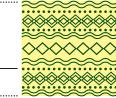


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Perspectives Teacher's and **Practices** on Student in **Engagement** Post-Pandemic Technical-Vocational-**Livelihood Education**

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Abstract

The shift back to in-person learning after the COVID-19 pandemic has exposed significant challenges in student engagement within the TVL track, where teachers must balance theory with hands-on instruction amid declining student motivation and changing learning contexts. Previous research lacks focus on teacher-driven strategies in TVL settings, particularly in post-pandemic settings. Using the Quantitative-Qualitative research design, this study sought to determine the conceptualizations and practices of TVL teachers related to student engagement. Data were gathered using a survey questionnaire completed by 114 TVL teachers and in-depth interviews conducted with seven TVL teachers from 29 public secondary schools in the province of Benguet. Data were analyzed using descriptive statistics and non-parametric tests, including the Kruskal-Wallis H-test and Mann-Whitney U post hoc test, to examine group differences. The study found that TVL teachers, regardless of teaching experience or performance rating, shared a consistent and holistic understanding of student engagement. While engagement strategies were generally highly to very highly practiced, a significant difference emerged in the domain of teacher-student interactions based on teaching experience. TVL teachers, although the strategies were at least highly practiced, face complex challenges such as inadequate resources, curriculum mismatches, and limited parental involvement, yet they respond with resourceful, teacher-driven approaches. These findings highlight the need for institutional support to reinforce student engagement practices, improve resource allocation, and formalize innovative strategies through targeted professional development and policy support.

Introduction

Technical-Vocational-Livelihood track in the Philippine K-12 curriculum aims to equip students with practical skills for immediate employment or entrepreneurship even with only a high school diploma. However, the return to in-person learning after the pandemic has highlighted numerous challenges in student engagement, particularly for TVL teachers who are expected to find a balance between theoretical



instruction and hands-on training (Abdul & Silor, 2024). Understanding this situation is crucial in enhancing educational outcomes especially in the TVL curriculum.

Global surveys indicate that the COVID-19 pandemic significantly diminished student motivation in participating in the learning process. According to the EdWeek Research Center (2021), learners displayed decreased interest, reduced attention, and lower levels of engagement in academic activities, both in remote and subsequent in-person settings. This decline is credited to the disruption of teaching-learning cycles, decreased collaborative opportunities, and challenges in adapting to changing instructional modalities.

With these unpredictable shifts in the school environments, teachers must be flexible in implementing appropriate pedagogies and innovations to increase student engagement (Anderton et al., 2021; Sumitra & Chhetri, 2021; Pedler et al., 2020). As a result of the sudden changes, the teaching and learning landscape where some student engagement strategies have previously worked has also changed. It is also equally significant to understand that at the secondary level, less engagement is compounded by the reported low sense of belonging in school. Several studies have found that emotional engagement and academic interest decrease in the case of 15-year-old learners (de Bortoli, 2018; Pedler et al., 2020; Wang & Eccles, 2011). This decline is largely attributed to the variations in the learning environment from elementary school to high school (Hughes & Cao, 2018; Wang & Eccles, 2011). Therefore, high school students and teachers face unique sets of concerns related to student engagement.

However, although there is considerable research on engagement, there is still a paucity of literature on teacher factors affecting student engagement (Grove, 2019). Pedler et al. (2020) and Grove (2019) recommended the conduct of studies focused on the teachers' definition and the concretization of these definitions through strategies student engagement considering that teachers are the best people in schools for improving the engagement of learners. Moreover, while there is research on online and hybrid learning environments, few studies have been conducted focusing specifically on student engagement strategies employed by TVL teachers during in-person classes post-pandemic. Existing literature lacks comprehensive analysis of contextsensitive teaching approaches that TVL teachers employ to address diverse learner needs and operational limitations in in-person settings. These underexplored areas hinder the development of targeted interventions to improve engagement in practical, hands-on contexts.

To address these gaps, this study endeavored to investigate teachers' student engagement practices in in-person learning in a context where engagement towards learning has drastically decreased. Specifically, this study sought to identify TVL teachers' conceptualizations and student engagement strategies considering their teaching experience and performance rating along the areas of learning structure, instruction, teacher-student interactions, parent-community involvement, and re-engagement of students. It also determined the challenges encountered by the teachers in implementing student engagement strategies in in-person learning and the approaches to address these challenges were also discussed.

This study gathered data during the fourth quarter of SY 2021-2022 and the first quarter of SY 2022-2023. The participants were highly proficient teachers (Master Teachers) and proficient teachers (Teacher I-III) in government secondary schools teaching TVL specializations in Benguet province who are employing the in-person learning modality.

The findings of this study will add to the existing body of knowledge on student engagement, particularly under the in-person learning environments. The results will also help school leaders and administrators identify needs for the creation of effective training programs. Furthermore, it will provide schools with insights into training curriculum development. Educators, through the findings of this study, will be equipped with ideas for designing strategic initiatives aimed at enhancing student engagement within the TVL learning environment.

Methodology

Research Design

This study used the quantitative-qualitative approach. It combined the descriptive research design and basic qualitative study design. The quantitative results provided a general picture of



the research problem while the qualitative findings helped elaborate experiences related to the quantitative results.

In this study, the general objective was to investigate the practices of TVL teachers to increase student engagement in in-person learning. The identification of these definitions and practices was most effectively gathered through a quantitative survey and treated through statistical tools. However, since the COVID-19 pandemic brought unique situations in the teaching and learning sphere, the experiences of teachers provided an elaboration of the quantitative findings, particularly in the challenges experience in implementing teachers strategies and the strategies utilized by teachers in addressing these challenges. This in-depth exploration of participants' views through the semi-structured interviews helped explain the statistical results.

