Utilization of Technology Management in the Industry-Based Immersion of Senior High School Students: An Assessment

Sanson Jr, Antonio T., Muji, Jabir G., Daway, Nihma A.

Baliwasan Senior High School Stand-Alone Department of Education, Division of Zamboanga City.

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ABSTRACT

This study sought to evaluate the utilization of technology management in the industry-based immersion program at Baliwasan Senior High School. The findings revealed that the extent of technology management utilization in the program was moderate. Senior high school students demonstrated a moderate level of performance in terms of knowledge, while their performance in skills and attitudes was rated high. A significant relationship was identified between the level of technology management utilization and the students' performance. However, no notable difference was observed in the extent of technology management utilization between the HUMSS and TVL strands. It is recommended that administrators improve school operations and enhance the visibility of technology management usage on campus. Additionally, conducting campaigns and seminars is suggested to further advance and enhance technology management practices. The teachers may be acquainted with the utilization of technology management and be adequately informed about the alignment of it to the industry-based immersion. Students will gain a deeper understanding of the broader application of technology management in work immersion, including its importance and the advantages it provides during the immersion process. The community may become more aware of the appropriate implementation of technology management in the local context, as well as receive updates regarding its progress and upkeep. Future researchers might explore additional aspects as variables in the study, while also examining other relevant criteria in the application of technology management beyond those addressed in this research.

Keywords: Industry-based Immersion, Senior High School Students, Technology Management, Utilization of Technology Management

INTRODUCTION

Management of Technology (MOT) involves the implementation and oversight of technology tools within an organization. Zooming in, this can include elements of procurement, strategic planning, and customization. The latter is notable because not all tools are built for the same business need and are often tailored for specific purposes or teams. MOT ensures the tools you use will be optimized for maximum efficiency and aligned with your goals (UAGC, 2024)

In terms of conceptualization of the integration of technology utilization is referred to technology based-practices integrated to regular routines, work and administration of schools. These are resources such as computer and specific software, network-based communication system, equipment and infrastructure. Its practices encompass collaborative efforts and communication, online research, restricted access to specialized instruments, as well as the transmission and retrieval of data through network-based systems. Its definition is not limited to being sufficient to describe successful integration but a routine for It is both efficient and effective in aligning with and advancing the school objectives and purposes outlined by NCES (2002,1).

All throughout the globe we experience a rapid change in the information and technology field where it keeps on changing to follow such new development and advancement to protect the acquired information that are factors in determining the profile of human power which serve as requirement in today's society. Thus, making it possible for students and teaching staff for internship application in terms of monitoring them in the emerging technology aligned with the current and live applications. Internship application helps students to have services

in the ever changing and globalizing business world such as to communicate with businesses and references gained after graduation that are important in vocational education. This has been seen as factor that differs individuals in their career periods. During their internship where it referred to as job training of students where they make better plans for their future by determining their interest. They become permanent information when academic information's turn into some based practical applications in their workplace. Also, They acquire fresh skills, practical expertise, and a vision for addressing challenges encountered in their professional lives, utilizing logical reasoning and information frameworks, as described by Soran et al. (2006, 201-210)

Also, Roca-Gonzales et al. (2017, 441-468) stressed out that the approach process to current industry activity was called technology immersion (TI). This has been part of Innovation Management Process (for Spain, this is the regulation of UNE16600) that focuses on improving competitive standards of the production activity which were regulated by any Internation standards. Project management allows the use of education as basic foundation in using technology for security and defense purposes in the industry framework.

As per observation, the immersion setting in the senior high school are merely an experimentation of usage of technology and the traditional aspect. These concerns are relevant in approach where students are immersed in the industry but there is no guarantee that there is a utilization of technology in a matter of accomplishment of their outputs. The industry-based immersion contextualized the readiness stage of the students in terms of knowledge, skills and acquisition of learnings.

The present study aimed to assess the utilization of technology management in the industry-based immersion setting. Also, this will look into the performance of the students in terms of Work immersion which helps develop essential knowledge, practical skills, and a positive attitude, preparing individuals for real-world challenges in their chosen fields. It enables them to apply theoretical concepts, hone professional competencies, and cultivate values such as adaptability, responsibility, and teamwork and its significance in the utilization of technology management. The findings of this study focused on the implications of proper utilization of technology management where the school can enhance equipment and materials that are useful in the work immersion.

LITERATURE REVIEW

DepEd Order No. 30, series of 2017, outlining the Guidelines for Work Immersion, was issued on June 5, 2017 by Secretary Leonor Magtolis Briones. It was distributed to dignitaries, heads of public and private elementary and secondary schools, and all other relevant stakeholders, instructing them to adhere to the provisions detailed in the guidelines as a framework for implementing work immersion programs in Senior High Schools nationwide.

