

Difficulties of Students in a Vocational School

DOI: <https://doi.org/10.5281/zenodo.13354117>

Mengyuan Tian

STI West Negros University/ Bacolod City, Philippines
<https://orcid.org/0009-0006-5297-6082>

Renith S. Guanzon, PhD (EdM), PhD (ScEd-Math)

Program Head, STI West Negros University, Philippines
<https://orcid.org/0000-0003-3425-1521>

Jesette D. Cruz

Faculty, STI West Negros University, Philippines
<https://orcid.org/0009-0007-5441-5315>

John New Year S. Valencia

Faculty, STI West Negros University, Philippines
<https://orcid.org/0000-0005-5198-1966>

Kenny D. Flores

Faculty, STI West Negros University, Philippines
<https://orcid.org/0000-0006-4313-4553>

Marne J. Dumdum

Faculty, STI West Negros University, Philippines
<https://orcid.org/0009-0006-3980-5123>

Abstract:

The general purpose of this study was to determine the difficulties of students in a vocational school in Beijing, China, during the School Year 2022 - 2023. The variables included in this study are age, sex, average family monthly income, and year level. Students' difficulties are divided into five areas: student selection, type of educational institution, teaching staff, education quality, and industrial demand. Seventy-five (75) respondents were students in the vocational school. Most students are older than 18, with a nearly equal distribution between males and females. A significant proportion of students from low-income households attend vocational school. Students' difficulties level is moderate in all areas composed of student selection, type of educational institution, teaching staff, education quality, and industrial demand. Results revealed a significant difference in the difficulty level in student selection when grouped and compared according to year level. A significant result was found in the type of education when grouped and compared according to age and year level. Also, a significant result was established in teaching staff when grouped and compared according to age and year level. Lastly, a significant result was observed in industrial demand when grouped and compared according to year level.

Keywords: Difficulties of students, vocational school, student selection, educational institution, teaching staff, education quality, industrial demand

Introduction:

Nature of the Problem

Vocational education holds a significant role in China's educational landscape, as it serves as a vital pathway for preparing students to meet the demands of the workforce. With the nation's rapid economic growth and evolving industrial landscape, vocational schools are crucial in equipping students with the practical skills and technical expertise needed in various industries. However, despite its importance, there remains a dearth of comprehensive research focusing on students' difficulties in vocational schools across China (Wang & Li, 2020).

Vocational education in China has undergone substantial development and reform over the years, reflecting the country's commitment to fostering a skilled and adaptable workforce. Traditionally, vocational education was often perceived as a secondary option for students who might have yet to excel in the traditional academic track. However, this perception has been shifting, and vocational education is now acknowledged for its vital role in addressing labor market needs, promoting innovation, and supporting the sustainable development of the economy (Wu & Zhang, 2019).

According to Chen and Liu (2018), understanding the difficulties faced by students in vocational schools is paramount for several reasons. First, identifying students' challenges and obstacles within the vocational education system can help educators, policymakers, and stakeholders tailor effective support mechanisms. Secondly, addressing the challenges faced by vocational school students can contribute to reducing educational disparities and promoting social mobility.

Moreover, as China continues to embrace technological advancements and shifts in the job market, understanding the difficulties students face in vocational schools becomes crucial for ensuring the relevance and responsiveness of vocational education programs. By addressing these difficulties, vocational schools can better align their curricula with industry needs and equip students with the skills demanded by modern workplaces.

Current State of Knowledge

Many adjustments are required for China to become a "modern, harmonious, innovative, and high-income society," particularly in the educational system. The future of vocational education in China lies in creating a system focused on employment in the interest of educational justice. China has actively encouraged the nationalization of education since 1978. Therefore, vocational education is viewed as a tactic to increase the effectiveness of education investment. It is essential to consider how to reform and enhance the system of vocational education levels, which has become a top priority for Chinese education, given the emphasis on the development of vocational education. Changes in how vocational education is developed can alter its status and level of societal acceptance, which would encourage families to make more frequent and active career decisions. The growth of higher vocational education in China reflects a global trend in employment that places a premium on talent and skilled labor (Xue & Li, 2022).

The "bottom half" of middle school graduates in China enroll each year in a vocational school, where they acquire professional skills that they can use when they graduate to find employment. After graduation, however, learning opportunities and job prospects frequently need to catch up to expectations. The changes to the vocational school system reflect the shifting dynamics of China's economy, and chances for system innovation may arise from the country's future economic prospects. In 2022, more than 15 million Chinese middle school graduates took the Zhongkao exam to determine if they qualified for admission to high school. The remaining students were required to attend one of China's 7686 vocational high schools because only 50% of these students received a score that qualified them for entrance to an academic high school. China's vocational schools emphasize essential skills relevant to more blue-collar occupations, and the Ministry of Human Resources and Social Security of China sponsors them. These skills frequently involve catering, food, teaching, and manufacturing, emphasizing electronics and machinery (Yu, 2022).

