PREPAREDNESS OF TVL PROGRAM IMPLEMENTATION AT A PUBLIC SECONDARY MEMORIAL SCHOOL IN ZAMBOANGA PENINSULA: FACILITIES, TOOLS, AND TEACHER QUALIFICATIONS

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ABSTRACT. *This study investigates the preparedness of a public secondary memorial school in Zamboanga Peninsula to implement the K-12 Basic Education Curriculum, focusing on the Technical-Vocational-Livelihood (TVL) strand. The research employs a descriptive design to provide a comprehensive overview of the current state of readiness among TVL teachers and the availability of essential resources. The study involved 47 purposively selected TVL teachers from seven areas of specialization, who completed a researcher-constructed questionnaire. This instrument gathered detailed data on their academic qualifications, TESDA National Certificates, length of teaching experience, and participation in training and seminars related to TVL. The results indicate that a significant proportion of the teachers are well-qualified, with 64% holding master's units and 87% possessing TESDA National Certificate II (NC II) certifications, underscoring their capability to deliver the TVL curriculum effectively. However, the study also highlights critical deficiencies in the school's facilities, tools, and equipment, vital for providing practical, hands-on learning experiences essential to vocational education. For instance, Animation was moderately prepared, with mean scores of M=2.71 for facilities, M=2.92 for equipment, and M=2.66 for tools. In stark contrast, Carpentry demonstrated significant gaps, with mean scores of M=2.00 for facilities, M=1.64 for equipment, and M=2.44 for tools, indicating inadequate preparedness. Qualitative data from open-ended questions attached to the survey questionnaire revealed two critical themes: the insufficiency and substandard nature of the facilities, and the inadequate tools and equipment necessary for effective implementation of the K-12 curriculum. Teachers reported that the physical infrastructure and available resources are not only insufficient but also fail to meet TESDA standards, thus hindering the delivery of quality education. This lack of adequate facilities and equipment severely impacts the quality of teaching and learning, limiting students' ability to acquire essential skills and competencies required for employment and further education. The study concludes that while this public secondary memorial school's TVL teachers are academically and professionally capable, the substandard facilities and lack of necessary tools and equipment pose significant barriers to effective curriculum implementation. To address these challenges, substantial investments in upgrading the school's infrastructure and resources are imperative. This will ensure that students receive a high-quality education that equips them with the skills and knowledge needed to succeed in a competitive workforce, thereby maximizing the potential benefits of the K-12 program.*

Keywords: Curriculum implementation, K-12 Basic Education, School Readiness, TESDA certification, TVL Strand,

INTRODUCTION

The introduction of the K-12 curriculum in the Philippines marked a significant shift in the educational landscape, transitioning from the long-standing K-10 system to a more comprehensive approach. The K-10 system, used from 1945 until the implementation of the K-12 curriculum in 2012, comprised one year of non-compulsory preschool education, six years of compulsory elementary education, and four years of mandatory high school education [1]. This system, while effective in many respects, was limited in its ability to fully prepare students for higher education and employment in a rapidly globalizing world.

The K-12 curriculum has been pivotal in the history of Philippine education, providing a more robust framework for student development. According to Gonzales (2016), the K-12 curriculum aims to enhance the basic education system by extending the number of years of schooling, thus ensuring that Filipino students are better equipped with the necessary skills and knowledge[2]. This reform was driven by the need to address gaps in the previous system, which often left graduates underprepared for both local and international opportunities [2, 3].

The necessity of the K-12 curriculum is underscored by the need to align the Philippine education system with international standards, particularly those of the ASEAN region. As highlighted by Abragan, et al. [2]and Francisco and Aingcoy [4], the K-12 curriculum was designed to make Filipino graduates competitive globally, preparing them for the demands of a rapidly changing world economy. This alignment is crucial for the Philippines to keep pace with neighboring countries that have long implemented extended basic education programs [5].

The K-12 curriculum is structured into several key components: Kindergarten, six years of elementary education, four years of junior high school, and two years of senior high school. Within the senior high school, students can choose from different strands, including the Technical-Vocational-Livelihood (TVL) strand. The TVL strand is particularly important as it equips students with practical skills and competencies necessary for employment or entrepreneurship. Essential requirements for the TVL strand include appropriate learning facilities, tools, and equipment to support effective instruction [4, 6].

