# The Uphill Climb: Technical Vocational (TechVoc) Graduates' Pathways from Vocational to Higher Education

**Michael Angelo A. Legarde**

Palawan State University – Graduate School
Puerto Princesa City, Palawan, Philippines
malegarde@psu.palawan.edu.ph

*Abstract: The experiences of Technical-Vocational students in university involve a period of adjustment, bridging knowledge gaps, interacting with diverse peers, and leveraging their practical skills. Thus, this descriptive cross-sectional study was conducted to determine the academic experiences of TechVoc students who decided to continue higher education. A researcher-made questionnaire was administered to the purposively chosen fifty TechVoc graduates who enrolled in a state university in the Philippines. The findings reveal that TechVoc students encountered an adjustment period as they transitioned from a vocational or technical training environment to a more academically focused university setting. Since TechVoc students may find that some aspects of their vocational training do not directly align with the theoretical concepts taught in university courses, they may need to adapt to a different teaching and learning style, increased academic workload, and theoretical coursework. With adaptability, perseverance, and the utilization of available resources, TechVoc students can thrive in their university education and prepare themselves for successful careers in their chosen fields. It is important to note that while TechVoc students may face certain challenges, they also bring valuable skills, practical knowledge, and a unique perspective to the college environment. By leveraging their strengths, seeking support when needed, and actively engaging in their education, TechVoc students can overcome challenges and make the most of their college experience.*

Keywords— TechVoc strand; academic experiences; engagement; motivation; career pathways

## 1. INTRODUCTION (*Heading 1*)

Education has garnered global attention over the years due to its significance in shaping the destiny of every country (Dizon, R. et al., 2019). To produce globally competitive Filipinos and clear the path for a progressive society, the Philippine government has worked relentlessly to continuously raise the bar for the country's educational system (Caballero & Cabahug, 2015). According to Mirasol et al. (2021), the Philippines was one of just three countries worldwide and the last in Asia to implement a 10-year pre-university curriculum. Moreover, it was determined that this system needed to be revised to educate pupils for both the workforce and higher education needs. With an emphasis on helping students develop important abilities and skills, the curriculum was also improved to give them a more well-rounded and thorough education. Because of this gap, the Philippine government made significant reforms to improve the quality of basic education. As a result, in order to coincide with the national curriculum and meet the demands of the global market, where a quality education has become a must for everyone, the Philippine Educational System had to adapt to a more dynamic, modern curriculum that followed the 12-year program.

The K-12 education system in the Philippines refers to the comprehensive reform implemented in 2013 that added two additional years to the country's basic education cycle. It was a substantial educational revolution intended to bring the Philippine educational system into conformity with international norms and give students a more comprehensive

and globally competitive education. Furthermore, the K–12 curriculum strongly emphasizes the acquisition of 21st-century skills like digital literacy, collaboration, communication, and critical thinking. With the knowledge, skills, and values required for higher education, work, entrepreneurship, and global citizenship, it hopes to generate well-rounded graduates. Although the K-12 program's implementation originally encountered difficulties and required revisions, it has been viewed as a significant step towards raising the standard of education in the Philippines. It offers students a longer and more thorough educational experience, better preparing them for postsecondary education or employment.

Technical Vocational Track, also known as the TechVoc Track, is one of the four tracks offered in the senior high school program, which was implemented as part of the K to 12 educational reforms. It is an educational program in the Philippines that provides students with technical and vocational skills (Ramos, 2021). This track aims to give students real-world expertise and skills that are immediately useful in the workplace. After graduating from high school, it is intended to prepare students for either the workforce right away or for starting their own business and additional study and training in technical or vocational institutions.

Depending on their interests and career goals, students in the TechVoc Track can select from a wide variety of specialized disciplines and fields of study. Automotive technology, electrical installation and maintenance, computer and communications technology, culinary arts, tourism, agriculture, and many more fields are among them. The curriculum incorporates academic knowledge and practical

training, enabling students to gain technical expertise and practical abilities in their chosen field (Brillantes et al., 2019). The track helps to achieve the overarching objective of creating a workforce with the essential skills to promote economic growth and development in the Philippines by providing a practical and industry-relevant education. It gives students the chance to gain marketable skills, become active citizens, and support the nation's sustainable growth.

Additionally, this track aims to give students relevant practical skills and competencies compatible with particular crafts or industries. It seeks to enable students to pursue additional study in technical or vocational institutions or to prepare them for immediate employment. The program blends classroom learning with practical experience to gain technical expertise and transferable skills in various fields. Auxiliary to this, the TechVoc track aims to meet the need for skilled professionals with technological know-how and practical skills. It gives students a more specialized and useful education that opens up work chances or serves as a springboard for additional study in technical or vocational institutions. Students who follow this pathway gain technical proficiency and vital abilities like critical thinking, problem-solving, teamwork, and communication. These abilities enable students to adapt to shifting workplace needs and promote economic growth, making them beneficial for employment and entrepreneurship.