Instrument

The study used a researcher-developed instrument. Before the survey questionnaire was administered to the respondents, it has undergone validity and reliability tests. Using Cronbach Alpha to measure reliability, Part II of the questionnaire noted an excellent internal consistency of 0.975 while Part III recorded 0.954. In terms of validity, three Master Teachers with 18 to 23 years of teaching experience, two Head Teachers with 19-25 years of teaching experience, and one TVL Teacher III with 26 years in service accomplished the instrument validation rating. In Part II and III, all items had a CVI higher than 0.79.

Sampling

To provide complete statistical coverage, the study employed a complete enumeration method in selecting the respondents, who were TVL teachers from 29 public secondary schools across Benguet. According to the data from the Benguet DepEd Division Office, the TVL track is offered in every municipality within the province, which contributed to the decision to focus on TVL teachers. Another factor was the distinct educational backgrounds of these teachers. While some did not hold a bachelor's degree in education, they had completed degrees aligned with their areas of specialization. Others had prior industry experience but have limited or no

background in teaching. The response rate for the questionnaires was 81% with 114 responses out of 141 TVL specialization teachers as presented in Table 1.

For the qualitative data collection, a total of 41 respondents answered all the open-ended questions included in the survey questionnaire. To put elaboration on the data, seven participants were selected for the in-depth interviews through quota sampling. The population was divided according to teaching experience since it was statistically shown that there was a significant difference in the level of practice of certain student engagement strategies when respondents were grouped based on the number of years in teaching.

Data Collection Procedure

The researcher sought approval from the Benguet Division Schools Superintendent for the administration of survey questionnaires and the conduct of interviews. With the approval letter from the SDS attached, letters for the conduct of the study addressed to the school head, consent forms, and copies of the survey questionnaires were sent in person and online to all concerned

Table 1The Response Rate for Questionnaires

Municipality	Number of TVI Teachers	Number of Responses Returned
Atok	2	2
Bakun	11	8
Bokod	19	13
Buguias	7	7
Itogon	19	14
Kabayan	9	8
Kapangan	8	8
Kibungan	4	3
La Trinidad	16	13
Mankayan	5	5
Sablan	5	5
Tuba	18	14
Tublay	18	14
Total	141	114



school heads. For each of the survev questionnaires, a short letter form the researcher was included to inform the respondents of the studv's objectives and to indicate participation was voluntary with the instruction that if they agree, they may sign the attached consent form.

Letters were sent to the identified participants to ask for permission to be interviewed. Some letters were sent online while others were handed personally. Participants who agreed decided on time, date, and mode of the meeting. Before the interview, the research objectives were repeated and reminded that participation may be withdrawn any time. The participants were requested to sign the consent form if they still wished to continue with the interview.

Data Analysis

The Kruskal Wallis test was used in this study to treat the quantitative data, particularly in identifying the significant differences on the levels of agreement and levels of practice. To identify the groups that significantly differ in the level of practice of student engagement strategies when grouped according to their teaching experience, the Mann Whitney test was used.

The Likert scale was used to assess the level of agreement and the level of practice. In the level of agreement on conceptualizations of student engagement, the following Likert scale and descriptive interpretations.

Scale Range	Descriptive Equivalent
4.21-5.00	Strongly Agree (SA)
3.41-4.20	Agree (A)
2.61-3.40	Neither Agree nor Disagree (N)
1.81-2.60	Disagree (D)
1.00-1.80	Strongly Disagree (SD)

The Likert scale on the level of practice of student engagement strategies also used five response options focused on the frequency of actual practice.

Scale Range	Descriptive Equivalent
4.21-5.00	Very Highly Priced (VHP)
3.41-4.20	Highly Priced (HP)
2.61-3.40	Moderately Practiced (MP)
1.81-2.60	Least Practiced (LP)
1.00-1.80	Not Practiced (NP)

qualitative data collected through semi-structured interviews was transcribed through intelligent transcription. In intelligent transcription, all the words are transcribed excluding the utterances, mistakes, and repetitions (McMullin, 2021). Since this research gave more emphasis on the answers to the interview questions than the exact wording used, intelligent transcription was deemed the most appropriate for this study.

The initial codes were identified from the transcripts through inductive coding, particularly verbatim coding. In verbatim coding, the participants' words and interpretations are used to summarize parts of the transcripts. Similar codes were then grouped into categories. Thematic analysis coding was utilized for the second-round coding. The data was re-examined closely by renaming, re-coding, and even merging codes. The final codes and categories were used to construct the narrative.

Results and Discussion

TVL Teachers' Conceptualizations of Student Engagement According to Teaching Experience

TVL teachers across all levels of teaching experience strongly agree with various conceptualizations of student engagement, as indicated by the overall weighted means, all falling within the "Strongly Agree" descriptive range (Table 2). Specifically, the highest agreement is observed among teachers with 6 to 10 years of experience (M=4.59), while the lowest is recorded by those with 16 to 20 years (M=4.45). However, statistical analysis yielded non-significant p-values for all items, including the overall mean (H=5.17, p=0.39). This suggests that differences in agreement across the groups are not statistically significant.

This finding aligns with previous studies indicating that the conceptual understanding of student engagement is widely accepted among educators regardless of their years in profession. The study of Baker (2017), for instance, concluded that teachers' views on student engagement coincide with widely accepted conceptualizations of engagement. However, unlike the previous study that focused on the

perspectives of highly proficient teachers, the current study included the responses of proficient teachers. The study of Stapleford (2003) also revealed similar results when it concluded that there is no relationship between years of teaching experience and the teachers' views of educational scenarios.