However, the successful implementation of the K-12 curriculum, particularly the TVL strand, raises pressing questions about the readiness of teachers and the adequacy of learning facilities, tools, and equipment. Previous studies have indicated varying levels of preparedness among teachers and schools, which could significantly impact the quality of education delivered [7]. This is especially critical for the TVL strand, where hands-on training and practical application are fundamental.

The research gap identified in this study centers on the preparedness of a public secondary schoolsto implement the

K-12 curriculum[8]. While there is existing literature on the general preparedness of schools in the Philippines, there is a scarcity of studies focusing on public high schools in Zamboanga City [9]. This study aims to fill this gap by examining the specific context ofa public secondary memorial school an empowered public secondary school in the region.

The scarcity of literature on the preparedness of public high schools in Zamboanga City underscores the need for this study. Understanding the extent of preparedness of the school under study will provide valuable insights into the challenges and opportunities faced by schools in similar contexts. This study will also contribute to the broader discourse on educational reforms in the Philippines, offering data-driven recommendations for policymakers and educators.To address the research gap, this study will focus on three key research questions:

1. What is the profile of the TVL teachers in a public secondary memorial school in Zamboanga Peninsula in terms of academic qualifications, TESDA National Certificates earned, length of service, and trainings related to TVL and Tech-Voc attended?
2. What is the extent of preparedness of the school to implement K-12 TVL curriculum according to facilities, tools, and equipment?
3. What are the perceptions of the TVL strand teachers at a public secondary memorial school in Zamboanga Peninsula regarding the schools' preparations for the K-12 Basic education curriculum?

By examining the profile of TVL teachers, this study aims to understand the qualifications and training that influence the effectiveness of instruction. The academic qualifications and certifications of teachers are critical indicators of their capability to deliver the curriculum effectively[10]. Additionally, the length of service and relevant training attended are essential factors that contribute to the readiness and confidence of teachers in implementing the K-12 curriculum [11, 12].

The extent of preparedness in terms of school facilities, tools, and equipment is another crucial aspect of this study. The availability and quality of these resources directly affect the ability of schools to provide hands-on and practical training necessary for the TVL strand[13]. Evaluating these aspects will highlight any gaps and areas for improvement, ensuring that students receive the best possible education and training.

Overall, this study aims to provide a comprehensive analysis of the preparedness of a public secondary memorial schoolin implementing the K-12 curriculum, with a focus on the TVL strand. The findings will offer insights into the challenges and successes of this significant educational reform, contributing to the ongoing efforts to improve the quality of education in the Philippines.

METHODOLOGY

Research Design

This study employed a parallel mixed-methods research design to investigate the preparedness of a public secondary memorial school in Zamboanga Peninsula in implementing the K-12 Basic Education Curriculum, specifically the Technical-Vocational-Livelihood (TVL) strand. In this design, both quantitative and qualitative data are collected simultaneously or sequentially but analyzed independently. The results from each data strand are not merged or directly compared but are reported separately. This design is mostly appropriately used in this study as it provided complementary insights or to address different aspects of a research problem without integrating the findings into a unified interpretation [14].

Respondents of the Study

The respondents of this study are 47 TVL strand teachers from the public secondary memorial school, representing the seven areas of specialization offered by the school. These teachers were purposively selected based on their roles and assignments in the Senior High School TVL strand. Purposive sampling, as described by Patton [15], is a non-probability sampling technique that selects participants based on specific characteristics and relevance to the study's objectives. This method ensures that the selected respondents have the necessary experience and knowledge to provide meaningful insights into the preparedness of the school. Table 1 shows the distribution of the respondents based on their grade level and the areas of specialization.

Table 1 Distribution of the Respondents According to Areas of Specialization

Variables	F	%
Grade level teacher		
Grade 7	9	0
Grace 8	13	28
Grade 9	16	34
Grade 10	9	19
TLE Specializations		
Cookery	14	30
Dressmaking	9	19
Carpentry	4	8
Consumer Electronic Servicing	5	11
Electrical Installation and Maintenance	7	15
Animation	4	8
Programming	4	8

Research Instrument

The research instrument used in this study is a researcher-constructed questionnaire designed to gather comprehensive data on the respondents and their perceptions of the school's preparedness. The questionnaire is divided into three sections. The first section collects demographic information about the respondents, including their academic qualifications, length of teaching experience, TESDA National Certificates II, and training and seminars attended related to TVL. This section provides a profile of the teachers, which is essential for understanding their background and expertise [16].