Moreover, graduates from TechVoc tracks are increasingly interested in pursuing higher education, and this enthusiasm is becoming increasingly essential. To prepare students for quick entry into the workforce, this track equips them with the practical skills and information needed in particular trades or vocations. Nevertheless, many TechVoc graduates decide to continue their education by seeking higher education degrees or certifications (Ramos, 2021).

However, the path from tech voc to university is not without its challenges. Some students may need to take additional prerequisite courses to meet university admission requirements. There can also be adjustments in learning styles and study habits required when transitioning from a more applied vocational program to a more theory-driven university environment.

While choosing to continue higher education is a big move for TechVoc graduates, it is not without its difficulties. These graduates might experience various difficulties throughout the transfer, such as academic adaptations, variances in learning styles, budgetary limitations, and social integration into a different school setting. When TechVoc graduates transition to college, they often encounter common challenges as they adjust to the academic rigor. These challenges stem from the difference in educational focus between vocational training and college coursework. While TechVoc programs emphasize practical skills and hands-on learning, college education emphasizes theoretical knowledge, critical thinking, and academic writing. Similarly, transitioning from a learning environment that promotes practical application and hands-on

learning to one that prioritizes theoretical understanding may require more work for TechVoc graduates. They must improve their capacity to understand abstract ideas critical thought, and apply theoretical concepts to practical situations. This change may take time and effort as students learn to traverse areas that demand in-depth reading, research, and conceptual understanding.

For many students who have completed technical and vocational (TechVoc) programs, the prospect of transitioning to university-level studies can be an intimidating one. These students, armed with hands-on skills and practical expertise, often find themselves facing a steep learning curve as they navigate the more theoretical and research-oriented environment of the university.

One of the primary challenges TechVoc graduates encounter is the adjustment to academic rigor and the university's theoretical curriculum. Accustomed to a more applied, project-based approach, these students can struggle to adapt to the conceptual nature of university coursework, which places a greater emphasis on abstract thinking, critical analysis, and scholarly writing. Developing the necessary study habits, critical thinking skills, and comfort with ambiguity required for success in the university setting is a key hurdle for these students to overcome.

Another significant challenge lies in fulfilling the prerequisite and general education requirements set by universities. The transfer of vocational credits and aligning them with university degree programs can be a complex and time-consuming process. Additionally, TechVoc students may find themselves required to complete additional courses outside their technical field of expertise, such as humanities and social sciences, which can pose a substantial challenge. Closely tied to the academic transition is the development of strong academic writing and research skills. TechVoc students are often more familiar with hands-on, project-based assessments rather than the traditional academic writing and research assignments common in university courses. Mastering scholarly conventions, information literacy, and formal citation practices can be a significant hurdle for these students.

Furthermore, navigating the university resources and support services can be a daunting task for TechVoc graduates. The larger, more impersonal university setting can be vastly different from the tight-knit, cohesive environment of vocational programs. Proactively seeking out and utilizing resources such as academic advising, tutoring, and mental health support can be crucial for TechVoc students to succeed in the university environment.

By addressing these key challenges through targeted institutional support and individual resilience, TechVoc graduates can position themselves for academic and career success as they pursue their university studies. With the right strategies and resources in place, these students can leverage

their unique strengths and experiences to thrive in the university setting.

In line with these arguments, studies have yet to be conducted on the academic experiences of TechVoc graduates who continued higher education. Thus, this study offers valuable insights into the experiences of TechVoc graduates in university settings. This will also provide a deeper knowledge of the elements influencing students' academic journeys by shedding light on their motivations, difficulties, support networks, and success techniques.

## 2. METHODOLOGY

### 2.1 Research Design

In accordance with the research questions found in this study, a quantitative research strategy was carried out. In order to address research issues and evaluate hypotheses, quantitative research employs a methodical empirical approach to the collection, organization, and analysis of numerical data (Ishtiaq, 2019). It involves collecting data in numerical form, usually through surveys, experiments, or existing datasets, and applying statistical analysis to draw objective conclusions. Specifically, this study used a descriptive cross-sectional method. A cross-sectional study is a type of quantitative research design in which researchers gather data from many individuals at a single time (Wang & Cheng, 2020). A cross-sectional study is a quantitative research design in which researchers collect data from a large number of people at once (Wang & Cheng, 2020). In a cross-sectional study, the researcher evaluates both the participants' exposures and the outcomes. In contrast to cohort and case-control studies, which select participants based on exposure or outcome status, cross-sectional studies select participants based only on the study's inclusion and exclusion criteria (Setia, 2016). After selecting study volunteers, the researcher performs the study to assess exposure and outcomes.