Skills. The K to 12 Basic Education Program in the Philippines aims to equip students with the necessary skills, ethical principles, and values crucial for success in both higher education and professional settings. Central to this program is Work Immersion, a required subject that serves to connect theoretical academic learning with practical, real-world experiences. It provides students with firsthand exposure to diverse work environments, enabling them to practice their skills and apply their knowledge in simulated or actual work settings. Through Work Immersion, learners can refine their specialized competencies in authentic scenarios, often conducted in workplaces such as workshops, offices, and laboratories, as outlined in DepEd Order No. 30, series of 2017.

Also, Klincewicz (2010,1) Technology management, as highlighted in the research, is characterized as an integral component of emerging innovative technologies that shape ongoing industry developments and progress. It encompasses identifying opportunities and addressing challenges in technology advancement, guiding decision-making processes to oversee and synchronize individual research and development efforts, enhancing high-tech products, and strengthening the industrial and intellectual resources of an organization.

From the study made by Gudanowska (2017, 247-254), it stated that the scope of interest aligned to Technology management, as outlined by Alicja E. Gudanowska in Procedia Engineering 182 (2017, pp. 247–254), likely discusses frameworks, practices, or methodologies essential for efficiently overseeing technological processes and resources, association, its structure, knowledge, creativity, competencies, the culture and idea of

management; policy in terms of technology referring to the policies and systems of management, the acquisition of the technology, systems of innovation specifically its transfer, diffusion, adaptation and dissemination.

Furthermore, Orbeta (2021,1) stated that the Senior High School (SHS) program must equip students with essential skills and competencies to make them more employable. Accordingly, computer literacy and formal writing skills are crucial skills for both employment and college success (e.g. lessons in Personal Dev't, Oral Communication, Immersion and Research program). Additionally, senior high school learners need to also acquire soft skills like communication, personal development, and research knowledge which are fundamental for their success. Specialized tracks within SHS also helped students focus on developing skills and knowledge directly relevant to potential careers with immersion program at the core, which is particularly beneficial for TVL (Technical Vocational Livelihood) graduates as it exposed them to real-world work environments, further enhancing their employability.

Knowledge. A critical component in developing Science Technology and Innovation (STI) has been considered in technology management policies in developing countries. They have different specification such as management standards for developing their research and development (R&D) strength. Bolukbas and Guneri (2016, 302-307) assessed the dimensions of technology competency based on the efficient utilization of its capabilities to develop effective research and development in the national level. Research and Development identifies the relationship between technology management and technological capabilities to upgrade researches to the national level.

According to Pauly (2016,1) who posited that from a business perspective training human rights and business at a business school involves someone to teach with human rights concept. Human rights commitments are primed with the mainstream business paradigm which focus on the maximization of profit of how corporation can reconcile its core business. It's on the concrete example why students reflect on the existing business paradigm that understand why human rights makes a good business. There are school currently experimenting in the real-world scenario using the innovative teaching approaches. In terms of immersion, teaching approaches were used to turn students into dynamic decision-makers in situations that composed of human rights and business component. This approach invites business practitioners to discuss business case studies with students that are essential to them at business schools.

Additionally, Amedorme (2013, 253-255) made research that challenges technical vocational education which acquire practice applied knowledge and hands on skill to the basic concept in their chosen concentration. Immediate self-employment on technical vocational education provides students with the acquired practical skills that are necessary and part of training needed in the job market.

Moreover, Lozada (2017,1) emphasize experiencing real stuff firsthand is important in the work immersion that are seen vital in giving students the avenue to improve themselves which is the highlight of curriculum in senior high. As professional individuals this help them to experience and be knowledgeable in their field. Also, actual methodologies such as real tools, equipment and documents are provided in the program. The outcome of learning from the academy is giving them the workplace to develop more for student trainee to even learn more on their chosen field. As such, experience is the best and the greatest teachers. They gain experience in their fields as trainees which serves as inspiration where this can help them not only for the job in the future but also as professional employee in the making.

In the findings of Wilson-Mah and Thomlinson (2014, 65-81), it was revealed that research discovered participants are generally satisfied with 46 of 93 students and 14 of 55 employers in their internship programs are above average or excellent rated as 85%. A strong aspect of internship, theory and applied learning are the ability to use skills and learning form the work environment they experience with few areas to consider including better communication with the employers, supervisors and the broader internship opportunities for improvement. This has been supported with some research studies specifically on the potential disconnects between student's expectations and their performance evaluation with their employers. The findings demonstrated an important aspect of learning experience that are essential in the internship programs.