The uniformity in the conceptualization of student engagement across various experience levels implies a shared professional perspective among TVL teachers. This result denotes that professional development initiatives, regardless of their target

group, can leverage this shared perspective as a basis for introducing more nuanced strategies. Furthermore, this result encourages standardized frameworks to be effectively implemented across TVL teaching cohorts.

TVL Teachers' Conceptualizations of Student Engagement According to Performance Rating

Table 3 shows that TVL teachers across all performance rating categories expressed high levels of agreement with various conceptualizations of student engagement. Teachers rated as

Table 2Level of Agreement of TVL Teachers on the Conceptualizations of Student Engagement According to Teaching Experience

Conceptualization of Student			Ye	ars of Te	eaching l	Experien	ce	
Engagement	0-3	4-5	6-10	11-15	16-20	21-Up	H-value	P-value
1. Student engagement is multi-dimensional. It includes behavioral, cognitive, and emotional dimensions	4.71	4.62	4.73	4.53	4.5	4.56	1.7601	0.7312 ^{ns}
2. The dimensions of student engagement must be examined and addressed holistically	4.47	4.65	4.68	4.47	4.67	4.44	2.8151	0.5405 ^{ns}
3. Student engagement can be observed in school and non-school settings	4.47	4.65	4.68	4.53	4.67	4.67	1.1875	0.8802 ^{ns}
4. Extracurricular activities provide resources to students that can impact their engagement in school.	4.35	4.54	4.46	4.4	4	4.56	1.3248	0.8915 ns
5. Engagement is susceptible to changes resulting from influences from the learning environment	4.24	4.42	4.49	4.47	4.33	4.44	1.9641	0.7811 ^{ns}
6. Educators can either positively or negatively affect student engagement	4.59	4.46	4.51	4.53	4.5	4.44	0.7474	0.9632 ^{ns}
7. Students who have high motivation try to be engaged in class	4.59	4.54	4.59	4.4	4.5	4.44	1.2345	0.8912 ^{ns}
Overall Weighted Mean	4.49	4.55	4.59	4.48	4.51	4.51	0.175	$0.39^{\rm ns}$

Legend: ns-Not significant

 $Statistical\ Limit:$

Scale Descriptive Equivalent
4.21-5.00 Strongly Agree (SA)
3.41-4.20 Agree (A)
2.61-3.40 Neutral (N)
1.81-2.60 Disagree (D)
1.00-1.80 Strongly Disagree (SD)



"Outstanding" reported the highest overall weighted mean (4.60), followed closely by teachers rated as "Very Satisfactory" (4.50). Teachers with a "Satisfactory" rating showed a slightly lower mean (4.19). Despite these gaps, there are no statistically significant differences across performance ratings (H=1.3248, p=0.4238) based on the statistical analysis.

The results can be credited to the support, advice, and guidance from highly experienced teachers as shared during the interviews conducted. Master teachers, and school heads who are considered highly proficient teachers under the RPMS, have always been willing to

provide responses to questions related to teaching content and processes. Furthermore, the common understanding of the concept may stem from standardized teacher education and ongoing professional development initiatives of the Department of Education (DepEd).

This uniformity regardless of performance ratings suggests that conceptual knowledge of student engagement is not dependent on the appraisals of teacher performance. It implies that current teacher evaluation systems emphasize shared theoretical foundations, even if they do not equally capture pedagogical effectiveness in practice.

Table 3Level of Agreement of TVL Teachers on the Conceptualizations of Student Engagement According to Performance Rating

Consentualization of Student				Doufou	manaa D	otina.		
Conceptualization of Student Engagement	_	D.T.	***		mance R		** 1	n 1
	0	DE	VS	DE	S	DE	H-value	P-value
1. Student engagement is multi- dimentional. It includes behavioral, cognitive, and emotional dimensions	4.69	SA	4.63	SA	4.33	SA	0.3565	0.7533 ^{ns}
2. The dimensions of student engagement must be examined and addressed holistically	4.67	SA	4.54	SA	4.33	SA	1.6483	0.3044 ^{ns}
3. Student engagement can be observed in school and non-school settings	4.68	SA	4.58	SA	4.33	SA	0.7725	0.5627 ^{ns}
4. Extracurricular activities provide resources to students that can impact theri engagement in school.	4.56	SA	4.35	SA	4	A	1.4339	0.403 ns
5. Engagement is susceptible to changes resutling from influences from the learning environment	4.5	SA	4.37	SA	4	A	2.1708	0.2555 ^{ns}
6. Educators can either positively or negatively affect student engagement	4.57	SA	4.45	SA	4.33	SA	0.7697	0.5999 ^{ns}
7. Students who have high motivation try to be engaged in class	4.52	SA	4.58	SA	4	A	1.2242	0.4344 ^{ns}
Overall Weighted Mean	4.6	SA	4.5	SA	4.19	А	1.3248	0.4238^{ns}

Legend: ns-Not significant

Statistical Limit:

Scale Descriptive Equivalent
4.21-5.00 Strongly Agree (SA)
3.41-4.20 Agree (A)
2.61-3.40 Neutral (N)
1.81-2.60 Disagree (D)
1.00-1.80 Strongly Disagree (SD)

Strategies of TVL Teachers to Increase Student Engagement According to Teaching Experience

4 shows that student engagement Table strategies related to learning structure are consistently practiced at a very high to very high level among teachers across all teaching experience groups. The overall weighted means, from 3.96 to 4.35, indicate that regardless of the number of years in the teaching profession, teachers generally adhere to structured classroom practices to foster the engagement of learners. Interestingly, the group with 21 years and above of teaching experience recorded slightly lower mean scores across several items, particularly in clearly communicating expectations (M=3.38). While this may not be statistically significant, it suggests the need for continued professional development particularly in adapting evolving student needs and classroom dynamics. Additionally, the Kruskal-Wallis H test results reveal that none of the observed differences are (p>0.05),statistically significant confirming that the years of teaching experience do not significantly influence the level of practice.