### 2.2 Respondents of the Study

Based on the descriptive cross-sectional design adopted in this study, the respondents involved in this study were selected using a purposive sampling technique. A non-probability sampling method called "purposeful sampling" is used in research to choose individuals or groups of individuals who meet particular requirements pertinent to the study question or objective. When the population being investigated is too small, difficult to reach, or too heterogeneous to employ probability sampling methods, this sampling technique is frequently used, also known as judgmental sampling or selective sampling. In the context of this study, 50 respondents were involved and they were purposively chosen based on the pre-identified criteria. First, they should finish their senior high school from the Technical-Vocational-Livelihood (TVL) track. Second, they should be enrolled in a state university for their higher education.

### 2.3 Research Instrument and Statistical Analysis

A researcher-made questionnaire was used to gather the data needed in this study. This questionnaire consisted of two components. The first component describes the demographic profiles of the respondents, whereas the second component consists of a 5-point Likert scale that describes the different experiences of the respondents. This component includes their academic engagement, motivation to finish their studies, study habits and time management skills, and critical thinking and analyses. Furthermore, the said questionnaire was pilot tested to other group of students who have shared common demographics. Similarly, it was subjected to content validity and internal reliability. The Cronbach alpha of 0.897 indicates that the research instrument has highly reliable and internally consistent.

Furthermore, descriptive statistical measures were used to address the study's research problems. Mean and standard deviation were used to determine the respondents' academic experiences based on the stipulated variables. For ethical reasons, the students who participated in the study were given informed consent. They were informed of the study's goal and assured that their participation was entirely voluntary and had no influence on their academic standing.

## 3. RESULTS AND DISCUSSION

### 3.1 RESPONDENTS' ACADEMIC ENGAGEMENT

**Table 1 – Academic Engagement of the Respondents**

| Statement | Mean | Description |
|---|---|---|
| 1. *I participate actively in our class discussion, performance tasks and educational activities.* | 1.88 | Low Engagement |
| 2. *I make sure that I am paying attention to my professors/instructors during our class discussion.* | 3.41 | High Engagement |
| 3. *I am contributing to our class discussions by answering the questions of my professors/instructors.* | 2.13 | Low Engagement |
| 4. *When our academic tasks and other requirements are difficult, I still exert effort to do them* | 3.43 | High Engagement |
| 5. *Despite facing some challenges, I keep trying or working hard to finish my academic requirements.* | 3.45 | High Engagement |
| **Over-All Mean** | **2.86** | **Moderate Engagement** |

**Legend:**
*1.0 – 1.79 – Very Low Engagement; 1.80 – 2.59 – Low Engagement; 2.60 – 3.39 – Moderate Engagement; 3.40 – 4.19 – High Engagement; 4.20 – 5.0 – Very High Engagement*

Table 1 depicts the respondents' level of academic engagement. Based on the analysis, it can be gleaned that the statement *"I participate actively in our class discussion, performance tasks, and educational activities"* got the lowest mean rating of 1.88. This implies that the respondents have low engagement in terms of class participation. This data was followed by the statement, *"I am contributing to our class discussions by answering the questions of my professors/instructors,"* with a mean rating of 2.13, which stresses that the respondents also have low engagement in terms of their engagement during the class discussion.

However, it can also be noted that despite the academic difficulty experienced by the respondents, they still exert effort in working on their academic tasks and requirements. Furthermore, the overall mean rating of 2.86 clearly indicates that the respondents have a moderate level of academic engagement. This could be explained by Bacit's (2019) findings, which found that students engaged in the Technical-Vocational and Livelihood (TVL) track appear to have little interest in academic achievement and settle for passing grades. She further stresses that TechVoc graduates may initially feel hesitant to actively participate in classroom discussions or group activities. They may be less accustomed to expressing their ideas verbally or engaging in academic debates. Overcoming this challenge and actively participating in class can enhance their learning experience and help them build confidence in their academic abilities

As the landscape of higher education continues to evolve, one group of students is increasingly making their mark on university campuses: those who have graduated from technical and vocational (TechVoc) programs. Contrary to the perceptions that often surround this population, TechVoc students are proving to be a force to be reckoned with in the university setting.

One of the primary strengths that TechVoc students bring to the university is their strong foundation in practical, hands-on skills. Having honed their expertise in a specific technical domain, these students often excel in courses and projects that require the application of their specialized knowledge. This practical orientation allows them to bridge the gap between theory and practice, making valuable contributions to both classroom discussions and real-world problem-solving.