Attitudes. Onte (2018,1), probed on the Level of Compliance of Public Senior High School on Work Immersion in Technical-Vocational Livelihood Track Home Economics The "Strand in the Division of Pasay" serves as a foundation for developing a Proposed Continuous Improvement Plan for the school year 2018-2019. This has been a quantitative descriptive approach. It has been found out that it should be projected to improve the level of submission for the improvement plan of public senior high schools in Pasay City Division in their work immersion guidelines. It shows that there are no significant differences exist on the level of adherence to work immersion guidelines in public senior high schools, as assessed by respondents, demonstrates a moderate submission. This evaluation encompasses several factors, including partnerships with establishments, the development and application of learning competencies, as well as the responsibilities attributed to school heads, work immersion coordinators, teachers, and learners. Such assessments highlight areas that may require further attention to optimize the implementation of the guidelines and ensure successful outcomes with their partner institution in terms of learning competencies and duties and responsibilities.

On the other hand, Hahnenberg (2010,1) defines it as one's sense of who they are with a sense of meaning for one's life from deep within based on one's purpose of self-understanding. A theory of education from Plato, Dewey and Freire viewed it as human experience when they experience immersion focusing on constructing meaning. Hahnenberg, Buechnerm Palmer and Gulla draw out the meaning of vocation with various voices that impacts this study. There are certain literatures about the impact of workers on building leader develop strategies for leadership that describe the level of motivation that impact the workers. There are other studies about immersion on the importance of immersion experiences and adaptive leadership models which was developed. The Ignatian Paradigm Principle is used for integrating someone's personality in doing immersion with its four-phases process.

A study made by Düzeyinde (2016,1), when looking on the mean of partakers' responses, "Internship is important and essential for leisure industry" and "Internship improved my self-confidence" that has the highest mean. This illustrates the importance of internship necessary for tourism students. "Tourism shouldn't be done with only theoretical knowledge but also reinforced with practice appears", as important. The variable having the lowest mean is "I was getting extra money for my overtime work". Due to the changes in season, there are business does work more to gain profit. One of the integral parts of educational program is internship. Students can seize opportunities to strengthen their capabilities, refine their skills, and build confidence through immersive experiences and to gained knowledges and skills in their academic environment upon doing internship. Furthermore, they will also have a chance to experience new technologies and development in the different workplace. This subject provides insights to educations by researcher conducting studies to understand the courses the students' makes, topics they should include in their progresses and the kind of programs/career that should be combined in the development of the course to increase the student's working possibility in the same field after graduation.

Research Questions

This study aimed to determine the utilization of technology management in the industry-based immersion in Baliwasan Senior High School.

Specifically, it sought to answer the following questions:

What is the extent of utilization of technology management in the industry-based immersion?

What is the level of senior high school students' performance in terms of;

Knowledge

Skills

Attitudes?

Is there a significant relationship between the extent of utilization of technology management and the level senior high school students' performance?

Is there a significant difference in the extent of utilization of technology management when the respondents are grouped by their profile?

How important is utilization of technology management in the work immersion?

On the basis of the findings, what intervention can be developed?

Scope and Limitation

This study focused on the application of technology management in industry-based immersion programs at Baliwasan Senior High School during the 2023-2024 school year. The respondents comprised selected Grade 12 HUMSS and TVL students who participated in industry-based immersion programs across various industries. The scope of the study was limited to assessing the utilization of technology management within these immersion programs, specifically with contributions from select industry partners. For the qualitative aspect, 12 participants were purposively chosen. The survey gathered data on students' profiles and their performance in utilizing technology management, evaluated in terms of knowledge, skills, and attitudes. The research intended to determine the significance of the utilization of technology management in the industry-based immersion where students really applied their learnings using the technology in the industry or whether students performed the required tasked with the help of technology management. The challenges that was inevitable are those with students who have less background in technology and unexposed to performances required in the school especially the skills that are needed to demonstrate in their field of specialization.

METHOD

Research Design

This research utilized a mixed method design employing quantitative-qualitative approach, using survey questionnaires to assess the extent of technology management implementation within industry-based immersion programs at Baliwasan Senior High School. The combination of quantitative and qualitative approaches aimed to provide a comprehensive understanding of the topic, leveraging statistical data alongside in-depth insights. This study also focused on the students' performance in terms on knowledge, skills and attitudes. Also, an open-ended question was employed for the qualitative part of this study. Descriptive research as stated that it is the status generally used in the education field which is valuable and is based on the problems being solved. Also, it seeks to find variables such as knowledge, skills, and attitudes.

Furthermore, Bhandari (2020,1) stated that it is the process of analyzing a collection of numerical data. This is useful to find patterns and mean in making prediction, testing casual connection and simplify results in a broader population. On the other hand, this study is quantitative-qualitative research because this determined the significant difference in the utilization of technology management and the relationship between the extent of utilization and the level of senior high school students' performance.