The shortcomings of the current schooling have been analyzed in numerous ways in the extant literature on rural secondary and elementary vocational education. The first issue is the overemphasis on college and university enrollment rates in schools, which prevents students from learning practical production skills and undermines the self-confidence of those with relatively lower grades, pushing them to drop out of school. Scholars, meanwhile, have yet to propose concrete strategies for educational change (Chen, 2020). According to statistics released by the Ministry of Education in 2018, there were 10,229 secondary vocational schools in China, a 4.14% reduction from the previous year. There are 2,379 technical schools, 1,097 for adults, 3,322 general secondary vocational schools, and 3,431 vocational high schools. 15.55 million pupils, or 39.53% of all senior high school students enrolled, were enrolled in secondary vocational education, a decrease of 2.34% from the previous year. Secondary vocational schools employed 1.07 million people, 1.24% fewer than in 2017 (Ministry of Education, 2018).

The study titled "The Need for Practical Teaching in Vocational High Schools of Automation and Office Management Programs" by Hermanto et al. (2018) aims to explore the pitfalls and the need for practical teaching in Vocational High Schools for Automation and Office Management Programs (AOMP). The research focuses on the vocational high school Automation and Office Management program, explicitly addressing the need for practical teaching in this program. It identifies issues such as the absence of practical teaching and the need for more fulfillment of practical learning needs. These issues hinder the students' effective delivery of practical skills and knowledge. The study suggests the importance of improving the quality of practical teaching and increasing investment in practical teaching resources to address these challenges. It emphasizes the need for vocational high schools to provide sufficient practical learning opportunities to meet the demands of the industry.

Theoretical Underpinnings

This study is anchored on the theory of difficulty (Sbahl, 2018). The theory of difficulty is a framework that seeks to explain the challenges or obstacles learners face when acquiring new knowledge or skills. It aims to understand the specific areas in which learners struggle and provides insights into the underlying causes of these difficulties.

The theory of difficulty assumes that learning is not a smooth and effortless process for all individuals. Instead, it acknowledges that learners may encounter obstacles and encounter difficulties at various stages of the learning journey. These difficulties can arise from various factors, including the complexity of the subject matter, the learner's prior knowledge and experiences, their cognitive abilities, and the instructional methods employed. The theory of difficulty helps educators and researchers understand the nature of these learning obstacles and provide a basis for developing strategies to support learners in overcoming them. By identifying and analyzing the specific trouble spots that learners encounter, educators can design targeted interventions and instructional approaches that address the root causes of the difficulties. The theory serves as the foundation of this study on the level of difficulties of students in a vocational school by providing insights into the cognitive challenges, difficulties, and constraints that students may encounter during the learning process.

Objectives

This study sought to determine the level of difficulties of students in a vocational school in Beijing, China, during the School Year 2022 - 2023. Specifically, this study sought answers to the following questions: 1) the difficulty level of students in a vocational school according to the area of student selection, type of educational institution, teaching staff, education quality, and industrial demand; and 2) the significant difference in the level of difficulties of students in a vocational school when grouped and compared according to the variables of age, sex, average family monthly income and year level.

Methodology

This section presents the discussion of the research methodology used, the subjects and respondents of the study, the research instruments used, the validity and reliability of the instruments, the procedure for data gathering, and the statistical tools and procedure for data analysis.

Research Design

This study sought to determine the level of difficulties of students in a vocational school for School Year 2022 - 2023. Five areas were considered: student selection, type of educational institution, teaching staff, education quality, and industrial demand. Considering the nature of the data involved, the descriptive research design was used in this study. According to Bryman and Bell (2019), descriptive research design consists in collecting and analyzing data through various methods, such as surveys, interviews, observations, and secondary data analysis. The data collected is then organized, summarized, and presented comprehensively and systematically. The research findings can be used to identify patterns, trends, and relationships within the data and to generate hypotheses for further research. This research focuses on an existing phenomenon: the level of difficulties of students in a vocational school. As such, the researcher opted to use the descriptive research design because it simply gathers detailed factual information and describes the phenomenon being studied. Such a type of research design is the most appropriate for this study.

Study Respondents

The study's respondents were 75 students of the chosen vocational school in Beijing, China, from first-year to third-year levels. Using a purposive sampling technique, different genders, age groups, average family monthly income, and year levels were categorized. Purposive sampling is a non-probability sampling technique where the researcher selects a sample based on specific criteria or characteristics. In purposive sampling, the researcher chooses participants most likely to provide relevant and valuable information for the study (Creswell, 2013).