The second section of the questionnaire focuses on the perceived adequacy of school facilities, tools, and equipment necessary for teaching the seven areas of specialization in the TVL strand. Teachers are asked to evaluate the availability and quality of these resources, as these are critical factors in the effective implementation of the TVL curriculum [17]. The question items are adapted from the TESDA taining regulations for the the qualifications under study.

The third section includes an open-ended question that allows teachers to express their thoughts and experiences regarding the preparedness of the school to offer the TVL strand. This qualitative component provides deeper insights and context to

the quantitative data collected.Question items for the third section of the research instrument are the following:

- What are the common problems met in Teaching TLE subject?
- How sufficient are the instructional facilities available in your respective field of specialization to sustain the needs of your learners as stipulated in the requirements of the Senior High School Program?
- Please share how the instructional tools and equipment available in your respective field of specialization cater the needs of your learners in the Senior High School program as stipulated in Training Regulation.
- Are the instructional facilities, tools, and equipment available according to the requirement of Technical Education and Skills Development Authority (TESDA) Training Regulation (TR)?
- How do you deal with the problems met along in the implementation of the K to 12 Program?
- How prepared, in your opinion, is the school to implement the K to 12 SHS program in the near future?

To ensure the validity of the research instrument and the interview questionnaire, three experts in language, content, and research methodology assessed the research instrument for content and face validity[18]. The validity test results confirmed that all items are acceptable and suitable for implementation in the study.

Data Collection

Before the actual data collection, the researcher submitted a letter of permission to the City Schools Division Superintendent (SDS) for approval to conduct the study, which was subsequently forwarded to the school principal of the school under study for concurrence. Upon receiving approval from both the SDS and the Principal, the data collection process began, with respondents being gathered to answer the survey questionnaire[19].

The data collection was conducted through the personal administration of the questionnaires, ensuring a high response rate and allowing the researcher to address any clarifications needed by the respondents. The respondents were also reminded to answer the open-ended questions found at the last part of the survey questionnaire. This approach also helped establish rapport and trust between the researcher and the respondents, enhancing the quality of the data collected [20]. The data were collected on the first quarter of 2016 before the implementation of the K-12 SHS program.

Data Analysis

Data analysis involves several statistical and qualitative techniques. The demographic profile of the respondents is analyzed using frequency and distribution statistics to provide a clear overview of their characteristics. The perceived extent of preparedness regarding school facilities, tools, and equipment is evaluated using mean and standard deviation. These measures provide a summary of the central tendency and variability of the responses, offering insights into the general perception of the teachers [21].

The responses to the open-ended question are analyzed using thematic analysis, a method for identifying, analyzing, and reporting patterns within data. This approach helps to capture the nuanced experiences and opinions of the teachers, contributing to a comprehensive understanding of the school's preparedness [22].

Ethical Considerations

Ethical considerations are paramount in this study. Informed consent was obtained from all respondents, ensuring that they were fully aware of the purpose of the study, their involvement, and their right to withdraw at any time. Confidentiality and anonymity were maintained by assigning codes to respondents instead of using their names, and data were securely stored to prevent unauthorized access. Ethical approval was sought and obtained from the relevant institutional review board before commencing the study, adhering to the ethical guidelines outlined by the American Psychological Association [23].

RESULTS AND DISCUSSION

The results and discussion section presents an in-depth analysis of the data collected, highlighting key findings regarding the preparedness of a public secondary memorial school in Zamboanga Peninsula to implement the K-12 Basic Education Curriculum, specifically the TVL strand. This section also interprets the implications of these findings in the context of existing literature and educational standards.

Profile of the Respondents

The analysis of the data reveals that the majority of the Senior High School TVL teachers in a public secondary memorial school in Zamboanga Peninsula possess relevant academic qualifications and professional development necessary to effectively teach the TVL strand. As shown in Table 1, 64% of the teachers hold master's units, indicating a significant level of advanced education.

Additionally, 87% of the teachers have attained TESDA National Certificate II (NC II), demonstrating their qualifications to teach specialized TVL subjects. The distribution of educational qualifications and TESDA certifications suggests that the teachers are well-equipped with both theoretical knowledge and practical skills necessary for their roles [24, 25].