However, one of the primary challenges for TechVoc students is adjusting to the more theoretical and conceptual nature of university-level coursework. After being immersed in a hands-on, applied learning environment during their vocational training, they may initially struggle with the shift towards abstract thinking, scholarly research, and complex theoretical frameworks. These students may find that their technical expertise and practical skills do not always directly align with the academic prerequisites or foundational knowledge required in certain university courses. This can create a knowledge gap that they need to bridge, often requiring additional time and effort to catch up on foundational concepts or fill in any academic deficiencies.

As TechVoc graduates continue to make their mark in universities, institutions are recognizing the value they bring to the table. From dedicated support services to tailored curricular initiatives, universities are making strides in creating an environment that fosters the success of these students. By acknowledging and nurturing the strengths of TechVoc students, universities can unlock a wealth of untapped potential and pave the way for a more diverse and enriched academic landscape.

## 3.2 RESPONDENTS' ACADEMIC MOTIVATION

**Table 2 – Academic Motivation of the Respondents**

| | Statement | Mean | Description |
|---|---|---|---|
| 1. | *I attend my classes because learning new things gives me happiness.* | 3.48 | High Motivation |
| 2. | *I attend my classes because I enjoy the feeling of surpassing myself in one of my personal achievements.* | 3.53 | High Motivation |
| 3. | *I attend my classes because I believe that learning from my teachers will help me better prepare for the career I want to pursue in the future.* | 3.43 | High Motivation |
| 4. | *I go to my classes because I enjoy learning new things that I have never done before.* | 3.42 | High Motivation |
| 5. | *I attend my lessons for the satisfaction I get from reading about many interesting topics.* | 3.49 | High Motivation |
| | **Over-All Mean** | **3.47** | **High Motivation** |

**Legend:**
*1.0 – 1.79 – Very Low Motivation; 1.80 – 2.59 – Low Motivation; 2.60 – 3.39 – Moderate Motivation; 3.40 – 4.19 – High Motivation; 4.20 – 5.0 – Very High Motivation*

Table 2 illustrates the academic motivation of the respondents. The analysis shows that the statement *"2. I attend my classes because I enjoy the feeling of surpassing myself in one of my personal achievements."* got the highest mean of 3.53 which indicates that the respondents are highly motivated to finish their academic tasks. This was followed by the statement *"I attend my lessons for the satisfaction I get from reading about many interesting topics"* which obtained a mean score of 3.49 which reflects that the respondents experienced enjoyment in their academic education in pursuing higher education.

Further analysis indicates that the overall mean of 3.47 stresses that the respondents have high level of academic motivation. This supports with the study of Dimaunahan & Panoy (2021) which revealed that students whose inclination is in the Technical and Vocational track have high level of

motivation in doing their academic tasks. They further revealed that TechVoc students may find a mismatch between the skills they have acquired through their vocational training and the curriculum offered in their college program. This can result in feelings of redundancy or boredom in certain courses. Moreover, the standard deviations indicate that there is no variation in the mean ratings obtained from the responses of the participants.

Moreover, TechVoc students tend to possess a heightened sense of motivation and determination. Having already navigated the challenges of a vocational program, they often approach their university studies with a keen focus and a drive to succeed. This intrinsic motivation, coupled with their willingness to work hard and persevere, enables TechVoc students to overcome the initial obstacles they may face in transitioning to the university environment. Furthermore, TechVoc students also experience a range of emotions as they navigate the transition to the university setting. Understanding these academic emotions can provide valuable insights into their experiences and help universities better support their success. Many TechVoc students may feel apprehensive or anxious about the shift to a more theoretical and research-oriented curriculum, particularly if they have been primarily focused on hands-on, practical learning. Also, the unfamiliarity with university-level academic expectations, such as in-depth writing assignments and rigorous examinations, can contribute to feelings of unease and self-doubt.

In addition, the transition from a vocational training program to the university environment can be an emotional rollercoaster for many TechVoc students. As they exchange the hands-on, applied learning they are accustomed to for the more theoretical and research-oriented curriculum of higher education, these students often confront a myriad of challenges that can significantly impact their academic emotions and, ultimately, their overall success.

One of the primary hurdles TechVoc students face is the difficulty in adapting to the academic culture of the university. Immersed in a world that prioritizes scholarly writing, in-depth analysis, and abstract critical thinking, these students may initially feel out of their element. The shift from a practical, problem-solving approach to a more conceptual, theory-driven framework can be jarring, leading to feelings of anxiety, disorientation, and self-doubt. The unfamiliar academic norms and expectations can make these students question their ability to thrive in this new environment.