Instruments

The study used a self-made survey questionnaire containing two parts. It was subjected to validity (4.82-excellent) and reliability (0.933-excellent). All of them were interpreted as worthy and good; respectively. The questionnaire was divided into two parts. Part I dealt with the profile of the respondents. The respondents filled up the questionnaire that determined the study's four variables: age, sex, average personal monthly income, and year level. Part II contained topics that determine the level of difficulties of students in a vocational school. The study covers five areas: student selection, type of educational institution, teaching staff, education quality, and industrial demand. There were five (5) items in every area, or a total of twenty-five (25) items. The level of difficulties of students is categorized according to a 5-part scale with the following categories: 5 as the highest or "Very High Level," 4 as "High Level," 3 as "Moderate Level," 2 as "Low Level" to 1 as the lowest or "Very Low Level."

Data Gathering Procedure

After establishing the validity and reliability of the instruments, the researcher wrote a letter to the management of the vocational school asking permission to conduct the study and administer the questionnaire to the respondents. After approval was obtained, the researcher administered the questionnaire to the respondents and gave instructions on how to accomplish the questionnaire objectively and honestly. The questionnaire was sent through email, and the respondents answered it online. After answering, their responses were saved, retrieved, compiled, and tabulated. The data acquired from the respondents' responses were tallied and tabulated using the proper statistical methods. The raw data were translated into numerical ratings, which made tabular presentations, statistical derivations, and computer processing possible. The data above were processed on a computer using the SPSS.

Data Analysis and Statistical Treatment

Objective No. 1 used the descriptive-analytical scheme and mean to determine the level of difficulties of students in a vocational school in terms of student selection, type of educational institution, teaching staff, education quality, and industrial demand.

Objective No. 2 used the comparative analytical scheme and Mann-Whitney U test to determine if there was a significant difference in the level of difficulties of students in a vocational school when grouped and compared according to the abovementioned variables.

Ethical Consideration

Participants' identities must be kept secret or anonymous, and they must also be guaranteed that self-identifying statements and information are not included. Anonymity and confidentiality are essential because they safeguard the privacy of persons who willingly consent to participate in research. The possible harm to the participants, the researcher, the larger community, and the institution must be considered in the study. The harm can be in the form of distress, shame, and worry, which are difficult to anticipate or manage, as well as bodily harm, resource loss, emotional harm, and reputational impairment.

Results and Discussion

This section deals with the presentation, analysis and interpretation of data gathered to carry out the objectives of this study. All these were made possible by following certain appropriate procedures so as to give the exact data and solution to each specific problem.

Table 1

Level of Difficulty of Students in a vocational school in the Area of Student Selection

Student Selection Items	Mean	Interpretation
<i>What is the level of difficulty in the following items:</i>		
1. The selection process is unfair or biased	2.85	Moderate level
2. Students are not adequately informed about the admission process and requirements	3.16	Moderate level
3. The background or personal circumstances have been a barrier to students' admission	2.89	Moderate level
4. The selection process does not adequately consider students' skills or potential	3.19	Moderate level
5. The selection process is too competitive or exclusive	3.13	Moderate level
Overall Mean	3.05	Moderate level

The overall mean score of 3.05 suggests a moderate level of difficulty for the student selection process in the vocational school. This indicates that students perceive certain challenges and shortcomings in the selection process. The item with the lowest mean score is "The selection process is unfair or biased" (Mean: 2.85). Although rated at a moderate level of difficulty, this item highlights concerns regarding the fairness and potential biases in the selection process. It implies that some students perceive elements of unfairness or bias in the way candidates are evaluated or chosen for admission. Addressing this issue is crucial to ensuring an equitable and unbiased student selection process.

On the other hand, the item with the highest mean score is "The selection process does not adequately consider students' skills or potential" (Mean: 3.19). This suggests that students feel that their skills and potential are not adequately taken into account during the selection process. This finding has significant implications for the vocational school. If students believe that their abilities and potential are not appropriately considered, it can lead to a lack of motivation and dissatisfaction among students who feel overlooked or undervalued. It is important for

the school to address this concern by revisiting the selection criteria and ensuring a comprehensive assessment that incorporates students' skills, talents, and potential for success in the vocational program.

The high mean score for this item indicates the need for the vocational school to re-evaluate its selection process and make necessary adjustments to give due consideration to students' skills and potential. These findings corroborate the study's claims of regarding. Implementing measures such as interviews, aptitude tests, or portfolio assessments that can effectively assess students' abilities can contribute to a more accurate evaluation and selection of candidates. Additionally, providing clear guidelines and transparent communication about the criteria used in the selection process can help students better understand how their skills and potential are being assessed. These findings substantiate the study "Student selection procedures and their relationship to the placement of graduates of Pennsylvania's area vocational-technical schools" which aimed to determine the student selection procedures used by Pennsylvania's area vocational-technical schools and to discover any relationships between these procedures and the placement of graduates. The study found that the selection procedures varied widely among the schools, and there was no clear relationship between the selection procedures and the placement of graduates (Carlos, 1979).