Research Participants

For this study, the target population consisted of Baliwasan Senior High School learners in Zamboanga City, specifically those enrolled in the HUMSS and TVL strands. A total of 100 senior high school students participated as respondents, as detailed in Table 1. Quota sampling was utilized to determine the appropriate sample size from the selected respondents, ensuring representation across the targeted groups.

Table 1: Summary of Sampling Size

Strand	n	%
HUMSS	50	50%
TVL	50	50%
Total	**100**	**100%**

In determining the sample size, quota sampling was employed to ensure a fair and balanced representation of respondents from each strand. Through this method, one hundred (100) respondents were identified as the sample size. Additionally, for the qualitative component of the study, 12 selected students were involved, comprising five (6) from the HUMSS strand and five (6) from the TVL strand which are skillful, highly competent, academically performing and with good feedbacks from their immersion site. The researchers opted for quota sampling to focus on a specific subgroup of interest within the study. It is worth noting that, in contrast, a simple random sample refers to a population subset selected entirely at random, without regard for subgroup representation.

This study aimed to investigate specific characteristics of a particular subgroup, making the chosen selection method an ideal approach. Proportional quota sampling was employed, ensuring that significant characteristics of the population were represented based on their proportional distribution within the study's population. This method is often used in surveys and opinion polls, where the total number of respondents to be surveyed is predetermined to maintain balance and accuracy in the representation of the population (Nikolopoulou 2022,1).

Research Instrument

The researchers developed a self-made survey questionnaire consisting of 20 items aimed at assessing the utilization of technology management at Baliwasan Senior High School. This research instrument was designed by the researchers and underwent validation by a panel of experts in the relevant field. The survey tool was divided into several parts: Part I: Profile - Collects personal information and demographic details of the respondents. Part II: Extent of Utilization - Focuses on questions measuring the utilization of technology management and students' performance. Responses are rated using a four-point Likert scale: 4 – Very high extent; 3 – High extent; 2 – Moderate extent; 1 – Low extent. Part III: Likert Scale - Continues with the four-point Likert scale descriptions to assess the extent of application across various aspects. Part IV: Qualitative Guide - Includes guiding questions for the qualitative segment, targeted at selected participants to provide deeper insights.

The research instrument underwent validation by a panel of experts, preferably individuals holding master's or doctorate degrees, to ensure its accuracy and relevance. The survey questionnaire was subjected to the Cronbach's Alpha reliability test which was 0.92, interpreted as excellent reliable, and highly, to evaluate its consistency and reliability. For this purpose, the researchers distributed the questionnaire to non-respondents, who were asked to provide their suggestions and remarks in the designated space on the same form. The feedback and recommendations from the validators were thoroughly reviewed and incorporated by the researchers to enhance and refine the instrument.

Data Gathering Procedure

To facilitate data collection at Baliwasan Senior High School Stand-Alone within the Zamboanga City Division, the researchers sought approval from the Schools Division Superintendent, coordinating closely with the Chief of Curriculum Implementation Division and the Research and Planning Office. Upon receiving authorization, they approached the school heads, presenting an endorsement letter from the Division Office to secure permission. Following these formalities, the researchers administered survey questionnaires to the senior high school students. The gathered quantitative data was subsequently organized, tabulated, and analyzed using statistical tools to ensure accurate interpretation and meaningful insights.

Following the Research Ethics Protocol, the researchers ensured that informed consent was obtained from all survey participants. This process ensured that respondents clearly understood the purpose of the study, willingly agreed to take part, participants were granted access to the study's findings, informed about potential benefits arising from the research, and reassured that their provided information would remain strictly confidential. These measures ensured transparency and upheld ethical standards throughout the study they provided and the anonymity of their identities.

Data Analysis

The researchers utilized the Statistical Package for Social Sciences (SPSS) to facilitate data analysis. The mean was calculated to assess the extent of technology management utilization in industry-based immersion at Baliwasan Senior High School, as well as the performance levels of senior high school students. Pearson R was applied to examine the significant relationship between the utilization of technology management and students' performance. Additionally, Analysis of Variance (ANOVA) was utilized to identify significant differences in technology management utilization across knowledge, skills, and attitudes. The participants data for the qualitative part will be analyzed using thematic analysis.

