, and communication. Similarly, virtual work immersion enabled them to become more self-aware and learn new methods of applying technical skills in the real world. The findings agree with the claim of Rodriguez (2019) that students strengthen their technical knowledge and abilities, recognize the value of applying the concepts and ideas learned in class, and are better equipped after graduation to handle the job, entrepreneurship, or postsecondary learning requirements and difficulties.

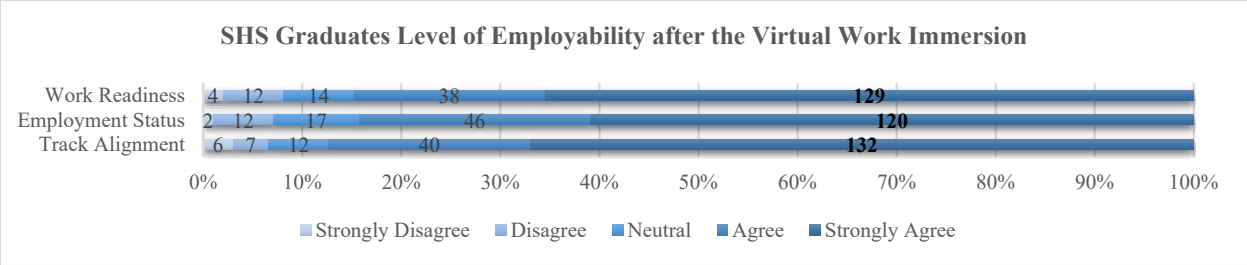

Figure 3. SHS Graduates' Level of Employability after the Virtual Work Immersion

As shown in Figure 3, in terms of the level of employability, 65.48% of the participants feel ready to work (OM = 4.21) due to the help of the virtual immersion program. Most of them strongly agree that the virtual work immersion helped improve necessary Microsoft skills and that the program was compatible with the current norms. The virtual program equips graduates to work for employers or companies, and extensive training and seminars help them succeed as employees. They also strongly agree (65.48%, OM = 4.17) that learning during the virtual work immersion helped the respondents with their employment and enhanced their skills. Also, 67.01% of the SHS graduates strongly agreed (OM = 4.21) that the virtual program allows them to be familiarized with their track. Work immersion can supply students with the essential core information and abilities needed to pursue higher education in their preferred career, pursue middle-level skills, obtain employment instantly, or develop their businesses (Garcia and Yazon 2020). Nevertheless, virtual work immersion differs from the traditional work immersion setup for SHS students. But, relevant career learning was successfully taught, supported, and prepared the respondents to enter the corporate world.

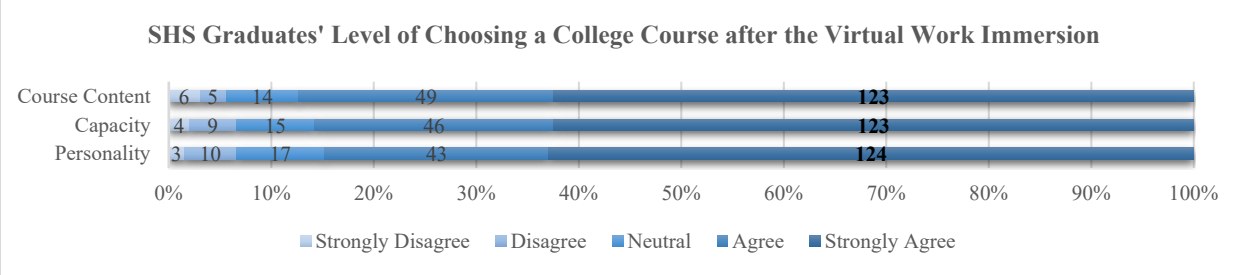

Figure 4. SHS Graduates' Level of Choosing a College Course after the Virtual Work Immersion