Compounding this challenge is the perceived lack of belonging that many TechVoc students experience. Surrounded by peers who have followed a more traditional academic path, these students may feel like outsiders, struggling to find their place within the university community. The encounter with biases or preconceptions from their classmates or even faculty members can exacerbate this sense of not belonging, contributing to the development of imposter syndrome. As these students grapple with the notion that they do not rightfully belong in this academic setting, their confidence and self-esteem can take a significant hit.

Moreover, the need to bridge the knowledge gap between their technical expertise and the academic prerequisites of certain courses can be emotionally draining for tech voc students. The extra time and effort required to catch up on foundational concepts or fill in academic deficiencies can lead to feelings of frustration, exhaustion, and a lack of confidence in their own abilities. The constant struggle to keep up with their peers can be overwhelming, further exacerbating the emotional challenges they face.

Hence, understanding and addressing the diverse range of emotions experienced by TechVoc students is crucial for universities to create a more inclusive and supportive environment. By acknowledging these emotional challenges and implementing tailored resources and initiatives, universities can empower TechVoc students to navigate the transition to higher education with confidence and achieve their full academic potential.

## 3.3 RESPONDENTS' STUDY HABITS AND TIME MANAGEMENT

**Table 3 – Study Habit and Time Management of the Respondents**

| | Statement | Mean | Description |
|---|---|---|---|
| 1. | *I make a weekly timetable for my school work and other academic tasks that I need to accomplish.* | 2.35 | Rarely |
| 2. | *I make a review schedule for my examination.* | 2.69 | Sometimes |
| 3. | *I prioritize academic tasks which should be done first, second, and so on.* | 2.52 | Rarely |
| 4. | *I am able to keep my concentration when working academic tasks and does not let my mind drift away.* | 3.16 | Sometimes |
| 5. | *I limit myself in using gadgets, online games, and/or social media platforms.* | 2.30 | Rarely |
| | **Over-All Mean** | **2.61** | **Sometimes** |

**Legend:**
*1.0 – 1.79 – Never; 1.80 – 2.59 – Rarely; 2.60 – 3.39 – Sometimes; 3.40 – 4.19 – Often; 4.20 – 5.0 – Always*

Table 3 indicates the study habits and time management of the respondents. It can be gleaned in the table that the statement "*I limit myself in using gadgets, online games, and/or social media platforms*" has the lowest mean rating of 2.30, which reveals that the respondents experienced difficulty in controlling their selves in using their gadgets for recreational activities, which hindered their time for studying their lessons and working with their academic tasks. This was

also validated by the statement "*I make a weekly timetable for my school work and other academic tasks that I need to accomplish*" having a mean rating of 2.35, which stresses that in terms of managing their time, the respondents were not organize in terms of accomplishing their tasks and other school works.

Further, the mean rating of 2.52 for the statement "*I prioritize academic tasks which should be done first, second, and so on*" reflects that the respondents have difficulty in managing their tasks. However, the mean rating of 2.69 indicates that they still give their time in making a review schedule in preparation for their examination. This could be attributed by the findings of Gayef et al. (2017) which revealed that the time management and study habits of students from TechVoc is lower than those students from other strands. They further echoed that the time management of these group of students is not ideal since they spend most of their time on using their smartphones in playing games and browsing social media platforms, instead of studying and doing their academic tasks.

In line with this, TechVoc graduates may need to develop new study habits and refine their time management skills to meet the demands of college coursework. Balancing academic requirements with work or other responsibilities can be particularly challenging. Learning how to allocate time effectively for studying, completing assignments, and preparing for exams becomes crucial. Furthermore, the standard deviations indicate that there is no variability in the responses obtained from the respondents.

One of the primary challenges TechVoc students face is the need to develop more robust note-taking and active learning strategies. Accustomed to a learning style that emphasizes practical demonstrations and hands-on problem-solving, these students may struggle to effectively capture and synthesize the wealth of information presented in university lectures and course materials. The shift towards a greater emphasis on written assignments, scholarly research, and critical analysis can leave tech voc students feeling overwhelmed and uncertain about the best way to approach their studies.

Moreover, the university environment often demands a higher level of self-directed learning and independent research. Tech voc students, who may have relied more on structured guidance and step-by-step instructions in their previous educational experiences, may find the increased autonomy and responsibility of university-level studies to be a significant challenge. Developing effective time management skills, creating personalized study schedules, and cultivating the discipline to engage in independent research and exploration can be daunting tasks for these students.