Instructional strategies, as shown in Table 5, are either Highly Practiced (HP) or Very Highly Practiced (VHP) by TVL teachers across experience levels. This indicates that, regardless of teaching tenure, there is a consistent implementation of instructional engagement practices. Among the given instructional strategies, the highest mean (4.67) was observed for the item "I select activities and resources that are relevant to students" among teachers with 11-15 years of experience. This implies that mid-career educators may be particularly effective at aligning instructional content with student interests and needs. The item "I provide authentic and challenging tasks" received the lowest mean (3.71) from the 0-3 years group, though still within the "Highly Practiced" range. may imply that early-career teachers are still the confidence developing required consistently deliver more complex, real-world learning tasks. Only one item, "I take time in explaining complex topics," yielded a statistically significant difference among (H= 14.2, p=0.006). This indicates that the practice of thoroughly explaining difficult concepts differs significantly with

experience, suggesting that more experienced

Table 4 Level of Practice of Student Engagement Strategies Related to Learning Structure According to Teaching Experience

Learning Structure			Ye	ars of Te	aching E	xperienc	e	
	0-3	4-5	6-10	11-15	16-20	21-Up	H-value	P-value
1. I establish classroom routines	4	4.15	4.46	4.33	3.5	4.11	6.1717	$0.1617^{\rm ns}$
2. I set high expectations for all students	3.76	3.77	3.98	3.73	3.83	3.67	1.6746	0.8394 ^{ns}
3. I provide clear learning objectives, instructions, and guidances	4.12	4.31	4.49	4.33	4.33	4.22	2.6552	0.6521 ^{ns}
4.I clearly communicate my expectations from my learners	4.12	4.15	4.29	4.13	4.17	3.38	5.0864	0.2367 ns
5. I maximize class time by minimizing disruptions	4.00	4.15	4.41	4.33	4.33	4.00	4.7549	0.3025 ^{ns}
Overall Weighted Mean	400.	4.11	4.35	4.17	4.23	3.96	5.1172	0.3887 ^{ns}

Legend: ns-Not significant

Statistical Limit:

Descriptive Equivalent Scale 4.21-5.00 Strongly Agree (SA) 3.41-4.20 Agree (A) 2.61-3.40 Neutral (N) 1.81-2.60 Disagree (D) 1.00-1.80 Strongly Disagree (SD)



teachers are more intentional in this practice compared to less experienced peers.

Despite this, the overall Kruskal-Wallis H-test result for the composite mean (p>0.05) suggests that there is no significant difference in the overall level of instructional engagement practices across teaching experience groups. This implies that educators, regardless of teaching experience, are generally consistent in implementing student-centered instructional strategies.

In terms of strategies related to teacherstudent interactions, the results in Table 6 indicate that all experience groups consistently demonstrate a high to very high level of practice. The first item, "I establish warm and trusting relationships with my students (H=13.2456, p=0.04)," indicates a statistically significant difference across teaching experience levels. This suggests that the ability to build trusting relationships with students may improve with more years of classroom exposure and professional maturity. Remarkably, the overall weighted mean across all strategies reveals a general trend: teachers with 11–15 years of experience scored the highest, while those in the 0–3 years group scored the lowest. The Kruskal-Wallis test result (H=10.6717, p=0.0498) indicates a statistically significant difference in the overall level of

 Table 5

 Level of Practice of Student Engagement Strategies Related to Instruction According to Teaching

Instruction	Years of Teaching Experience							
	0-3	4-5	6-10	11-15	16-20	21-Up	H-value	P-value
1. I selected activities and resources that are relevant to students	4.24	4.42	4.63	4.67	4.5	4.33	3.6564	0.4526 ^{ns1} .
2. I give learning activities that allow students to interact with me and their classmates	4.12	4.23	4.44	4.27	4.17	4.56	4.5622	0.3621 ^{ns}
3. I provide choices in topics, resources, or assignment formats	3.94	4.00	4.00	4.07	4.00	4.11	0.359	0.9918 ^{ns}
4. I vary instructional activities depending on the learning preferences of students	3.94	4.11	4.29	4.20	4.00	4.11	3.2496	0.5532 ns
5. I provide authentic an challenging tasks	3.71	4.08	4.15	4.2	4.00	3.78	5.1787	0.2111 ^{ns}
6. I give positive feedback on student outputs and behaviors	4.24	4.27	4.53	4.47	4.50	4.22	3.4113	0.515 ^{ns}
7. I give my timely feedback on student outputs and behaviors	4.06	4.00	4.24	4.33	4.33	4.22	2.4389	0.6818 ^{ns}
8. I encourage learners to elaborate answers to questions	4.00	4.19	4.34	4.20	4.00	3.89	4.8218	0.2619 ^{ns}
9. I encourage learners to elaborate answers to questions	3.89	4.11	4.17	4.33	3.17	3.89	3.4911	0.5319 ^{ns}
10. I take time in explaining complex topics	3.94	4.11	4.46	4.60	4.33	4.11	14.2	0.006 ^{ns}
Overall Weighted Mean	4.01	4.15	4.32	4.31	4.20	4.12	4.4913	0.4769 ^{ns}

Legend: ns-Not significant

Statistical Limit:

Scale Descriptive Equivalent
4.21-5.00 Strongly Agree (SA)
3.41-4.20 Agree (A)
2.61-3.40 Neutral (N)
151-2.60 Disagree (D)
150-1.80 Strongly Disagree (SD)

practice of teacher-student interaction strategies based on teaching experience.