Based on Figure 4, the majority of the SHS graduates strongly agreed that the online program helped them choose the right college course. In terms of course content (63.44%, OM = 4.20), the knowledge gained during the virtual work immersion helped them identify their program interests. It allowed students to decide which program would provide them with the best chance of finding employment. Similarly, 63.44% of the respondents strongly agree that learning while immersed in virtual work helped them become aware of their capacities, such as their strengths and weaknesses. Work immersion made them understand the importance of being motivated and passionate about their chosen programs. The respondents also strongly agree with choosing the right course based on their personality (62.94%, OM = 4.19). They realized the value of making an informed decision while choosing a course of study due to their work immersion. Bernales et al. (2020) also stated that in choosing a professional path, the students could use the experiences and skills they acquired during work immersion as a foundation for their assessment of decision-making about careers to feel more fulfilled in their subsequent courses.

Analysis of Likert-Scale Result of Statements using One-Way ANOVA Test

The researchers use the one-way ANOVA method to test the significant difference of each statement that falls under the SHS graduates' perceptions, gained experiences, employability level, and college program choice level. Their sub-variables under perception were labeled as P1 (Effectiveness), P2 (Reliability), P3 (Assistance), P4 (Compliance), and P5 (Comfort). While the gained experiences sub-variables are GE1 (Work Ethics), GE2 (Soft Skills), and GE3 (Technical Skills). The employability level also has sub-variables, such as LE1 (Work Readiness), LE2 (Employment Status), and LE3 (Track Alignment). In choosing the right course, the sub-variables are LC1 (Course Content), LC2 (Capacity), and LC3 (Personality). The following hypotheses are used to test the assumption:

Ho: There is no significant difference between the means of statements regarding participants' perceptions, gained experiences, level of employability, and level of choosing the right college course;
Ha: There is a significant difference between the variables.

Table 1. Summary of Analysis of Variance (ANOVA) p-value results based on different statements

	Source													
	Perceptions					Gained Experiences			Level of Employability			Level of Choosing College Course		
	P1	**P2**	P3	P4	**P5**	GE1	GE2	GE3	LE1	**LE2**	**LE3**	LC1	LC2	LC3
P-Value	0.05	**0.00**	0.07	0.42	**0.00**	0.07	0.07	0.07	0.12	**0.03**	**0.01**	0.08	0.10	0.11

Table 1 shows that only the respondent's perception of the virtual work immersion's reliability (P2) and comfort (P5) and level of employability regarding employment status (LE2) and track alignment (LE3) significantly affects their ratings for different statements in each variable ($p < 0.05$). Since the difference is statistically significant, it shows that not all means are equal and that the respondents have different views when rating each statement regarding the virtual work immersion reliability and comfort. It signifies that the designated tasks and paperwork they have accomplished during online training are irrelevant to some participants in their chosen program or working industry. It also supported the significant difference regarding track alignment, denoting that the virtual program only helps some participants to acquire the necessary skills, knowledge, and areas of interest aligned with labor market needs. As a result, their rating in terms of employment status also differs, meaning not all the participants agreed that the virtual program provides them the opportunity to locate accessible work. It might also be one of the reasons why Añago (2021) stated that graduates lacked the necessary skills for employment. It is also because a problem exists in public and private education systems producing graduates who can fulfill industrial needs (Song and Tang 2016, cited in Patacsil and Tablatin 2017). Moreover, not all have the same comfort since they have different environments and internet connections. It also supports the study of Insorio et al. (2021), where HUMSS graduates experienced difficulties in terms of work habits, such as unstable internet and noise distraction at home.

One-way Analysis of Variance (ANOVA) Results based on the Respondents' Demographic Profile

To assess the perceptions, gained experiences, level of employability, and level of choosing a college course of SHS graduates after taking the virtual work immersion based on their age, sex, strand, and GWA, the researchers test if the difference between each category is statistically significant using the following hypotheses:

Ho: There is no significant difference between the SHS graduate students' perceptions, gained experiences, level of employability, and choosing the right college course when categorized based on their selected demographic profile;
Ha: There is a significant difference between the variables.