RESULTS AND DISCUSSION

Table 2: Extent of Utilization of Technology Management in the Industry-based Immersion

Statements	Mean	Verbal Description
I am acquainted with different technologies used in the industry.	3.06	Moderate
I understanding the legal, ethical, cultural, and societal aspects of technology utilization involving key areas.	3.22	Moderate
I follow simple instruction while using the technology.	3.48	High
I understand the proper procedure on the utilization of technology management	3.26	Moderate
I know how to utilize technology management in the industry-based immersion.	3.19	Moderate
Over-all Mean	**3.24**	**Moderate Extent**

Legend: 1.0 – 1.79= Very Low Extent, 1.80– 2.59 = Low Extent, 2.60 – 3.39 = Moderate Extent, 3.40 – 4.19= High Extent, 4.20-5.00 = Very high Extent

Shown in Table 2 is the extent of utilization of technology management in the industry-based immersion. The reflected data illustrate that item number 3 "I follow simple instruction while using the technology" got the highest mean of 3.48, indicates high extent. Item number 1 "I am acquainted with different technologies used in the industry" has the lowest mean with 3.06 which indicates moderate extent. This implies that having the overall mean of 3.24 indicates moderate extent which shows that technology management is evident in the students doing an industry-based immersion.

The findings of the study were supported by Klincewicz (2010,1) who made the same study focusing on technology management that identifies the interest within its concept. Also, with regards to the new technologies appearing on the current activities and development that impact the enterprise, the context of development of technologies identification of opportunities and threats. There is emerging development of technological products aligned to decision making in the research and development activities, industrial and intellectual property of an enterprise.

Table 3. Level of Senior High School Students' Performance in terms of Knowledge

Statements	Mean	Verbal Description
I apply the competencies aligned to the specialization in the work immersion environment.	3.30	Moderate

I enhance the technical knowledge in the immersion site.	3.34	Moderate
I demonstrate proper employment simulation and procedures.	3.39	Moderate
I am articulated with the principles and policy stated in the work immersion rules and regulations.	3.38	Moderate
I am knowledgeable in the assign task in the immersion field.	3.39	Moderate
Over-all Mean	**3.36**	**Moderate Level**

Legend: 1.0 – 1.79= Very Low, 1.80– 2.59 = Low, 2.60 – 3.39 = Moderate, 3.40 – 4.19= High, 4.20-5.00 = Very high

Illustrated in Table 3 is the level of senior high school students' performance in terms of knowledge. Similarly, item numbers 3 and 5 "I demonstrate proper employment simulation and procedures", "I am knowledgeable in the assign task in the immersion field" got the highest mean of 3.39 which indicate moderate level. Also, item number 1 "I apply the competencies in areas of specialization in the work immersion environment" got the lowest mean of 3.30 described as moderate level. This proves that having an overall mean of 3.36 indicates moderate level. This simply implies that the level of senior high school students' performances is really significant in terms of knowledge based in doing their work immersion in the industry. Thus, this was evidence that teachers are really equipping students with knowledge and methodologies in accomplishing required task during the immersion period.

The findings of this study align with the insights presented by the Asian Foundation (2018, 1), which highlight that youth unemployment poses significant barriers to economic development in the Philippines. Key contributing factors include deficiencies in knowledge, skills, and practical work experience across various sectors. Addressing these gaps is crucial to fostering sustainable economic growth and empowering the youth to participate actively in the workforce. The Department of Education SHS program address this concern pattern to the K-12 education reform. The real workplace experience is at stake and seen as one of its components in giving students have the skills in technical vocational and livelihood which help them in their employment prospects and career choices.

Table 4. Level of Senior High School Students' Performance in terms of Skills

Statements	**Mean**	**Verbal Description**
I enhance technical skills in accomplishing tasks.	3.53	High
I enrich skills in communication and human relations.	3.48	High
I develop cognitive flexibility in doing the immersion tasks.	3.32	Moderate
I have superior problem-solving skills in dealing with the task assign.	3.16	Moderate
I am skillful in terms of understanding and following the policy and objectives of work immersion.	3.48	High
Over-all Mean	**3.40**	**High Level**

Legend: 1.0 – 1.79= Very Low Level, 1.80– 2.59 = Low Level, 2.60 – 3.39 = Moderate Level, 3.40 – 4.19= High Level, 4.20-5.00 = Very high Level

The table revealed that the level of senior high school students' performance in terms of skills. Whereas, statement number 1 "I enhance technical skills in accomplishing tasks" got the highest mean of 3.53 indicates high level of skills. Also, item number 4 "I have superior problem-solving skills in dealing with the task assign"

got the lowest mean of 3.16 which means moderate level. This implication only serves that the level of senior high school performance in terms of skills is relevantly high having an overall mean of 3.40 indicates high level which inherit a substantial factor in their industry-based work immersion. More so, this indicates a more technical improvement of the students in their skills in doing the task necessary in their work immersion.