In order to identify where the significant differences lie among the groups in Table 6, a post hoc analysis was conducted through the Mann-Whitney U pairwise test. Table 7 shows the pairwise comparisons, indicating that statistically significant differences (p<0.05) occurred between the following Group 0–3 years and 11–15 years (p=0.01) and Group 4–5 years and 11–15 years (p=0.03).

These findings indicate that teachers with 11–15 years of teaching experience practice teacher-student interaction strategies at a significantly higher level compared to those with 0–3 years and 4–5 years of experience. This result reinforces the earlier interpretation that mid-career teachers (specifically those in the 11–15 years category) tend to be more effective in establishing strong, supportive, and trusting relationships with students.

As to parent-community involvement engagement strategies, the results in Table 8 indicate that across all teaching experience levels, these strategies are generally practiced at a "Highly Practiced" (HP) level, with mean scores ranging from 3.33 to 4.10. The overall weighted mean scores reinforce this pattern, with mid-career teachers (particularly those in the 6–10 years group, mean = 4.02) showing the highest level of practice, while early-career

Table 7Follow-up Test for Teacher-Student InteractionsUsing Pairwise Mann-Whitney Test

G1	G2	p-value
0-3	4-5	0.36
0-3	6-10	0.08
0-3	11-15	0.01
0-3	16-20	0.66
0-3	21 up	0.63
4-5	6-10	0.38
4-5	11-15	0.03
4-5	16-20	0.91
4-5	21 up	0.87
6-10	11-15	0.09
6-10	16-20	0.52
6-10	21 up	0.46
11-15	16-20	0.13
11-15	21 up	0.08
16-20	21 up	0.95

teachers (0–3 years, mean = 3.53) and veteran teachers (21+ years, mean = 3.39) reported the lowest.

Despite these differences, the Kruskal-Wallis H-values for both items and the overall mean are not statistically significant (p > 0.05). This

Table 6Level of Practice of Student Engagement Strategies Related to Teacher-Student Interactions According to Teaching Experience

Teacher-Student Interactions	Years of Teaching Experience							
	0-3	4-5	6-10	11-15	16-20	21-Up	H-value	P-value
1. I established warm and trusting relationships with my students	4.06	4.27	4.46	4.73	4.50	4.22	13.2456	0.04*
2. I let my students feel secure in class	4.18	4.46	4.49	4.80	4.17	4.33	2.1228	0.0681 ⁿ
Overall Weighted Mean	4.12	4.37	4.48	4.77	4.33	4.28	10.6717	0.0498*

Legend: *- significant ns-Not significant Statistical Limit:



means that while there are variations in how often teachers at different experience levels engage parents and the community, these differences are not strong enough to be considered statistically meaningful.

The level of practice of re-engagement strategies of teachers with varying years of teaching experience is shown in Table 9. The overall weighted mean scores follow a similar pattern: the highest practice level was among teachers with 16-20 years of experience (mean = 4.33 - VHP), while the lowest was again noted among veteran teachers with over 21 years of experience (mean = 3.89 - HP). Despite these differences in mean scores, the Kruskal-Wallis H-values and p-values indicate that none of the differences across experience groups are statistically significant (p>0.05). The overall H-value=2.1067 and p=0.8151 suggest that teaching experience does not strongly influence how consistently teachers apply re-engagement strategies. This implies that training, institutional culture, or professional development creates a standard practice level across experience levels.

In general, the results can be attributed to several factors, including teachers' educational backgrounds, practical classroom experiences, perceptions of the pandemic's effects, and the

implementation of DepEd's guidelines and programs. Insights from the conducted interviews with respondents suggest that the lower mean scores among teachers with more than 15 years of experience compared to those with lesser years of experience may be linked to shifts in student behavior brought about by rapid technological advancements. Strategies that were once effective are now proving less applicable in the contemporary classrooms.

This aligns with the findings of Graham et al. (2020), who reported no significant differences in teaching quality between novice and experienced teachers. Interestingly, when educators were grouped into beginning (0-3 years), transitioning (4-5 years), and experienced (6 years and above), both beginning and experienced outperformed those in the transitioning phase (Graham et al., 2020). This lower performance among transitioning teachers was attributed to increased emotional stress, heavier workloads, diminished institutional and support. Similar patterns were noted in studies by Chingos and Peterson (2011) and Klassen and Chiu (2010), which found that teaching effectiveness is often higher at the beginning of a teacher's career but tends to decline as they adjust to the demands of the profession and their workplace.

Table 8Level of Practice of Student Engagement Strategies Related to Parent-Community Involvement According to Teaching Experience

Parent-Community Involve-	nt-Community Involve- Years of Teaching Experience								
ment	0-3	4-5	6-10	11-15	16-20	21-Up	H-value	P-value	
1. I involve parents and the community in school activities	3.53	3.85	4.10	4.00	4.00	3.44	6.1017	0.201 ^{ns}	
2. I encourage parents and the community to join the planning and implementation of school projects and programs	3.53	3.96	3.95	4.00	4.00	3.33	4.0238	0.434 ns	
Overall Weighted Mean	3.53	3.90	4.02	4.00	4.00	3.39	4.8214	0.3812 ⁿ	

Legend: *- significant ns-Not significant Statistical Limit:



Strategies of TVL Teachers to Increase Student Engagement According to Performance Rating

Table 10 presents the level of practice of strategies to foster student engagement as evaluated according to the teachers' performance ratings. Across all domains, teachers generally reported high to very high levels of practice in implementing student engagement strategies, regardless of performance rating. In the Learning Structure and Instruction domains, teachers with Outstanding ratings reported slightly higher levels of practice, though all groups rated them as either Highly or Very Highly Practiced. Teacher-Student Interactions received highest mean score (M=4.49), particularly from Outstanding teachers, but the differences across performance levels were not significant. Similarly, Parent-Community Involvement was consistently rated as Highly Practiced across all groups, with minimal variation. In the domain of Re-engagement of Students, Very Satisfactory teachers gave the highest rating, but all groups still fell within the Highly to Very Highly Practiced range. Despite these trends, statistical tests confirmed that none of the differences across performance ratings were significant.