Table 2. Analysis of Variance p-value results summary based on selected demographic profile

Variables	Age	Sex	Strand	GWA
	P-value	P-value	P-value	P-value
Perceptions				
Effectiveness	0.95	0.43	0.05	**0.00**
Reliability	0.88	0.36	0.12	**0.00**
Assistance	0.41	0.16	0.17	**0.00**
Compliance	0.35	0.91	0.23	**0.00**

Variables	Age	Sex	Strand	GWA
	P-value	P-value	P-value	P-value
Comfort	0.80	0.80	0.12	**0.00**
Gained Experiences				
Work ethics	0.38	0.92	0.14	**0.00**
Soft Skills	0.79	0.59	0.10	**0.00**
Technical Skills	0.26	0.84	0.16	**0.00**
Level of Employability				
Work Readiness	0.67	0.91	0.09	**0.00**
Employment Status	0.50	0.84	0.18	**0.00**
Track Alignment	0.56	0.88	0.14	**0.00**
Level of Choosing College Course				
Course Content	0.61	0.30	0.13	**0.00**
Capacity	0.37	0.61	0.50	**0.00**
Personality	0.70	0.36	0.53	**0.00**

Table 2 shows the results from the one-way ANOVA when the responses are grouped according to age, sex, GWA, and strand. Among the four (4) selected demographic profiles, only the GWA has a significant effect ($p <$ significance level of 0.05) on their perceptions based on the virtual work immersions' effectiveness, reliability, assistance, compliance, and comfort. It also indicates that the null hypothesis for SHS graduates' perceptions of virtual work immersion based on the mentioned variables is rejected. The p-values for the SHS gained experiences (work ethics, soft skills, and technical skills), level of employability (work readiness, employment status, and track alignment), and level of choosing college course (course content, capacity, and personality) are also less than the significant level ($p < \alpha$) when categorized to their GWA. It indicates that not all means are equal; thus, the null hypothesis is not true and is rejected. With these results, it can be said that respondents' academic performance has the most significant effect in rating the statements given to them. The results were also supported by the research conducted by Chua et al. (2019), whose respondents are ABM students. The results demonstrated that work immersion favorably enhances the academic performance of grade 12 students. It prepares and develops students for a brighter future by providing relevant job experiences.

Pearson Correlation Analysis Results

The researchers aim to assess if the SHS graduates' gained experiences from virtual work immersion have a significant relationship in improving their level of employability and choosing a college course. The following hypotheses are used to test this assumption:

Ho: There is no significant relationship between the dependent (graduate students' level of employability and choosing the right college course) and independent variables (experience in virtual work immersion);
Ha: There is a significant relationship between the dependent and independent variables.

Table 3. Pearson correlation results summary

Variables	Gained Experiences					
	Work Ethics		Soft Skills		Technical Skills	
	R-value	p-value	R-value	p-value	R-value	p-value
Level of Employability						
Work Readiness	0.82	**0.00**	0.84	**0.00**	0.82	**0.00**
Employment Status	0.80	**0.00**	0.83	**0.00**	0.81	**0.00**
Track Alignment	0.79	**0.00**	0.82	**0.00**	0.80	**0.00**
Level of Choosing College Course						
Course Content	0.78	**0.00**	0.80	**0.00**	0.82	**0.00**
Capacity	0.78	**0.00**	0.80	**0.00**	0.77	**0.00**
Personality	0.80	**0.00**	0.80	**0.00**	0.76	**0.00**