Additionally, the need to bridge the knowledge gap between their technical expertise and the academic prerequisites of certain courses can significantly impact the study habits of TechVoc students. The extra time and effort required to catch up on foundational concepts or fill in academic deficiencies can disrupt their typical study routines, leading to feelings of frustration and a sense of falling behind their peers. To navigate these challenges, TechVoc students must be willing to embrace a more diverse array of study strategies and learning techniques. This may involve experimenting with different note-taking methods, such as the Cornell system or mind mapping, to better capture and organize the information presented in lectures and course materials.

Additionally, developing effective time management skills, creating personalized study schedules, and learning to prioritize tasks can help these students manage the increased autonomy and academic demands of the university setting. TechVoc students should not hesitate to seek out academic support services, such as tutoring centers, writing workshops, or peer-learning groups, to help bridge the knowledge gap and develop the necessary academic skills. By adapting their study habits to the unique demands of the university setting, TechVoc students can position themselves for academic success. Through the adoption of more comprehensive note-taking strategies, the cultivation of self-directed learning skills, and the utilization of available academic support resources, these students can navigate the transition to higher education with greater confidence and resilience.

## 3.4 RESPONDENTS' CRITICAL THINKING SKILLS AND ANALYSIS

**Table 4 – Critical Thinking and Analysis of the Respondents**

| Indicator | Mean | Description |
|---|---|---|
| 1. *Ability to formulate and analyze the main issues.* | 2.56 | Low |
| 2. *Ability to answer questions accurately and systematically.* | 2.70 | Moderate |
| 3. *Ability to organize and analyze arguments and opinions.* | 2.33 | Low |
| 4. *Ability to choose logical, relevant, and accurate arguments.* | 2.37 | Low |
| 5. *Ability to draw and make accurate conclusions.* | 2.69 | Moderate |
| **Over-All Mean** | **2.53** | **Low** |

**Legend:**
*1.0 – 1.79 – Very Low; 1.80 – 2.59 – Low; 2.60 – 3.39 – Moderate; 3.40 – 4.19 – High; 4.20 – 5.0 – Very High*

As depicted by Table 4, the mean rating of 2.56 indicates that the respondents have low level in terms of formulating and analyzing the main issues. Added to this, the mean score

of 2.33 also indicates that they have difficulty in organzing and analyzing their arguments and opinions. This could be attributed by the fact that they have low level in terms of choosing logical, relevant and accurate arguments. However, it can also be noted that that respondents have moderate level in terms of answering questions accurately and systematically and making accurate conclusions, having mean ratings of 2.70 and 2.69, respectively.

Further analysis also stresses the overall mean rating of 2.53 which shows that the respondents have low level of critical thinking and analysis. Similarly, the standard deviations depict that there is no variability in the responses obtained from the participants of this study. This echoes the findings of López et al. (2023), who found that critical thinking has been difficult to develop in technical and vocational education and training, where learning practical skills is generally prioritized.

Moreover, college courses often require TechVoc graduates to develop critical thinking, analysis, and problem-solving skills. This shift from practical problem-solving to abstract analysis can be a significant challenge. Therefore, TechVoc graduates may need to adapt to this new way of thinking and develop the ability to analyze complex concepts and apply critical thinking to their assignments and exams.

One of the key assets that TechVoc students bring to the university is their strong problem-solving skills. Accustomed to tackling practical, real-world challenges through a systematic, step-by-step approach, these students possess a deep understanding of the process of identifying problems, analyzing the root causes, and implementing effective solutions. This practical problem-solving mindset can be a valuable asset in the university setting, where they are often required to engage in complex, multi-faceted problem analysis and solution development.

Additionally, TechVoc students' familiarity with the application of technical knowledge and the ability to translate theoretical concepts into tangible outcomes can be a significant advantage. Their capacity to bridge the gap between abstract ideas and concrete applications can provide them with a unique perspective that allows them to approach academic tasks with a more pragmatic and solution-oriented mindset.

However, the transition to the university environment can also present challenges for TechVoc students in developing their critical thinking skills. The shift from a focus on hands-on, practical learning to a greater emphasis on theoretical analysis, scholarly research, and abstract conceptualization can be a significant hurdle. These students may initially struggle to adapt their problem-solving approach to the more nuanced and multifaceted demands of academic critical thinking

To address this challenge, universities must provide targeted support and resources to help these students bridge the gap between their existing problem-solving skills and the critical thinking requirements of the academic setting. This may involve offering specialized workshops or mentoring programs that guide these students in developing the skills necessary for effective research, analytical writing, and complex problem analysis. By exposing these students to a wider range of critical thinking strategies, such as evaluating multiple perspectives, engaging in deeper questioning, and considering the implications and broader contexts of their work, universities can empower these students to expand their critical thinking abilities. Additionally, providing opportunities for collaborative learning, where TechVoc students can engage with their peers from diverse academic backgrounds, can further enhance their critical thinking skills through the exchange of diverse ideas and problem-solving approaches.