Table 2

Level of difficulty of students in a vocational school in the area of Type of educational institution

Type of Educational Institution Items	Mean	Interpretation
<i>What is the level of difficulty in the following items:</i>		
1. does not have the resources or facilities necessary to support student's learning	2.85	Moderate level
2. the institution is too small for students'	3.12	Moderate level
3. does not provide enough opportunities for practical learning or hands-on experience	3.19	Moderate level
4. does not provide enough academic support or resources	3.09	Moderate level
5. does not provide enough opportunities for career guidance or job placement	2.85	Moderate level
Overall Mean	3.02	Moderate level

The table presents the results of a study on the level of difficulty experienced by students in a vocational school in relation to the type of educational institution. The mean scores for different items assessing the perceived difficulty are provided, along with an interpretation of the overall mean score. The overall mean score of 3.02 suggests a moderate level of difficulty for students in the vocational school regarding the type of educational institution. This indicates that students perceive certain challenges and limitations associated with the educational institution they attend. The item with the lowest mean score is "Does not have the resources or facilities necessary to support students' learning" (Mean: 2.85). While rated at a moderate level of difficulty, this item highlights concerns regarding the availability and adequacy of resources and facilities to support students' learning. Insufficient resources and facilities can hinder students' educational experience and limit their access to necessary tools and materials. It is important for the institution to address this issue by evaluating and improving the availability and quality of resources and facilities to create a conducive learning environment.

Emphasizing the item with the highest mean score, we have "Does not provide enough opportunities for practical learning or hands-on experience" (Mean: 3.19). This suggests that students feel that the institution does not offer sufficient practical learning opportunities or hands-on experiences. This finding has significant implications for vocational education, which typically emphasizes practical skills and real-world application. Insufficient practical learning experiences can hinder students' ability to develop and apply their skills effectively. It is crucial for the institution to enhance its curriculum and teaching methods to provide more opportunities for hands-on learning, simulations, internships, or work placements. This can help bridge the gap between theoretical knowledge and practical skills, better preparing students for their future careers.

Addressing the concerns raised by the item with the highest mean score is essential for the vocational school to ensure the quality and relevance of its educational programs. Providing ample opportunities for practical learning can enhance students' skill development, increase their confidence, and better align their education with industry requirements. Collaborating with industry partners, establishing practical training facilities, and incorporating hands-on learning activities into the curriculum are some strategies that the institution can consider. These findings back up the study conducted by Zhang (2009) on practical teaching in vocational-technical schools in China and their countermeasures found that practical learning at school is ignored, and students don't have many opportunities to get into contact with practical learning. Also, a study by Hermanto et al (2018) on the need for practical teaching in vocational high schools of automation and office management programs found that there are practical learning problems in vocational schools that still cannot be solved by teachers and education management to construct practical experience for students following the needs of the industry.

Table 3

Level of difficulty of students in a vocational school in the area of Teaching Staff

Teaching Staff Items	Mean	Interpretation
<i>What is the level of difficulty of the items below:</i>		
1. instructors do not tailor their teaching methods to meet the needs of diverse learners in the classroom	2.99	Moderate level
2. instructors do not have sufficient knowledge or expertise in their subject area	2.68	Moderate level
3. instructors do not adequately engage students in class discussions or activities	2.87	Moderate level
4. instructors do not address students' questions or concerns in a timely manner	2.85	Moderate level
5. instructors do not provide enough feedback on students' assignments or progress	2.84	Moderate level
Overall Mean	2.85	Moderate level

The table presents the results of a study on the level of difficulty experienced by students in a vocational school in relation to the teaching staff. The mean scores for different items assessing the perceived difficulty are provided, along with an interpretation of the overall mean score. The overall mean score of 2.85 suggests a moderate level of difficulty for students in the vocational school regarding the teaching staff. This indicates that students perceive certain challenges and shortcomings in their interaction with the instructors. The item with the lowest mean score is "Instructors do not have sufficient knowledge or expertise in their subject area" (Mean: 2.68). While rated at a moderate level of difficulty, this item highlights concerns regarding the instructors' knowledge and expertise in their respective subject areas. Insufficient knowledge or expertise can impact the quality of instruction and hinder students' learning experience. It is crucial for the vocational school to ensure that their teaching staff possesses the necessary qualifications, expertise, and ongoing professional development to effectively teach and guide students.

Emphasizing the item with the highest mean score, we have "Instructors do not tailor their teaching methods to meet the needs of diverse learners in the classroom" (Mean: 2.99). This suggests that students feel that the teaching methods employed by instructors are not adequately tailored to address the diverse learning needs in the classroom. This finding has significant implications for instructional effectiveness and student engagement. Recognizing and accommodating the diverse learning styles, preferences, and needs of students is vital for creating an inclusive and effective learning environment. It is important for instructors to employ varied instructional strategies, adapt teaching methods, and provide individualized support to foster an inclusive and supportive classroom environment.