Table 3 showed a significant relationship between the level of employability (work readiness, employment status, and track alignment) and gained experiences of SHS graduates in terms of work ethics, soft skills, and technical skills (all

p = 0.00 < 0.05). It is also similar to the relationship between SHS-gained experiences and their level of choosing a college course (all p = 0.00 < 0.05). With these p-values, there is a significant relationship between SHS graduates' gained experiences and their level of choosing a college course. The R-values for each variable also suggest an upward trend, indicating a positive relationship, denoting that as the respondents gained experience increase, their level of employability and level of selecting a college course increased. It can also be seen that the relationship between their work readiness and work ethics has one of the highest Pearson correlation coefficients (r = 0.82). This value of 0.82 represents a strong positive relationship between variables, denoting that their work readiness also improves as their experience in work ethics increases. It is also the same with the relationship between SHS work readiness and technical skills (r = 82), indicating that having a more significant experience in virtual work immersion based on technical skills tends to increase their employability level regarding work readiness. Similarly, the relationship between course content and technical skills has the largest R-value of 0.82, suggesting that as they have gained technical skills from their virtual work immersion experience, the SHS graduates' level of choosing a college course in terms of course content also increases. It is also applied to other variables since all p-values are significant.

5.1 Proposed Improvements

The researchers used content analysis to categorize the suggestions from the respondents into six categories: face-to-face Implementation, student engagement and participation, time, topics, communication, and others (consideration, quality of immersion, and virtual program continuation).

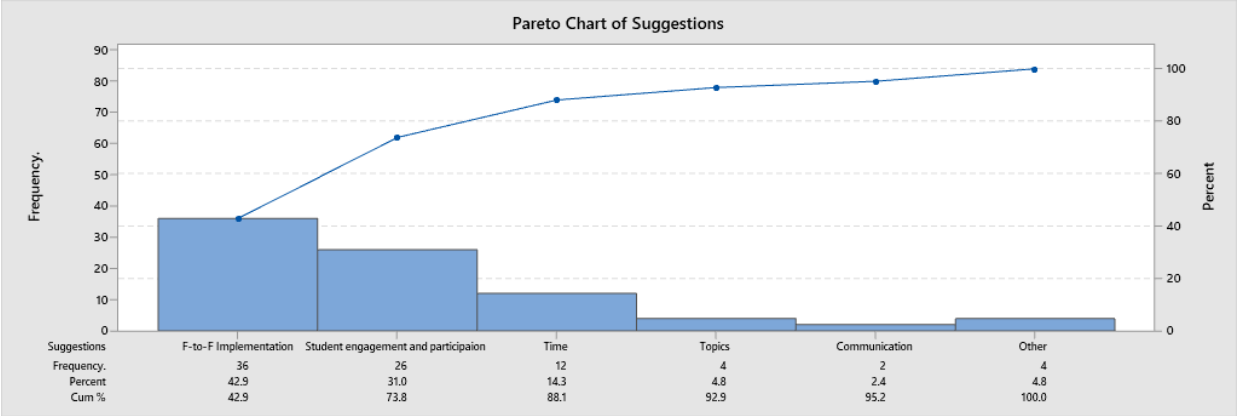

Figure 5. Pareto Chart of SHS Graduates on Virtual Work Immersion

Figure 5 denotes that 42.9% of respondents said it is preferable to perform the work immersion face-to-face to become more familiar with their area of specialization. The researchers also identified that the students' lack of access to mobile devices and personal computers became their challenge due to the online setup that requires the mentioned resources to attend the class. Consequently, it is suggested to implement face-to-face work immersion to enhance the student's skills and help them become more familiarized with the application of the tools, functions used by seeing and touching them physically, and the protocols applied during work immersion. Favila et al. (2019) stated that students' exposure to work immersion allowed them to become acquainted with and understand the company's usual protocols, working environment, and regulations. Additionally, the face-to-face setup ensures the active participation and cooperation of the students. Figure 5 also shows that 31.0% of the SHS graduates who offered suggestions said that virtual work immersion should increase student engagement and participation. Thus, the researchers recommend increasing their involvement by executing at least two activities, such as icebreakers or assessments using Kahoot and Slido, to encourage the students to engage with the class. The facilitators can also utilize tricks and different teaching styles, such as collaborative learning, mentorship, and group discussion, to catch the students' attention and allow them to interact with one another. The facilitators should also advise and help elevate the students' morale to further improve their communication and social skills despite the challenges during the online work immersion. Yet, learners are urged to seek their instructors' advice on tasks they must undertake before, during, and after immersion (Rodriguez 2019). The cumulative percentage (73.8%) of all categories suggests that the first two categories, including the student's engagement and face-to-face implementation, are the suggestions that must prioritize to achieve most of the significant improvement to the entire execution of virtual work immersion.