Moreover, the professional development of the respondents is evident from the number of seminars and trainings they have attended related to the K to 12 programs. About 64% of the teachers have participated in 1 to 2 relevant trainings or seminars, while 28% have attended 3 to 4 trainings, and 9% have attended 5 to 6 trainings.

This level of engagement in professional development activities is crucial for maintaining and enhancing the quality of instruction, as ongoing training helps teachers stay updated with the latest educational trends and practices [26]. The alignment of the teachers' qualifications and their commitment to professional development ensures that they are well-prepared to deliver the TVL curriculum effectively, contribution to the overall success of the K-12 program implementation at a a public secondary memorial school in Zamboanga Peninsula.

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Table 2 Profile of the Senior High School TVL Teachers as Distributed According to their Qualifications

Variables	Cookery n=14		Dressmaking n=9		Carpentry n=4		Electronics n=5		Electrical n=7		Animatio n=4		Program n=4		Total n=47	
	F	%	F	%	F	%	F	%	F	%	F	%	F	%	F	%
Educational Qualification																
Bachelor's Degree Gradute					2	50			6	86	1	25			9	19
With Masters Units	10	71	7	88	2	50	5	100	1	14	3	75	2	50	30	64
MA Graduate (Non-Thesis)	4	29	1	13		0		0		0		0	1	25	6	13
With Doctoral Units		0	1	13		0		0		0		0	1	25	2	4
TESDA National Certificate (NC) Attained																
None	1	7	1	13	1	25	2	40		0		0	1	25	6	13
NC II	13	93	8	100	3	75	3	60	7	100	4	100	3	75	41	87
Length of Service																
5 years and below		0	3	38	1	25	1	20	3	43	1	25	1	25	10	21
6 to 10 years	7	50	1	13	0	0	4	80	2	29	1	25	1	25	16	34
11 to 20 years	4	29	3	38	2	50	1	20	1	14	2	50	1	25	14	30
20 years and above	3	21	2	25	1	25	4	80	1	14		0	1	25	12	26
Number of Seminars/Trainings Attended Related to K to 12 Program																
1 to 2	6	43	7	88	4	100	3	60	4	57	4	100	2	50	30	64
3 to 4	4	29	2	25		0	2	40	3	43		0	2	50	13	28
5 to 6	4	29		0		0		0		0		0		0	4	9

Readiness in Terms of Learning facilities, Tools and Equipment

Learning facilities, as defined by TESDA Training Regulations, refer to classrooms equipped with essential physical resources to support an optimal educational environment. These include adequate lighting and ventilation, an appropriate learning resource area, a contextual learning laboratory, and standardized wash, toilet, and locker rooms. Additionally, facilities encompass a designated lecture area, sufficient space for facilities, equipment, and circulation, comfort rooms and lavatories with standard fixtures, and a first-aid cabinet for emergencies. Tools refer to the specific instruments required to carry out instruction and hands-on activities, with an evaluation based on the number and compliance with TESDA Training Regulations for each area of specialization. Equipment includes the larger apparatus and machinery necessary for practical instruction and activities, assessed for both their quantity and functionality in accordance with TESDA Training Regulations qualifications per specialization area.Table 2 presents the perceived extent of readiness of the school in terms of facilities, tools, and equipment.

The analysis of data highlights the varying levels of perceived preparedness in implementing the TVL track at a public secondary memorial school in Zamboanga Peninsula across different areas of specialization. For Animation, the mean scores for facilities, equipment, and tools were *M=2.71*, *M=2.91,* and *M=2.66* respectively, all indicating a "moderate extent" of preparedness. This suggests that while Animation is moderately prepared, there remains a need for improvement in both facilities and equipment to fully meet the curriculum requirements [27]. In contrast, Carpentry shows significant gaps with mean scores of *M=2.00* for facilities, *M=1.64M* for equipment, and *M=2.44* for tools, falling into the "a little extent" to "not at all" categories. This indicates a critical need for enhanced resources in Carpentry to ensure effective teaching and learning.