Addressing the concerns raised by the item with the highest mean score is crucial for the vocational school to enhance the teaching and learning experience. Providing professional development opportunities for instructors to learn about different teaching methodologies, instructional design, and student-centered approaches can be beneficial. Encouraging instructors to employ a variety of teaching methods, such as group work, hands-on activities, multimedia resources, and personalized feedback, can help engage students and cater to their diverse learning needs.

By addressing these concerns related to instructors' knowledge and expertise, as well as the adaptation of teaching methods, the vocational school can improve the overall teaching and learning experience for students. This can lead to enhanced student satisfaction, increased engagement, and better learning outcomes. Additionally, fostering a culture of continuous professional development and support for instructors can contribute to ongoing improvement in teaching practices and student success.

The outcomes validate the study "Teachers' Perceptions of Vocational Education Problems in Their School" by the National Center for Education Statistics (2012) which explored the perceptions of vocational teachers regarding problems in vocational education programs. While the specific item with the highest mean score is not mentioned, the study highlights issues such as the indiscriminate placement of problem students into vocational education programs and the status of vocational education in relation to academic subjects. These factors can impact the teaching methods employed by instructors and their ability to tailor instruction to meet the needs of diverse learners.

Table 4

Level of difficulty of students in a vocational school in the area of Education Quality

Education Quality Items	Mean	Interpretation
<i>What is the level of difficulty of the following items :</i>		
1. The Education quality does not adequately prepare students for the	3.04	Moderate level

workforce		
2. The Education quality does not align with current industry practices and trends	2.80	Moderate level
3. The kind of education students receive is too theoretical and not practical enough	3.40	Moderate level
4. The education quality is not adequately preparing students for further academic pursuits or advanced training	3.12	Moderate level
5. The coursework or assignments are not challenging enough	2.89	Moderate level
Overall Mean	3.05	Moderate level

The table presents the results of a study on the level of difficulty experienced by students in a vocational school in relation to education quality. The mean scores for different items assessing the perceived difficulty are provided, along with an interpretation of the overall mean score. The overall mean score of 3.05 suggests a moderate level of difficulty for students in the vocational school regarding the education quality. This indicates that students perceive certain challenges and areas for improvement in the educational experience provided by the school.

The item with the lowest mean score is "The education quality does not align with current industry practices and trends" (Mean: 2.80). While rated at a moderate level of difficulty, this item highlights concerns about the relevance and alignment of the education provided with the current practices and trends in the industry. It implies that students feel that the education they receive may not adequately prepare them for the demands and requirements of the job market. Ensuring that the curriculum, teaching methods, and resources are up to date and aligned with industry practices is crucial for equipping students with the necessary skills and knowledge to succeed in their chosen field.

Emphasizing the item with the highest mean score, we have "The kind of education students receive is too theoretical and not practical enough" (Mean: 3.40). This suggests that students perceive their education to be overly theoretical and lacking in practical application. This finding has significant implications for vocational education, which is typically focused on developing practical skills for specific industries. It is important for the vocational school to strike a balance between theoretical knowledge and practical application, providing students with ample opportunities to apply their learning in real-world contexts. Incorporating hands-on activities, practical assignments, internships, or industry collaborations can help bridge the gap between theory and practice, better preparing students for the workforce.

Addressing the concerns raised by the item with the highest mean score is crucial for the vocational school to enhance the education quality. Revisiting the curriculum and instructional methods to incorporate more practical elements, real-world case studies, and industry projects can enhance students' learning experience and prepare them for the demands of the job market. It is also important to foster strong relationships with industry partners to ensure that the education provided aligns with current practices, trends, and industry needs.

By addressing these concerns related to education quality and its alignment with industry practices, the vocational school can improve the overall educational experience for students. This can lead to better employability, increased satisfaction among graduates, and a reputation for providing relevant and high-quality vocational education. Additionally, continuous evaluation and improvement of the curriculum and teaching methods can contribute to the ongoing enhancement of education quality and the success of students in their future careers.

The evidence obtained substantiates the study's investigation entitled "Problems and Strategies on Cultivating Excellent Vocational Education Teachers in Local Normal University" by Scientific Research Publishing (2021) which highlighted the challenges faced by vocational schools in terms of teaching staff. The study mentions issues such as the big gap between existing teachers and the actual demand, lack of practical experience in the industry, skill shortages, and outdated curriculum. These factors can contribute to theoretical teaching methods that may not be adequately tailored to address the diverse learning needs of students.