The result of the study was supported by Mendoza (2017) who specified the adding of two years of basic education would let students acquired the required skills in the K to 12 Curriculum in which the Department of Education released certain guidelines in the manner of the work immersion in the country. The key features in the senior high school curriculum are the work immersion itself as emphasize by DepEd Secretary Leonor Briones. It depends on the conduct that reflects on the purpose and needs of the learners. Work immersion was emphasized to help develop learners' life and career, skills and decision making or employment as stated in the guidelines. This led towards the four exits of SHS graduate such as employment, entrepreneurship, skills training through TESDA and college education.

Data revealed in Table 5 is the level of senior high school students' performance in terms of attitudes, where item number 2 "I develop good work habits, attitudes, appreciation and respect for work" got the highest mean of 3.67 indicates high level. Also, item number 4 "I create a work immersion atmosphere that are relevant and purposive to the needs" got the lowest mean of 3.44 shows high level of performances. The overall mean of 3.55 shows a high level of students' performances in terms of attitudes which simply implies that attitudes of the students doing work immersion greatly affect their performance, therefore it is vital to have right attitudes while immerse in the industry-based immersion. This aspect is an indication that students adhere to the immersion site protocol and ensures a good character while doing their task in the work immersion.

Table 5. Level of Senior High School Students' Performance in terms of Attitudes

Statements	Mean	Verbal Description
I recognize the value of applying the principles and theories acquired through academic learning to practical situations.	3.61	High
I cultivate positive work habits, foster constructive, nurture a sense of appreciation and respect for labor.	3.67	High
I follow punctuality with good attendance and resiliency in work immersion.	3.55	High
I create a work immersion atmosphere that are relevant and purposive to the needs.	3.44	High
I organize in terms of work assignment and I am compassionate in dealing with the others.	3.47	High
Over-all Mean	**3.55**	**High Level**

Legend: 1.0 – 1.79= Very Low Level, 1.80– 2.59 = Low Level, 2.60 – 3.39 = Moderate Level, 3.40 – 4.19= High Level, 4.20-5.00 = Very high Level

The findings were supported by Henry (2011,1), who declared that the immersion was a great way to get a sense of how it feels to work in a positive environment. These students were offered a unique perspective on what it is like to gain hands-on experience in a technology-driven global work environment through full-time employment. A significant number attend college to acquire the necessary knowledge and skills for securing employment and building a career after completing their studies. They want to learn the skills they need to work in the industry.

Table 6. Significant Relationship Between the Extent of Utilization of Technology Management and the Level of Senior High School Students' Performance

	Extent of Implementation	Means	R-value	P-value	Interpretation
Extent of Utilization of Technology Management	Knowledge	3.36	.664	.000	Correlated
	Skills	3.40	.685	.000	Correlated
	Attitude	3.55	.589	.000	Correlated

*Significant level at @=0.05

The data in Table 6 highlights the correlation between the extent of utilization of technology management and the performance of students in work immersion, focusing on their knowledge, skills, and attitudes. The findings reveal; Attitudes: Recorded the highest mean score of 3.40, indicating significant performance in this aspect; Skills: Also attained a mean of 3.40, showcasing strong competence in practical abilities; Knowledge: Scored the lowest mean of 3.36, while still reflecting a notable level of understanding. In terms of correlation, the results of the Pearson R analysis are as follows; Knowledge: R-value of 0.664 with a p-value of 0.000, Skills: R-value of 0.685 with a p-value of 0.000, Attitudes: R-value of 0.589 with a p-value of 0.000. All p-values are below the alpha level of 0.05, indicating significant correlations between the extent of technology management utilization and student performance in all dimensions (knowledge, skills, and attitudes). These results suggest that the greater the integration of technology management in industry-based immersion, the higher the performance outcomes among students across these areas. This highlights the critical role of technology management in enhancing the overall effectiveness of work immersion programs, the more the students performed better in doing their required task with technology management.

The findings of the study were supported by DepEd (2015,1), which says that work immersion objectives are to develop skills that are relevant to the job market in the area should not merely focus on recruiting for partner institutions but instead emphasize long-term goals, such as ensuring graduates are prepared for future employment within the industry. Partnerships should be structured to align students' skills and competencies, gained through collaboration with partner institutions, with the qualifications required by available job opportunities. This process will adhere to DepEd Order No. 8, s. 2015 (Policy Guidelines on Classroom Assessment for the K–12 Basic Education Program), which provides guidance on evaluating and fostering students' readiness for industry-based employment. Such an approach ensures that educational initiatives contribute meaningfully to both students' careers and local economic growth.