In general, the findings imply that the existing teacher performance evaluation system of DepEd accurately gauges teacher competence given that outstanding teachers recorded the highest mean, followed by teachers with very

satisfactory performance. The data also shows that although teachers who have satisfactory and very satisfactory ratings have lower mean scores, they still highly practiced the strategies.

As stated in the interviews conducted with the respondents, this is largely due to the consistent support from superiors. Feedback from superiors is a vital component of teacher development in the areas of classroom management, instruction, and student engagement (Mireles-Rios et al., 2019). In a previous study by Taylor and Tyler (2012), teachers with poor performance before the evaluation recorded the highest improvement in post-evaluation years. This suggests that evaluations of teacher performance result in the development of new skills and an increase in long-run efforts (Taylor & Tyler, 2012). This explains the high to the very high level of practice of the student engagement strategies even when teachers are categorized based on performance rating.

Challenges Encountered in Implementing Student Engagement Strategies

In transitioning to in-person learning, the implementation of student engagement strategies among TVL teachers is primarily shaped by a number of persistent challenges rooted in both institutional limitations and socio-cultural factors. Table 11 summarizes the different challenges encountered by the participants in the implementation of student engagement strategies

Table 9Level of Practice of Student Engagement Strategies Related to Re-engagement of Students According to Teaching Experience

	Years of Teaching Experience								
Re-engagement of Students	0-3	4-5	6-10	11-15	16-20	21-Up	H-value	P-value	
1. I monitor the academic progress of my students	4.30	4.27	4.49	4.33	4.50	3.89	4.8738	0.2779 ^{ns}	
2.I immediately provide intervention to students who fail to engage	4.18	4.15	4.14	4.20	4.17	3.89	0.7517	0.9675 ^{ns}	
Overall Weighted Mean	4.24	4.21	4.32	4.27	4.33	3.89	2.1067	0.8151^{ns}	

Legend: *- significant ns-Not significant

Statistical Limit:



derived from the interview transcripts and questionnaire responses.

Inadequate Tools and Equipment

Several of the interviewees identified the lack of facilities, equipment, and tools needed for the effective acquisition of required competencies as one of the major challenges in the implementation of student engagement strategies. Respondents emphasized that resources for learning core skills in the different fields of specialization in the TVL track are not sufficient. One teacher said "I only have three functional welding machines for more than 40 students" (T2), while another mentioned"...the classroom does not have enough space for ovens and baking stations" (T6). This problem is especially concerning in teaching TVL specializations since many of the competencies require demonstrations of skills to improve competency levels.

Respondents attribute the lack of tools and equipment for teaching and learning to the inadequate operational funds provided by the Schools Division Office (SDO). This confirms the findings of Brilliantes et al. (2019) on the in sufficiency of funds to cover expenses for school resources.

Inconsistencies Between Curriculum Standards and National Assessment Competency Standards

The inconsistency of Technical Education and Skills Development Authority (TESDA)-mandated competencies for certification (NCI and NCII) and DepEd-released competencies was another challenge identified. Based on the responses during the interviews, this situation catalyzes confusion and difficulties in lesson delivery.

"I cannot really follow the DepEd mandated competencies because it will not actually cater to the NCII that the students are aiming for because they will just pass NCI. The DepEd curriculum gives more time to the common competencies rather than the core competencies". (T6)

The lack of alignment between curriculum standards and national assessment standards proves to be detrimental not only to the learning process but to the system of education. When schools ignore national standards and instead just focus on teaching what is tested, the assessment results may not accurately provide data to inform policymakers and other stakeholders about the real ground situation (Herman et al., 2005). In addition, as explained by TESDA, the assessment competencies are being

Table 10Summary of the Level of Practice of Strategies to Foster Student Engagement According to Performance Rating

	Performance Rating								
Domains	o	DE	VS	DE	S	DE	H-value	P-value	
Learning Structure	4.24	VHP	4.12	HP	4.07	HP	1.5399ns	0.4554	
Instruction	4.27	VHP	4.17	HP	3.83	HP	2.8317ns	0.2402	
Teacher-Student Instructions	4.49	VHP	4.36	VHP	4.00	HP	1.984ns	0.32	
Parent-Community Involvement	3.91	HP	3.84	HP	3.67	HP	0.4783ns	0.7691	
Re-engagement of Students	4.17	HP	4.31	VHP	4.17	HP	1.3231ns	0.4796	
Overall Weighted Mean	4.22	VHP	4.15	HP	3.94	HP	2.0312	0.3615	

Legend: *- significant ns-Not significant

Statistical Limit:



Table II							
Challenges and Approaches	of TVL	Teachers	Related	to	Student	Engagement	