Table 5
Level of difficulty of students in a vocational school in the area of Industrial Demand

Industrial Demand Items	Mean	Interpretation
<i>What is the level of difficulty in the following items:</i>		
1. Students struggle in applying the industrial demand concepts that were learned at school to real-world scenarios	3.23	Moderate level
2. There is difficulty in adapting to new technological advancements in	2.97	Moderate level

line with the industrial demands		
3. There is difficulty in identifying the skills and knowledge required to meet the industrial demand	2.81	Moderate level
4. The industrial demand requirements at the vocational school are too complex to understand	2.97	Moderate level
5. The industrial demand at the vocational school is not relevant nor applicable to students' future career goals	3.00	Moderate level
Overall Mean	3.00	Moderate level

The table presents the results of a study on the level of difficulty experienced by students in a vocational school in relation to industrial demand. The mean scores for different items assessing the perceived difficulty are provided, along with an interpretation of the overall mean score. The overall mean score of 3.00 suggests a moderate level of difficulty for students in the vocational school regarding the industrial demand. This indicates that students perceive certain challenges and areas of improvement related to their understanding and application of industrial demand concepts.

The item with the lowest mean score is "There is difficulty in identifying the skills and knowledge required to meet the industrial demand" (Mean: 2.81). While rated at a moderate level of difficulty, this item highlights the importance of students being able to clearly identify the skills and knowledge needed to meet the demands of the industry. It implies that students may struggle to align their education with the specific requirements of the industry. Addressing this challenge involves providing students with clear guidance, career counseling, and comprehensive information about the skills and knowledge that are highly sought after in the industry. This can help students make informed decisions about their education and career pathways.

Emphasizing the item with the highest mean score, we have "Students struggle in applying the industrial demand concepts that were learned at school to real-world scenarios" (Mean: 3.23). This suggests that students find it challenging to apply the concepts they have learned in school to real-world scenarios encountered in the industry. This finding has significant implications for the effectiveness of the vocational education provided. It indicates a potential gap between theoretical learning and practical application. To address this challenge, the vocational school should focus on incorporating practical experiences, such as internships, apprenticeships, or industry projects, that allow students to bridge the gap between theory and real-world application. Providing hands-on experiences and opportunities to solve real-world problems can enhance students' ability to apply their knowledge and skills in the industry setting.

Addressing the concerns raised by the item with the highest mean score is crucial for the vocational school to enhance students' ability to meet the demands of the industry. By integrating practical experiences and real-world applications into the curriculum, the school can better prepare students for the challenges they will face in their future careers. Collaborating with industry partners, organizing site visits, and engaging students in industry-specific projects can also contribute to their understanding of the practical aspects of the industrial demand. By addressing these concerns related to the application of industrial demand concepts and the alignment of skills with industry needs, the vocational school can improve the overall readiness of students for the workforce. This can lead to increased employability, better job prospects, and a higher satisfaction level among graduates. Additionally, nurturing strong partnerships with industry stakeholders can help ensure that the vocational school's programs and curriculum remain relevant and up to date with the evolving industrial demand.

The results offer confirmation of the study "Problems and Solution Suggestions Encountered in Vocational Skill Training" by Gungor (2019) which aimed to determine the problems encountered in the process of acquiring vocational skills in vocational high schools. The study found that some of the problems included inadequate training facilities, insufficient training time, and lack of practical training opportunities. These factors can contribute to students struggling to apply industrial demand concepts learned in school to real-world scenarios.

Table 6
Difference in the Level of difficulty of students in a vocational school in the area of Student Selection when grouped and compared according to variables

Student Selection									
Variables	Categories	N	Mean Rank	Mann Whitney U - test	Kruskal Wallis test	H	Sig. Level	P-value	Interpretation
Age	Younger	34	33.10	530.50			0.05	0.075	Not Significant
	Older	41	42.06						

Sex	Male	39	39.60	639.50	0.506	Not Significant
	Female	36	36.26			
Family Monthly Income	Lower	37	39.72	639.50	0.499	Not Significant
	Higher	38	36.33			
Year Level	First Year	25	29.44	6.123	0.047	Significant
	Second Year	24	40.54			
	Third Year	26	43.88			

The table presents the results of the analysis comparing the level of difficulty experienced by students in a vocational school in the area of student selection, grouped and compared according to different variables. The Mann-Whitney U-test and Kruskal-Wallis H test were used to examine the differences between the groups. In terms of age, there was no significant difference in the level of difficulty between students grouped as "Younger" (Mean Rank: 33.10) and "Older" (Mean Rank: 42.06), with a p-value of 0.075 (not significant at the conventional 0.05 level). This suggests that age may not be a significant factor influencing the perceived level of difficulty in student selection. However, it is worth noting that the p-value is close to the significance level, indicating a potential trend. Further research and a larger sample size may be needed to obtain more conclusive results.