Table 7. Significant Difference in the Extent of Utilization of Technology Management when the Respondents are Grouped by Strand

	Strands	Means	F-value	P-value	Interpretation
Extent of Utilization of Technology Management	GAS	3.26	1.845	.178	Not significant
	TVL	3.22			

*Significant level at @=0.05

Table 7 presents the one-way ANOVA analysis on the extent of utilization of technology management, categorized by track. The results, showing an f-value of 1.845 and a p-value of 0.178, indicate that there is no statistically significant difference in the utilization of technology management across different tracks. This suggests that the implementation and practices related to technology management are relatively consistent, regardless of the track specialization. Also, TVL track got the highest mean of 3.26 while HUMSS got 3.22 mean. Therefore, the extent of utilization of technology management when grouped by track shows no direct

significant difference. This simply implies that students are used to technology management in the work immersion and evident that they are exposed to utilization of technology management. The results demonstrate that the more the students are exposed to technology, the more they fully maximize their potentials in the industry-based immersion required tasks.

The findings of this study align with the observations made by Georgiou and Kyza (2017, pp. 423–429), which emphasized notable differences in student performance attributed to the immersion experience, suggesting its influence on aspects such as content, motivation, and engagement. Conversely, some students showed minimal interest in the activity, remaining at the lowest performance level within the second group. These findings propose a link between practical immersion support and students' learning behaviors. Additionally, within the context of game-based environments, previous research suggests that immersion might impact student performance and problem-solving behaviors.

Importance of Utilization of Technology Management in the Work Immersion. The study revolved around addressing the research problem: "How important is the utilization of technology management in the work immersion?" Responses were gathered from twelve (12) public senior high school students who actively participated in the work immersion program.

Participant 1 shared their perspective, contributing to the qualitative findings and helping shape the understanding of technology management's significance in enhancing practical experiences and performance during immersion;

"Most challenging task during work immersion was the maintenance of the computer laboratories where we need to utilize technology management."

Participants 2, 3 and 4 emphasized more on the most the important aspect of utilization of technology management where it is crucial on the part of having industry-based immersion.

Participants 5, 6 and 7 said that it is very important where the industries that we have partnered were mostly are inclined to immense technology management.

Participants 8 and 9 replied with "very evident and most important part of the immersion is to know utilization of technology in the industry".

Participant 10,11 and 12 responded with "essential factor of doing immersion is knowing some technology management utilization.

Theme 1. Importance of Technology Management. Theoretically speaking in terms of importance of technology nowadays is something to adhere being part of our daily lives especially in the workplace. Utilization of technology is one thing to visualize where in industries, firms and institution tend to depend largely on the use of technology in their aspect of work. Technology management conceptualized the term development in all fields which determine that an industry is in the latest and updated part of the economy. This entails a sense of productivity for an industry to be existing in this generation.

This was supported by Klincewicz (2010,247-254) which identifies the fields of interest within which the researchers focused on technology management: an aspect of appearing new technologies and their impact on current activities and development of the enterprise; an identification of opportunities and threats in the context of development of technologies, particularly emerging ones; decision making within conducting and coordinating individual research and development activities as well as the development of technological products, or the protection of industrial and intellectual property of an enterprises.

CONCLUSION AND RECOMMENDATIONS

This study aimed to determine the utilization of technology management in the industry-based immersion in Baliwasan Senior High School. Based on the findings, it is concluded that the extent of utilization of technology

management in the industry-based immersion is moderate extent. The level of senior high school students' performance in terms of knowledge is moderate, Level of senior high school students' performance in terms of skills and attitudes is high. The significant relationship between the extent of utilization of technology management and the level of senior high school students' performance shows that there is a significant relationship indication. The significant difference in the extent of utilization of technology management in terms of track shows no significant difference whether HUMSS or TVL strand.

The researchers made the following recommendations which were formulated in line with the results and conclusion of this research. The school administrators may consider upgrading the operations and visibility of the utilization of technology management in the school campus and develop proper seminars and campaigns to further develop the need to enhance utilization of technology management. The teachers may be acquainted with the utilization of technology management and be adequately informed about the alignment of it to the industry-based immersion. The students will have an insight into the wider scope of utilization of technology management in the work immersion. They will be aware of the significance of technology management and how it benefits them in the work immersion. The community may understand the proper orientation of utilization of technology management in the vicinity and some updates on its development and maintenance. Future researchers may include other factors to consider in dealing with the setting as variables in the study and other relevant criteria in the utilization of technology management and from those mentioned or used in this study.

Intervention Program

Based on the findings, some of the intervention programs or action plans such as awareness seminars or symposium on technology management utilization, and informational Campaigns on the utilization of technology management in the industry-based work immersion can be designed. These programs are beneficial to everyone on the school campus as well as the industry partners where this will help them be updated with the latest developments on the utilization of technology management in the work immersion in the school and in the immersion site. Also, this will give information on how functional the technology management used in the work immersion.