Furthermore, universities should encourage TechVoc students to actively apply their practical problem-solving skills to academic tasks, fostering an environment where their unique perspectives are valued and integrated into the learning process. This can involve integrating case studies, project-based learning, and real-world scenario analyses into the curriculum, allowing TechVoc students to leverage their hands-on expertise and problem-solving mindset to tackle complex academic challenges.

By nurturing the critical thinking abilities of TechVoc students and creating a supportive academic environment that values their unique strengths, universities can empower these students to thrive in the university setting. Through a combination of targeted skill development, collaborative learning opportunities, and the integration of their practical expertise, these students can cultivate advanced critical thinking skills that will serve them well throughout their academic and professional pursuits.

## 4. CONCLUSION

TechVoc graduates encountered several challenges when adjusting to the academic rigor in college. Hence, it is important to recognize that the experiences of TechVoc graduates in college can vary substantially based on individual circumstances abd adversities and the specific college or university they attend. Some Techvoc graduates may seamlessly integrate into college life and thrive academically, while others may face certain challenges in the academic transition. Nonetheless, with determination, support, and a proactive approach, TechVoc graduates can make the most of their college experience and leverage their practical skills to excel in their chosen field.

Furthermore, TechVoc students encountered an adjustment period as they transition from a vocational or technical training environment to a more academically focused university setting. For instance, this study revealed that TechVoc graduates had difficulty in performing academic tasks that require critical thinking and other forms of higher order thinking skills. This aligns with the findings of López et al.

(2023), who discovered that critical thinking is difficult to develop in technical and vocational education and training, where mastering practical skills is typically favored. Critical thinking development in TechVoc is a revolutionary concept. Critical thinking is a higher-order cognitive capacity that is essential for students because it prepares them to respond to a wide range of difficult challenges that will inevitably arise in their personal and professional life. Analysis, interpretation, evaluation, explanation, inference, and self-regulation are the cognitive skills that underpin critical thinking. Critically thinking students actively participate in problem solving, evaluation, synthesis, communication, analysis, and reflection. Critical thinking is one of the most sought-after skills in the market, among other 21st-century competencies (Din Nugraha et al., 2020). In addition to basic guidelines on how to teach critical thinking and incorporate it into pedagogical practices in TechVoc, there is some evidence that activities can enhance higher-order thinking skills generally (Ismail, 2018). (Sulaiman, et al., 2015). Nonetheless, interventions that support the development of this skill are still needed (Salleh & Sulaiman, 2020).

Similarly, TechVoc students may need to adapt to a different teaching style, increased workload, and theoretical coursework. They may find that some aspects of their vocational training do not directly align with the theoretical concepts taught in university courses. By recognizing these challenges and proactively addressing them, TechVoc graduates can navigate the academic rigor of college more effectively. It is important for them to remember that these challenges are part of the learning process, and with perseverance, resilience, and the support of available resources, they can thrive in their college education and achieve their academic goals.

On the same vein, developing effective and efficient study habits and time management skills becomes crucial for success in university. Time management is managing and planning how to divide available time among various activities. Time management is essential because it greatly impacts an individual's overall performance and achievements (Mariano et al., 2022). The results of this study complement the findings of Gayef et al. (2017), who discovered that students in TechVoc have lower time management and study habits than students in other strands. They also stated that the students' time management skills could be better because they spend most of their time on their smartphones playing games and browsing social media platforms rather than studying and performing academic assignments.

As universities recognize the value that tech voc students bring to their institutions, many are making concerted efforts to support their academic success. This includes dedicated support services, such as academic advising, tutoring, and mentorship programs, to help these students navigate the transition to university-level studies. Additionally, some universities are introducing tailored curricular initiatives, such as bridging programs or integrated pathways, to facilitate the smooth transfer of vocational credits and help tech voc students fulfill degree requirements.

By leveraging their practical expertise, adaptability, and intrinsic motivation, tech voc students are making significant strides in achieving academic success at the university level. As they continue to contribute to the diversity and enrichment of the higher education landscape, their accomplishments serve as a testament to the value of embracing a wide range of educational backgrounds and experiences.