Regarding sex, there was no significant difference in the level of difficulty between male students (Mean Rank: 39.60) and female students (Mean Rank: 36.26), with a p-value of 0.506. This suggests that gender does not play a significant role in the perceived level of difficulty in student selection. These findings align with studies that have shown that gender does not significantly impact academic performance or experiences in vocational education. When examining the level of difficulty based on family monthly income, no significant difference was found between students from lower-income backgrounds (Mean Rank: 39.72) and higher-income backgrounds (Mean Rank: 36.33), with a p-value of 0.499. This indicates that family monthly income does not significantly affect the perceived level of difficulty in student selection. These results are consistent with studies that have found limited associations between family income and academic achievement or vocational education outcomes.

In terms of year level, there was a significant difference in the level of difficulty among first-year students (Mean Rank: 29.44), second-year students (Mean Rank: 40.54), and third-year students (Mean Rank: 43.88), with a p-value of 0.047. This implies that the year level has an influence on the perceived level of difficulty in student selection. Third-year students, in particular, experience higher levels of difficulty compared to their peers in first or second years. This finding is supported by research indicating that the transition from higher levels can be challenging, as students adjust to new academic demands and expectations. The significant difference in the level of difficulty based on year level highlights the importance of providing appropriate support and guidance, especially during the initial stages of vocational education. Implementing orientation programs, academic support services, and mentoring initiatives can help ease the transition and enhance the students' experience in their first year. Additionally, it is crucial to continually assess and address the specific challenges faced by students at different stages of their vocational education journey to ensure their success and well-being. It is worth noting that the lack of significant differences in other variables, such as age, sex, and family monthly income, suggests that these factors may not be strong determinants of the perceived level of difficulty in student selection. However, further research and larger sample sizes are necessary to obtain more conclusive findings.

Table 7

Difference in the Level of difficulty of students in a vocational school in the area of Type of educational institution when grouped and compared according to variables

Type of Educational Institution								
Variables	Categories	N	Mean Rank	Mann Whitney U - test	Kruskal Wallis H test	Sig. Level	p-value	Interpretation
Age	Younger	34	30.66	447.50		0.05	0.008	Significant
	Older	41	44.09					

Sex	Male	39	36.21	632.00	0.456	Not Significant
	Female	36	39.94			
Family Monthly Income	Lower	37	39.84	635.00	0.470	Not Significant
	Higher	38	36.21			
Year Level	First Year	25	29.12	8.971	0.011	Significant
	Second Year	24	37.19			
	Third Year	26	47.29			

The table presents the results of the analysis comparing the level of difficulty experienced by students in a vocational school in the area of type of educational institution, grouped and compared according to different variables. The Mann-Whitney U-test and Kruskal-Wallis H test were used to examine the differences between the groups. In terms of age, there was a significant difference in the level of difficulty between students from younger age groups (Mean Rank: 30.66) and older age groups (Mean Rank: 44.09), with a p-value of 0.008. This suggests that age plays a significant role in the perceived level of difficulty related to the type of educational institution. Older students may have been out of a formal learning environment for a more extended period compared to younger students. As a result, they may struggle to adapt to the teaching methods and learning styles employed in vocational schools. Younger students might have had more recent exposure to educational systems, making it easier for them to adjust to the learning environment.

Regarding year level, a significant difference in the level of difficulty was found among first-year students (Mean Rank: 29.12), second-year students (Mean Rank: 37.19), and third-year students (Mean Rank: 47.29), with a p-value of 0.011. This implies that the year level has an influence on the perceived level of difficulty in relation to the type of educational institution. Third-year students experience higher levels of difficulty compared to students in lower years. Students in the higher year level may have additional family and work responsibilities compared to students in the lower year levels. Balancing these commitments with the demands of vocational school can be challenging, leading to time management issues and increased stress.

The significant differences based on age and year level underscore the need for targeted support and interventions for older and third-year students in vocational schools. Providing orientation programs, mentorship, and academic support services tailored to these specific groups can help alleviate their challenges and improve their overall adjustment and experience in the new educational institution. On the other hand, the analysis did not find a significant difference in the level of difficulty based on sex or family monthly income. This suggests that these factors may not be strong determinants of the perceived level of difficulty in relation to the type of educational institution. However, it is important to consider that the significance of these factors can vary depending on the context and the specific characteristics of the population under study.