Other recommendations:

1. It is suggested that students have a learning environment in their homes far from distractions such as background noise, which significantly impact their learning session. They must have a separate study area to focus on doing their activities.
2. The instructors can provide handouts and recorded videos of the session for students experiencing internet issues so that they can follow and understand the lesson further.
3. The researchers recommended that the three-hour webinar should be divided into one hour and 25 minutes sessions (Tuesday, Friday, and Saturday, from 1:00 PM to 4:00 PM), with 10 minutes break in between, to allow the students to have allotted time to rest, organize their notes, and absorb the information before proceeding to the next part of the session (See Figure 6).

◄ February — March 2022 — April ►

Sun	Mon	Tue	Wed	Thu	Fri	Sat
		1	2	3	4	5
6	7	8 1:00PM-2:25PM – Understanding Work Immersion and Work Ethics (Part 1) 2:25PM-2:35 PM – Break Time 2:35PM-4:00PM – Understanding Work Immersion and Work Ethics (Part 2)	9	10	11 1:00PM-2:25PM – Azure DevOps (Part 1) 2:25PM-2:35 PM – Break Time 2:35PM-4:00PM – Azure DevOps (Part 2)	12 1:00PM-2:25PM – Paragraph & Creative Writing (Part 1) 2:25PM-2:35 PM – Break Time 2:35PM-4:00PM – Paragraph & Creative Writing (Part 2)
13	14	15 1:00PM-2:25PM - Nature, Objectives and Principles of Business (Part 1) 2:25PM-2:35 PM – Break Time 2:35PM-4:00PM - Nature, Objectives and Principles of Business (Part 2)	16	17	18 1:00PM-2:25PM – AutoCAD Workshop (Part 1) 2:25PM-2:35 PM – Break Time 2:35PM-4:00PM – AutoCAD Workshop (Part 2)	19 1:00PM-2:25PM – Introduction to Counseling (Part 1) 2:25PM-2:35 PM – Break Time 2:35PM-4:00PM – Introduction to Counseling (Part 2)

Figure 6. Improved Work Immersion Calendar (March 2022)

4. It is also recommended to survey the partner community to understand the interests and needs of the students before implementing such a program and its activities, ensuring that it is aligned with their strands and chosen future careers.
5. Given several reasons, such as time constraints and resources available, this study might have yet to reach the wholeness of the topic. Thus, partner communities should establish an alumni association and conduct work immersion post-survey to acquire more information. Moreover, future researchers may conduct a logical extension of the study (e.g., further research using work immersion appraisal).

6. Conclusion

The study's findings reveal that community virtual work immersion effectively improves the SHS graduates' level of employability and the level of choosing a college course. It also shows that the activities and discussions relevant to students' strands helped them gain appropriate knowledge to understand their strand's scope further and adequately utilize their skills in their field. Based on the ANOVA findings, the differences between the virtual work immersion's reliability and comfort, as well as the graduates' employment status and track alignment, are significant. It denotes that their experience during their training affects their perceptions and level of employability. On the other hand, the General Weighted Average (GWA) is the only statistically significant factor on the SHS graduates' ratings based on their perceptions, gained experience, level of employability, and level of choosing a college course after taking virtual work immersion. It also means that virtual work immersion affects their academic performance. The Pearson correlation analysis results suggest that the relationship between SHS gained experience from virtual work immersion on their level of employability and choosing a college program is statistically significant. The strengths of these relationships are strongly positive, indicating that as their gained experience improved, their level of employability and level of choosing a college course also enhanced.