Dissemination and Advocacy Plan

In compliance with the dissemination and advocacy plan is through sharing the assessment the rationale about the utilization of technology management and the intervention program that can be designed. The said programs align with the findings and conclusions recommended by the data in implementing proper utilization of technology management in the work immersion. Vital information will be transcended as part of doing the advocacy plan reflected in the data of this research. Also, it will be presented to academic institutions for proper presentations within the school campus.

The right person and school stakeholders are those in the administration, school staff, teachers, the school community, and local policy advocates who will be part of the execution of its objectives and initiate necessary actions to address the issues identified in the school campus, such as utilization of technology management. This activity can also be utilized to educate students and policy advocates on its impact and effects, especially regarding industry-based immersion.

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APPENDIX

A: Research Instrument

PART I. Respondent's Profile

Name: (Optional)

Track/Strands

☐ HUMSS

☐ TVL

PART II. Extent of Utilization of Technology Management

Directions: Below are constructs concerning the extent of utilization of technology management. Please read each item carefully and put a checkmark on your response. Please be guided by the following descriptions:

4 – Very high Extent 3– High Extent 2 – Moderate Extent 1 – Low Extent

1. Extent of Utilization of Technology Management	Extent of Utilization				
A. Instruction		4	3	2	1
1. I am acquainted with different technologies used in the industry.					
2. I understanding the legal, ethical, cultural, and societal aspects of technology utilization involving key areas.					
3. I follow simple instruction while using the technology.					
I understand the proper procedure on the utilization of technology management.					
I know how to utilize technology management in the industry-based immersion.					

PART III. Level of Senior High School Students' Performance

Directions: Below are constructs about the level of senior high school performances. Please read each item carefully and put a checkmark on your response. Please be guided by the following descriptions:

4 – Very high Level 3 – High Level 2 – Moderate Level 1 – Low Level

Level of Senior High School Performance	Level of Performance				
A. Knowledge		4	3	2	1
1. I apply the competencies aligned to the specialization in the work immersion environment.					
2. I enhance the technical knowledge in the immersion site.					
3. I demonstrate proper employment simulation and procedures.					

I am articulated with the principles and policy stated in the work immersion rules and regulations.					
5. I am knowledgeable in the assign task in the immersion field.					
B. Skills					
1. I enhance technical skills in accomplishing tasks.					
2. I enrich skills in communication and human relations.					
3. I develop cognitive flexibility in doing the immersion tasks.					
4. I have superior problem-solving skills in dealing with the task assign.					
I am skillful in terms of understanding and following the policy and objectives of work immersion.					
C. Attitudes					
1. I recognize the value of applying the principles and theories acquired through academic learning to practical situations.					
2. I cultivate positive work habits, foster constructive, nurture a sense of appreciation and respect for labor.					
3. I follow punctuality with good attendance and resiliency in work immersion.					
4. I create a work immersion atmosphere that are relevant and purposive to the needs.					
. I organize in terms of work assignment and I am compassionate in dealing with the others.					

PART IV. Qualitative Guide Question

Directions: Below are construct about the importance of utilization of technology management.

How important is utilization of technology management in the work immersion?

Respondent's Signature

Appendix B: Informed Consent Formed

Department of Education

Region IX, Zamboanga Peninsula

Division of City Schools

BALIWASAN SENIOR HIGH SCHOOL –STAND ALONE

San Jose Road, Zamboanga City

Tel No. 957-3739

Dear Respondent,

Greetings!

I am currently writing my basic Research study with the title. **"Utilization of Technology Management in the Industry-Based Immersion of Senior High School Students: An Assessment"**. You are invited to take part in this research. I hope that this study will benefit you as a student. The study aims to determine the Utilization of Technology Management in the Industry-Based Immersion of Senior High School Students in Baliwasan Senior HS. This will serve as an assessment to further enhance the services in the work immersion especially in the utilization of technology management. There are no identified risks from participating in this research. There are no costs or monetary compensation to you for your participation in this study.

Your participation in this research is completely voluntary, and you may refuse to participate without consequence. Responses to the survey will only be reported in an aggregated form to protect your identity. The collected data will be treated with the utmost confidentiality.

Sincerely yours,

ANTONIO T. SANSON JR.	**JABIR G. MUJI**	**NIHMA A. DAWAY**
Researcher	Researcher	Researcher

CONSENT:

By signing this consent form, I confirm that I have read and understood the information and have had the opportunity to ask question/s. I understand that my participation is voluntary and that I am free to withdraw at any time, without giving a reason and without cost. I voluntarily agree to take part in this study.

_____

Respondent's Signature over Printed Name