Challenges	Approaches Employed by TVL Teachers to Address Challenges	Specific Approaches Employed by TVL Teachers to Address Changes		
Inadequate Tools and Equipment	Optimizing Available Resources and Partnerships	 spending personal money making video lessons loaning materials downloading online videos encouraging parens to but materials creating mock-up structures 		
Inconsistencies between Curriculum Standards and National Assessment Competency Standards	Integrating TESDA and DepEd Competencies in Learning	- incorporating competencies - not identifying code and week number		
Poor Parental Involvement	Knowing Learners' Background Information	 contacting parents doing home visitation administering questionnaires to under stand learners communicating on a personal level 		
Teacher Specialization and Subject Taught Mismatch	Deepening Student Understanding of Subject Content	-,Modifying lesson plan - inviting experts - integrating other subjects -remediating 70-80		
Learners in Difficult Circumstances		-giving extension of deadlines		
	Increasing Student Compliance with Classroom Tasks	Giving collaborative activitiesputting 70 as the gradeusing a self-checking list		

modified according to the constantly changing industry needs.

By analysis, it can then be said that if the competency standards in the DepEd curriculum, particularly in TVL specializations, are not patterned after the needs of industries, they become irrelevant to students and society. The curriculum must relate to the real world to encourage student participation and provide the skills needed for a successful career in the future (Alismail & McGuire, 2015).

Poor Parental Involvement

Poor parental involvement was also indicated as a factor disrupting the implementation of student engagement strategies. Despite strategies to involve parents and the community, several teachers found it difficult to attain a high level of involvement from these stakeholders in which strategies related to parental and community involvement are only highly and moderately practiced. Poor parental involvement in schools can be linked to parent-related, school-related, and student-related factors (Jafarov, 2015). One parent-related factor, as identified by some participants, is the socioeconomic condition of parents. Most parents do not have regular jobs with some working more than eight hours a day on farms to provide for the family's needs. The findings of this study can also be explained by school-related factors. Confusion among parents on their role in their child's education because of unclear explanations from the school and teachers can result in a decrease in parent engagement. Lastly, because of age, senior high learners tend to not want the involvement of parents in schoolrelated tasks (Jafarov, 2015).



Teacher Specialization and Subject Taught Mismatch

Another major obstacle in the effective implementation of student engagement strategies is the mismatch between the teacher's field of specialization and the subject area being taught. One respondent finished a bachelor's degree in English but is teaching Shielded Metal Arc Welding (SMAW). Another teacher, a graduate of Bachelor of Secondary Education major in Mathematics, handles Bread and Pastry Production while a graduate of Bachelor of Science in Office Administration is given classes in Home Economics.

The findings can be attributed to the shortage of teachers in Senior High Schools (SHS). The additional requirements for TVL teacherapplicants resulted in the scarcity of qualified teachers for TVL specialization assignments (Brillantes et al., 2019). In the study of Co et al. (2021), teachers stated that their unfamiliarity with the subject area caused a lack of confidence in preparing lesson plans, devising activities, and applying concepts and principles. The lack of cognitive challenge disrupts professional development leading to the feeling of incompetence and inadequacy (Co et al., 2021). Eventually, teaching effectiveness is significantly decreased which in turn negatively affects student achievement (Ingersoll et al., 2014).

Learners in Difficult Circumstances

The condition of students in adverse socioeconomic circumstances and geographical locations also poses a great challenge to educators. Many students in SHS are working part-time jobs and living in far-flung areas. As stated by the participants, the long home-to-school distances also contribute to students' attitudes to schooling. In certain areas in the Benguet province, students must walk through fields and muddy paths for more than 30 minutes to reach school. Though walking to school is regarded as a physical activity that promotes health (Hinckson et al., 2014), it has a sizable effect on student performance in school (Baliyan & Khama, 2020). As argued, it may lead to poor concentration in class since traveling a lengthy distance is physically and mentally tiring (Peteros et al., 2022). This study's findings support the results of the study of Tomaszewski et al. (2020) which revealed that students with low socioeconomic status show lower levels of engagement compared to other students. Similar results were also found in the study Tzafea (2021) which indicated a strong relationship between socioeconomic status and student engagement.

Approaches Employed to Address Challenges in Implementing Student Engagement Strategies

The student engagement strategies were still recorded as highly practiced despite the difficulties encountered. This can be explained by the approaches done to address the challenges to minimize the adverse impacts and continue to foster engagement (Table 11). Particularly, the approaches include optimizing available resources and partnerships, integrating TESDA and DepEd competencies in learning, knowing learners' background information, deepening student understanding of subject content, and increasing student compliance with classroom tasks.

Optimizing Available Resources and Partnerships

With the unavailability of essential equipment materials. teachers maximized and utilization of obtainable resources. Some teachers took advantage of technological development by creating video lessons to demonstrate vital competencies and downloading videos from online platforms for students to watch. Instead of purchasing materials using personal money, some teachers opted to optimize partnerships with individuals and organizations. Although the lack of resources in schools has been comprehensively explored in prior studies, more work is necessary to answer the question of strategies employed by teachers in addressing this gap. As Brillantes et al. (2019) reiterated, the main cause of the problem is found in the procurement process. Therefore, the solution should target the elimination of these procedural barriers as teachers do not have the managerial and legal capacity to address the question in its entirety.

Integrating TESDA and DepEd Competencies in Learning

With the problem of the inconsistencies between the TESDA and DepEd TVL



competencies, TVL teachers were encouraged to integrate both the TESDA competencies and the DepEd competencies in their lessons.