However, virtual work immersion is challenging for some due to continuous discussion on the webinar that causes long duration, a distraction from their homes, and poor internet connection. But it helps develop most students and

gain awareness concerning their character strengths and weaknesses to showcase their skills fully. Also, it increases the student's work readiness, employment status, and track alignment under their level of employability by acquiring work ethics, soft skills, and technical skills that most companies look for in an employee. Similarly, developing these skills improves their decision-making in selecting their college course in terms of course content, capacity, and personality.

Nonetheless, virtual work immersion is vital for Senior High School students. It hones the student to choose a career in college and increase their skills. The study's findings present that virtual work immersion elevates the academic performance of grade 12 students and helps them prepare and develop their skills and perspective by gaining knowledge relevant to their chosen career. Thus, with effective implementation, this online program can help students grow as individuals and future professionals by giving them real-world learning opportunities in the workplace to complement their formal education and produce graduates who are prepared for success in the workforce.

References

Acut, D. P., Curaraton, E. P., Latonio, G. C. and Latonio, R. A. C., Work immersion performance appraisal and evaluation of Grade 12 STEM students in science and technology-based industries, *2nd International Annual Meeting on STEM education (I AM STEM) 2019*, Thái Nguyên, Vietnam, September 27-29, 2019.

Amper, E. C., Exploring the experiences of senior high school students on business simulation in the new normal: basis for a proposed intervention program, *International Journal of Multidisciplinary: Applied Business and Education Research*, vol. 3, no. 2, pp. 180–203, 2022.

Añago, B. A., Employers worried about SHS graduates' readiness for work, June 25, 2021, https://www.pids.gov.ph/details/employers-worried-about-shs-graduates-readiness-for-work. Accessed on September 06, 2022.

Arcayera, R. A., School-based work immersion in the time of pandemic: Senior high school's compliance and insights, *2nd Regional Multidisciplinary Research Conference*, Agusan del Sur, Mindanao, December 14-15, 2021.

Arturo, R. M. and Arturo, R. M., Work readiness of senior high school graduating learners of Assumption Iloilo: Bases for work enhancement program, *Solid State Technology,* vol. 63, no. 20, pp. 7585–7637, 2020.

Bernales Jr., G., Dela Cruz, M. M., Miguel, K., Secuya, A. M., Suarez, J. M. and Suyat, L., Impact of work immersion on career path of selected grade 12 general academic strand students of Bestlink college of the Philippines, *Ascendens Asia Singapore – Bestlink College of the Philippines Journal of Multidisciplinary Research*, vol. 2, no. 1, 2020.

Borling, K., Lozarito, N., Lagdamen, Q. B., Fegarido, J. and Besa, A., Implementation of work immersion and its effects on the social development of senior high school graduates, *Indonesian Journal of Educational Research and Technology,* vol. 3, no. 3, pp. 167–172, 2022.

Cabrera, W., Development and validation of work readiness assessment tool for home economics graduates, *International Journal of Economics Development Research (IJEDR),* vol. 1, no. 2, pp. 70–109, 2020.

Catelo, S. A., Work immersion program for senior high school in the division of Pasay: Basis for an intervention plan, *Journal of World Englishes and Educational Practices*, vol. 2, no. 4, pp. 65–77, 2020.

Chua, K. D., Ochobillo, M. S. C., Guerrero, T. D., Puzon, P. S., Luyas, J. T. and Tamon, C.J.S., The effects of work immersion in the academic performances of grade 12 ABM students in Bestlink College of the Philippines school year 2018-2019, *Ascendens Asia Singapore – Bestlink College of the Philippines Journal of Multidisciplinary Research,* vol. 1, no. 1, 2019.

Dela Cruz, J.N. and Permejo, M.M., Workplace skills and competencies: An industry partners appraisal on work immersion program among senior high school learners*, Journal of Business and Management Studies (JBMS),* vol. 2, no. 3, pp. 41-48, 2020.

Department of Education., Memorandum DM-CI-2020-00085-Guidelines for work immersion implementation during crisis situation, Available: https://region8.deped.gov.ph/2020/06/04/june-02-2020-memorandum-dm-ci-2020-00085-guidelines-for-work-immersion-implementation-during-crisis-situation/, Accessed on August 25, 2022.