Similarly, Cookery and Dressmaking demonstrate limited preparedness. Cookery facilities scored *M=2.27*, and equipment *M=2.10*, both reflecting "a little extent," while tools scored *M=2.69*, indicating a "moderate extent." Dressmaking showed similar trends with facilities at *M=2.60*, and equipment at *M=1.94*, both indicating "a little extent." Electrical and Electronics also highlight deficiencies, particularly in equipment and tools, with Electronics scoring *M=1.49* and *M=1.73* respectively, indicating "not at all" prepared. Programming, while slightly better, still reflects insufficient preparedness with mean scores indicating "a little extent" across facilities (*M=2.14)*, equipment *(M=2.60),* and tools (*M=2.50).* These findings emphasize the critical need for adequate facilities, tools, and equipment, which are essential for the effective implementation of the TVL strand. Properly equipped learning environments are fundamental to providing hands-on experiences and skills development, which are core components of the TVL curriculum [28], [29].

The importance of preparedness in learning facilities, tools, and equipment cannot be overstated, particularly for the TVL strand in Senior High School. These elements are vital for delivering practical and experiential learning, which is essential for technical and vocational education[30], [13]. The inadequacies highlighted in this study point to a significant challenge that needs to be addressed to ensure that students receive the quality education and training necessary to be competitive in the workforce[13]. Addressing these gaps will not only enhance the learning experience but also improve the overall effectiveness of the K-12 curriculum implementation.

Table 3. Extent of Perceived Preparedness to Implement SHS TVL Track Across the Different Areas of Specialization

Areas of Specialization	Extent of Preparedness in Terms of:					
	Facilities		Equipment		Tools	
	Mean	Description	Mean	Description	Mean	Description
Animation	2.71	Moderate Extent	2.92	Moderate Extent	2.66	Moderate Extent
Carpentry	2.00	A little extent	1.64	Not at all	2.44	A little extent
Cookery	2.27	A little extent	2.10	A little extent	2.69	Moderate Extent
Dressmaking	2.60	A little extent	1.94	A little extent	2.36	A little extent
Electrical	2.47	A little extent	1.89	A little extent	2.30	A little extent
Electronics	2.25	A little extent	1.49	Not at all	1.73	Not at all
Programming	2.14	A little extent	2.60	A little extent	2.50	A little extent

TVL Teachers' Perception About the School's Preparedness for TVL Strand

The qualitative data of this study revealed two critical themes: the insufficiency and substandard nature of the facilities, and the inadequate tools and equipment necessary for effective implementation of the K-12 curriculum.

Theme 1: Insufficient and Substandard Facilities

The qualitative data consistently revealed that the facilities available for the TVL strand are insufficient and often substandard. For instance, one teacher remarked, "*The facilities are not available for the senior high school students in the incoming future. Only the guidelines of the program were presented. Therefore, there is a need to be familiarized with the Training Regulation of TESDA."* This indicates the physical infrastructure necessary to support effective learning is lacking. The absence of adequate facilities undermines the potential for effective teaching and learning, which is critical in a hands-on, skills-based curriculum like TVL [13], [31].

Moreover, the discussion highlighted specific inadequacies in different specializations. For example, a dressmaking teacher stated, *"Some of the facilities are not available. There is no comfort room available intended for dressmaking students. The size of the classroom area is substandard."* Similarly, a carpentry teacher observed, *"The school has facilities, like classrooms for Carpentry. But these classrooms are substandard for the TESDA programs, like the Carpentry NC II."* These comments underscore a recurring issue of substandard and inadequate facilities across various specializations, which poses significant challenges to the delivery of quality education. The lack of appropriate and sufficient facilities hampers the ability of teachers to provide effective instruction and meet the program's outcomes.

Theme 2: Inadequate Tools and Equipment

In addition to facility issues, the qualitative data also pointed out significant deficiencies in the tools and equipment necessary for the TVL programs. A cookery teacher mentioned, *"Tools are not adequate to the number of learners; it's very difficult on our part."* This sentiment was echoed by a dressmaking teacher who shared, *"As of now, I can say that the dressmaking class is not ready to cater because of the insufficiency of tools. As of now, we do not know what is really needed in Dressmaking as far as tools are concerned."* These statements reflect a critical gap in resources that directly impacts the effectiveness of the TVL curriculum. Tools and equipment are essential for practical learning experiences, which are a core component of vocational education[13], [32].