"I try to identify important competencies both from DepEd curriculum guide and the NCI and NCII competencies. In my lesson plan, I do not really write the code and week number as required by the template provided by DepEd. Even if the competency asks for three weeks for mastery, I shorten this period to accommodate competencies identified by TESDA" (T6)

According to one of the respondents,"... the integration of NCGI and NCII competencies is necessary since it is TESDA that conducts assessments of the learners" (T4). Although this problem is apparently known by both agencies, no concrete steps have been identified to solve the inconsistencies. Teachers are then burdened with covering the DepEd-released competencies while providing the best preparation for the TESDA assessments.

Knowing Learners' Background Information

Efforts from some teachers were mostly focused on knowing and understanding learners' background stories. Usually, the data provided by parents and students during the enrollment period becomes the only source of learner background information. The document, however, only provides limited particulars to explain student behaviors and attitudes. To supplement, teachers took innovative actions such as home visitations, flexible communication with parents, student questionnaire surveys, background checks from friends and previous teachers, and classroom activities related to student self-awareness and self-reflection. Knowing pertinent information about students is beneficial to the teaching and learning process. Aside from the advantages to students, teachers also gain from this activity. With the knowledge about their students' backgrounds, teachers can develop effective differentiated classroom instruction pedagogies (Cornett et al., 2020). As pointed out by the participants, being familiar with the students helps the teachers in designing appropriate approaches, and interventions.

Deepening Student Understanding of Subject Content

With the observed low level of comprehension among SHS students, some teachers became creative in the delivery of lessons to ensure the learning of the required competencies.

"I asked experts from the field to conduct skills demonstrations in my classes. Recently, I invited a graduate of BSIT who is currently engaged in electronics repair in the community to help me in teaching my EIM students. I believe it was effective based on the outputs of my students after the demonstrations." (T4)

Many students have difficulty comprehending when the English language is used so some teachers resort to code-switching by the "...use of Ilocano when explaining aside from some terms which do not have direct transactions" (T3). Some students need more attention than others. For different type of learners, differentiated learning is highly encouraged but before this can be effective implemented, "...do home visits and let students answer questionnaires to assess their social and intellectual skills" (T4). Since some lessons are only viewed as abstract concepts by the learners, the teachers are expected to make the lessons relevant and concrete. For instance, "when teaching farming techniques, I bring my students to actual farms to do the demonstrations" (T3).

The participants explained that teachers may encounter difficulties in computing student grades but there should be a realization that the pandemic also caused difficulties that students face. This view is also reflected in Table 2 and Table 3 in which most of the teachers strongly agree that engagement is susceptible to changes resulting from influences from the learning environment.

Increasing Student Compliance with Classroom Tasks

One of the major challenges is the low rate of output submission due to various reasons such as poor attendance and low comprehension. Primarily, these behavioral problems are caused by difficulties in life faced by students. To resolve this concern, many of the teachers extended the deadlines for submissions. The self-checking strategy was used in the classes wherein students'



names were written on the board with the corresponding activities already performed.

Conclusions

TVL teachers, regardless of teaching experience, agree with the multi-dimensional and holistic nature of student engagement. The absence of significant differences across teaching experience groups suggests a shared and understanding of consistent engagement irrespective of the number of years in the teaching profession. Similar results are shown when TVL teachers are grouped according to their performance rating. The lack of significant differences indicates a unified perspective on engagement, suggesting that understanding of student engagement is consistent across varying levels of teacher performance.

In terms of the practice of student engagement strategies, all teaching experience groups generally highly practiced or very highly practiced these strategies. A statistically significant difference was only noted in the domain of Teacher-Student Interactions suggesting that teaching experience may influence how this specific engagement strategy is implemented. The levels of highly practiced and very highly practiced are similarly reported when teachers are grouped according to performance rating. Teachers rated Outstanding tended to report slightly higher engagement strategy practices compared to those rated very satisfactory and satisfactory.

implementation the of engagement strategies, TVL teachers face multifaceted challenges, including inadequate tools and equipment, curriculum mismatches, poor parental involvement, and misalignment between teacher specialization and subject assignments. These issues are compounded by the challenges with learners in difficult circumstances, highlighting pervasive gaps in resource allocation, curriculum and stakeholder support. Despite these challenges, TVL teachers demonstrate resourcefulness and adaptability by employing practical, often personal, strategies to sustain student learning. These include optimizing limited resources, integrating competencies from multiple agencies, engaging parents directly, modifying instruction, and providing flexible learning opportunities.

Recommendations

With the strong agreement to student engagement conceptualizations, it is recommended that professional development programs continue to reinforce this shared understanding of student engagement. Additionally, schools may sustain and enhance this unified perspective by integrating student engagement principles into teacher evaluation, mentoring, and performance development systems.

Based on the conclusion on the levels of practice of student engagement strategies, it is recommended that professional development programs continue to emphasize strategies for enhancing teacher-student interactions. Peer mentoring programs may also be continuously supported to allow less experienced teachers to learn from those with mid-level experience and highly experienced teachers as they demonstrated the most consistent and highly practiced engagement strategies.

The challenges may be addressed with DepEd, in collaboration with relevant agencies such as TESDA and LGUs, strengthen support systems for TVL teachers by providing adequate tools equipment, aligning curriculum assessment standards, and offering targeted professional development programs. Additionally, schools may be empowered to enhance community and parental engagement mechanisms implement teacher deployment policies ensure alignment between specialization and subject taught. Addressing these systemic issues will improve instructional delivery and foster more meaningful student engagement, particularly for learners in difficult circumstances.

Educational policymakers school and administrators may institutionalize the innovative strategies employed by TVL teachers by providing structured support, such as funding for instructional materials, access to professional learning communities, and training on differentiated instruction and multi-agency curriculum integration. Formalizing these teacherled practices through policy and program support will ensure sustainability, promote equity, and enhance the overall quality of technical-vocational education across diverse learning contexts.



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