Favila, S. A., Erfe, J. P., Pimentel, M. M., Naval, D. J. and Rabina, M. G., UGNAYAN: A proposed knowledge sharing model for senior high school work immersion program, *The Normal Lights,* vol. 13, no. 2, 2019.

Figueras, A. J. and Mendoza, F. E., Implementation and compliance of work immersion program of public secondary schools in Sorsogon city, *International Journal of Novel Research in Education and Learning*, vol. 7, no. 3, 2020.

Flores, D. D., Bocage, C., Devlin, S., Miller, M., Savarino, A. and Lipman, T. H., When community immersion becomes distance learning: Lessons learned from a disrupted semester. *Pedagogy in Health Promotion,* vol. 7, no. 1, pp. 46–50, 2021.

Garcia, A. and Yazon, A., Work immersion performance, alignment, and employability among senior high school graduates, *International Journal of Advanced Research,* vol. 8, no. 5, pp. 552–564, 2020.
Gozun, B. C. and Rivera, J. R., Role of Education in Encouraging Youth Employment and Entrepreneurship, *DLSU Business & Economics Review*, vol. 27, no. 1, pp. 72-88, 2017.
Icban, A.S., Fit or misfit: employability of the technical vocational livelihood students through their work immersion, *ASTR Research Journal,* vol. 3, no. 1, pp. 48–76, 2019.
International Labour Organization (ILO), COVID-19 labour market impact in the Philippines: Assessment and national policy responses, November 2020, Available: https://www.ilo.org/manila/publications/WCMS_762209/lang--en/index.htm, Accessed on August 25, 2022.
Insorio, A. O., Manaloto, C. C. and Lareña, J. J., Exploring work immersion at home: Humanities and social sciences students' compliance, difficulties and evaluation, *Puissant*, vol. 2, pp. 197–220, 2021.
Konstantinou, I. and Miller, E., Self-managed and work-based learning: Problematising the workplace–classroom skills gap, *Journal of Work-Applied Management*, vol. 13, no. 1, pp. 6–18, 2021.
Nyutu, E. N., Cobern, W. W. and Pleasants, B. A-S., Correlational study of student perceptions of their undergraduate laboratory environment with respect to gender and major, *International Journal of Education in Mathematics, Science, and Technology (IJEMST)*, vol. 9, no. 1, pp. 83-102, 2021.
Leslie, H. H., Hirschhorn, L. R., Marchant, T., Doubova, S. V., Gureje, O. and Kruk, M. E., Health systems thinking: A new generation of research to improve healthcare quality, *PLOS Medicine,* vol. 15, no. 10, 2018.
Montes, V. and Paño, J., Soft and hard skills perceived relevant by the work immersion partner institutions in the countryside, *Countryside Development Research Journal*, vol. 8, no. 1, pp. 35–43, 2020.
Patacsil, F. and Tablatin, C. L. S., Exploring the importance of soft and hard skills as perceived by IT internship students and industry: A gap analysis, *Journal of Technology and Science Education*, vol. 7, no. 3, 2017.
Roble, D., Competency level, employers' expectations and work immersion performance of senior high school Technical-vocational and Livelihood (TVL) students, *Asian Journal on Perspectives in Education*, vol. 1, no. 2, pp. 43-63, 2021.
Rodriguez, M., Work immersion among ABM grade 12 senior high school students of the Anselmo A. Sandoval Memorial National High School, *Ascendens Asia Journal of Multidisciplinary Research Abstracts, 3*(2), 2019.
Vecino, C. T. and Doromal, A. C., The implementation of senior high school work immersion program in selected public schools in Negros Occidental, *Philippine Social Science Journal*, vol. 3, no. 2, pp. 37–38, 2020.
Wangmo, D., A study on youth unemployment and its consequences in Bhutan*, KDI School of Public Policy and Management*, pp. 1-30, 2012.

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