Furthermore, the lack of proper equipment was a common concern across various specializations. For example, an electronics teacher stated, *"Equipment available is not according to the requirements of TESDA. And most of the equipment are not available. In order to purchase the equipment, we need a huge amount of funds."*

Similarly, a programming teacher claimed, *"Facilities are not appropriate and adequate as described in the Training Regulation. This could not sustain the needs of the learners."* These insights reveal a critical need for substantial investment in tools and equipment to align with TESDA standards and ensure the effectiveness of the TVL programs. The inadequacy of tools and equipment not only affects the quality of education but also the students' preparedness for certification and future employment.

LIMITATIONS OF THE STUDY

The limitations of this study include its focus on a single public high school, which limits the generalizability of the findings to other schools in different regions or contexts. Additionally, the study primarily relies on self-reported data from 47 TVL teachers, which may be subject to bias and may not fully capture the complexity of the issues surrounding the implementation of the K-12 TVL strand. The variables studied, such as teacher qualifications, facilities, tools, and equipment, while critical, do not encompass all factors influencing the successful implementation of the curriculum, such as student outcomes or administrative support. Furthermore, the descriptive research design, while effective in providing an overview of the current state of preparedness, does not allow for causal inferences or deep exploration of the underlying reasons for the observed deficiencies. These limitations suggest that future research may consider a broader sample, include additional variables, and possibly employ a mixed-methods approach to gain a more comprehensive understanding of the factors affecting TVL program implementation.

CONCLUSION

The findings of this study underscore the critical role that adequate learning facilities, tools, and equipment play in the effective implementation of the K-12 curriculum, particularly in the Technical-Vocational-Livelihood (TVL) strand. Despite the academic qualifications and extensive experience of the TVL teachers at a public secondary memorial school in Zamboanga Peninsula, the insufficient and substandard nature of the facilities, tools, and equipment significantly hampers the teaching and learning process. This inadequacy directly impacts the quality of education delivered, as practical, hands-on experiences are essential for students to acquire the necessary skills and competencies. When essential resources

are lacking, even the most capable teachers cannot fully achieve the curriculum's goals, leading to a less favorable learning experience for students.

Moreover, the practical implications of these deficiencies are profound. Without appropriate facilities and adequate tools, students are unable to engage fully in the experiential learning activities that are critical to vocational educatio. This shortfall not only affects their immediate educational outcomes but also their preparedness for future employment and further education in their chosen fields. Thus, while the teachers at a public secondary memorial school in Zamboanga Peninsula possess the academic prowess and professional expertise to deliver the TVL curriculum, the substandard learning environment poses a significant barrier to student success. To ensure that students gain the competencies required by industry standards, substantial investments in upgrading the facilities, tools, and equipment are essential. Without these improvements, the potential benefits of the K-12 program cannot be fully realized, ultimately affecting the long-term economic and social development goals of the country.

RECOMMENDATIONS

Based on the findings and limitations of this study, the following recommendations are proposed to enhance future research, curriculum implementation, and policy-making for the acquisition of essential learning facilities, tools, and equipment, as well as to encourage teachers to pursue graduate studies:

Future research may prioritize conducting longitudinal studies with larger and more diverse sample sizes across various regions to comprehensively evaluate the long-term effects of the K-12 curriculum on student competencies and employability. Such studies can provide valuable insights into persistent resource gaps and their impact on learning outcomes, offering data-driven recommendations for improving curriculum implementation. Additionally, an in-depth impact study is strongly recommended to assess the effectiveness of schools in delivering the TVL strand, considering both the availability of resources and the qualifications of TLE and TVL teachers. This approach will provide a holistic understanding of the program's strengths and challenges, ensuring informed decision-making for future improvements.

It is also recommended that school principals will need to conduct regular needs assessments and audits of TVL program facilities, tools, and equipment to inform targeted upgrades and integrate innovative teaching methodologies that utilize available resources and emerging technologies.

Finally, policymakers may prioritize funding and resource allocation for essential TVL program resources, establish industry partnerships for additional support, and incentivize teachers to pursue graduate studies and continuous professional development through scholarships, grants, and career advancement opportunities.

By addressing these recommendations, stakeholders can significantly improve the quality and effectiveness of the TVL strand in the K-12 curriculum, ultimately benefiting students and contributing to the broader goals of educational and economic development.

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