## 5. REFERENCES

[1] Bacit, A. A. (2019, January 18). Enhancement of Academic Performance of Technical-Vocational and Livelihood Students through Motivational Strategies in Senior High School in Tuy. https://ojs.aaresearchindex.com/index.php/AAJMRA/article/view/9612

[2] Brillantes, K. D. B., Orbeta, A. C., Francisco-Abrigo, K. A., Capones, E. M., & Jovellanos, J. B. B. (2019). Status of senior high school implementation: A process evaluation. RePEc: Research Papers in Economics. https://econpapers.repec.org/RePEc:phd:dpaper:dp_2019-13

[3] Caballero, F. R., & Cabahug, R. R. (2015). The K to 12 Senior High School Technical–Vocational Livelihood Track is Not at All Ready for Implementation. JPAIR Institutional Research Journal, 5(1). https://doi.org/10.7719/irj.v5i1.348

[4] Dizon, R. et al. (2019). Perspectives on the Implementation of the K to 12 Program in the Philippines: A Research Review. International Journal of Innovation and Research in Educational Sciences, Volume 6(Issue 6). https://www.ijires.org/administrator/components/com_jresearch/files/publications/IJIRES_1638_FINAL.pdf

[5] Dimaunahan, J., & Panoy, J. F. D. (2021). Academic motivation and Self-Efficacy in technical skills as correlates to academic performance. International Journal of Educational Management and Development Studies, 2(4), 72–89. https://doi.org/10.53378/352077

[6] Gayef, A., Tapan, B., & Sur, H. (2017). Relationship Between Time Management Skills and Academic Achievement of The Students in Vocational School. . . ResearchGate. https://www.researchgate.net/publication/318100775_Relationship_Between_Time_Management_Skills_and_Academic_Achievement_of_The_Students_in_Vocational_School_of_Health_Services

[7] Ishtiaq, M. (2019). Book Review Creswell, J. W. (2014). Research Design: Qualitative, Quantitative and Mixed Methods Approaches (4th ed.). Thousand Oaks, CA: Sage. English Language Teaching, 12(5), 40. https://doi.org/10.5539/elt.v12n5p40

**[8]** Ismail, M.; Sa'adan, N.; A Samsudin, M.; Hamzah, N.; Razali, N.; I Mahazir, I. (2018). Implementation of The Gamification Concept Using KAHOOT! Among TVET Students: An Observation. J. Phys. Conf. Ser. 2018, 1140, 012013.

**[9]** López, F., Contreras, M., Nussbaum, M., Paredes, R., Gelerstein, D., Álvares, D., & Chiuminatto, P. (2023). Developing critical thinking in technical and vocational education and training. Education Sciences, 13(6), 590. https://doi.org/10.3390/educsci13060590

**[10]** Mariano, L. A., Madel, N. S., & Miranda, A. T. (2022). The Relationship between Time Management Skills and Academic Performance of Working Students in Open High School Program. Asian Journal of Education and Social Studies, 61–66. https://doi.org/10.9734/ajess/2022/v36i2776

**[11]** Mirasol, J. M., Necosia, J. V. B., Bicar, B. B., & Garcia, H. P. (2021). Statutory policy analysis on access to Philippine quality basic education. International Journal of Educational Research Open, 2, 100093. https://doi.org/10.1016/j.ijedro.2021.100093

**[12]** Ramos, F. G. (2021). An Evaluation of the Technical Vocational Livelihood Track in Public Senior High Schools in the Division of Batangas: Basis for an enhancement program. International Journal of Academic Research in Progressive Education and Development, 10(2). https://doi.org/10.6007/ijarped/v10-i2/10269

**[13]** Salleh, K.M.; Sulaiman, N.L. (2020). Reforming Technical and Vocational Education and Training (TVET) on Workplace Learning and Skills Development. Int. J. Recent Technol. Eng. 2020, 8, 2964–2967.

**[14]** Setia, M. S. (2016). Methodology series module 3: Cross-sectional studies. Indian Journal of Dermatology, 61(3), 261. https://doi.org/10.4103/0019-5154.182410

**[15]** Sulaiman, N.L.; Salleh, K.M.; Mohamad, M.M.; Sern, L.C. (2015). Strengthening the usage of useful critical thinking and problem solving in knowledge dissemination among tvet educators in malaysia. In ICERI2015 Proceedings, Proceedings of the 8th International Conference of Education, Research and Innovation, Seville, Spain, 16–18 November 2015; IATED: Seville, Spain, 2015; pp. 7603–7610.

**[16]** Wang, X., & Cheng, Z. (2020). Cross-Sectional studies. Chest, 158(1), S65–S71. https://doi.org/10.1016/j.chest.2020.03.012Eason, G., Noble, B., & Sneddon, I. N. (1995). On certain integrals of Lipschitz-Hankel type involving products of Bessel functions, Phil. Trans. Roy. Soc. London, vol. A247, pp. 529-551.