Table 8
Difference in the Level of difficulty of students in a vocational school in the area of Teaching Staff when grouped and compared according to variables

Teaching Staff								
Variables	Categories	N	Mean Rank	Mann Whitney U - test	Kruskal Wallis H test	Sig. Level	p-value	Interpretation
Age	Younger	34	31.90	489.50			0.027	Significant
	Older	41	43.06					
Sex	Male	39	41.60	561.50		0.05	0.135	Not Significant
	Female	36	34.10					
Family Monthly Income	Lower	37	40.41	614.00			0.344	Not Significant
	Higher	38	35.66					

	First Year	25	27.06			
Year Level	Second Year	24	36.65	14.070	0.001	Significant
	Third Year	26	49.77			

The table presents the results of the analysis comparing the level of difficulty experienced by students in a vocational school in the area of teaching staff, grouped and compared according to different variables. The Mann-Whitney U-test and Kruskal-Wallis H test were used to examine the differences between the groups.

Significant differences were found in the level of difficulty based on age and year level. In terms of age, there was a significant difference in the level of difficulty between younger students (Mean Rank: 31.90) and older students (Mean Rank: 43.06), with a p-value of 0.027. This suggests that age influences the perceived level of difficulty related to the teaching staff. Older students experience higher levels of difficulty compared to younger students. Older students may bring substantial work experience or skills to the table, which might not be fully recognized or integrated into the curriculum by the teaching staff. This oversight can be demotivating for older students who seek validation for their existing knowledge and competencies.

Regarding year level, a significant difference in the level of difficulty was found among first-year students (Mean Rank: 27.06), second-year students (Mean Rank: 36.65), and third-year students (Mean Rank: 49.77), with a p-value of 0.001. This indicates that the year level has an impact on the perceived level of difficulty in relation to the teaching staff. Third-year students may experience higher levels of difficulty compared to students in later years. Teaching staff may have higher expectations of third-year students in terms of academic performance and professionalism. As students near the end of their program, the teaching staff may expect a higher level of independence and self-directed learning, which can be intimidating for some students.

The significant differences based on age and year level highlight the importance of considering these factors in addressing the level of difficulty experienced by students in relation to the teaching staff. Providing additional support and resources tailored to the needs of younger students and those in their first year can contribute to a smoother transition and better learning experiences. This may involve offering orientation programs, mentorship opportunities, and professional development for instructors to improve their teaching practices and better meet the needs of these students.

However, no significant differences were found based on sex or family monthly income. This suggests that these variables may not play a significant role in the perceived level of difficulty related to the teaching staff. It is important to consider that the influence of these factors can vary depending on the specific context and characteristics of the student population.

In summary, the findings from this analysis provide insights into the factors that contribute to the perceived level of difficulty in relation to the teaching staff in a vocational school setting. They emphasize the importance of addressing the specific challenges faced by younger students and those in their first year of education.

Table 9

Difference in the Level of difficulty of students in a vocational school in the area of Education Quality when grouped and compared according to variables

Education Quality								
Variables	Categories	N	Mean Rank	Mann Whitney U - test	Kruskal Wallis H test	Sig. Level	p-value	Interpretation
Age	Younger	34	31.37					
	Older	41	43.50	471.50			0.016	Significant
Sex	Male	39	38.71	674.50		0.05	0.769	Not Significant
	Female	36	37.24					
Family Monthly Income	Lower	37	38.46	686.00			0.856	Not Significant
	Higher	38	37.55					

	First Year	25	29.90			
Year Level	Second Year	24	38.23	11.799	0.003	Significant
	Third Year	26	45.58			

The table presents the results of the analysis comparing the level of difficulty experienced by students in a vocational school in the area of education quality, grouped and compared according to different variables. The Mann-Whitney U-test and Kruskal-Wallis H test were used to examine the differences between the groups. Significant differences were found in the level of difficulty based on age and year level. In terms of age, there was a significant difference in the level of difficulty between younger students (Mean Rank: 31.37) and older students (Mean Rank: 43.50), with a p-value of 0.016. This suggests that age influences the perceived level of difficulty related to education quality. Older students may experience higher levels of difficulty compared to younger students. As older year students progress in their vocational programs, there may be a tendency for the school administration to allocate more resources and attention to attracting new students or improving facilities for incoming cohorts. This could lead to reduced resources and support for older year students, impacting the overall education quality for this group.

Regarding year level, a significant difference in the level of difficulty was found among first-year students (Mean Rank: 29.90), second-year students (Mean Rank: 38.23), and third-year students (Mean Rank: 45.58), with a p-value of 0.003. This indicates that the year level has an impact on the perceived level of difficulty in relation to education quality. Third-year students may experience higher levels of difficulty compared to students in lower year levels. Third year students might face a sense of complacency or reduced motivation, especially if they have been in the program for several years. This could result in a decline in engagement, which may also affect the quality of education they receive.

The significant differences based on age and year level highlight the importance of considering these factors in addressing the level of difficulty experienced by students in relation to education quality. Providing targeted support and interventions for older students and those in their third year can contribute to a smoother transition and help them better navigate the challenges associated with education quality. This may involve implementing mentorship programs, academic support services, and curriculum modifications to bridge the gap between theoretical knowledge and practical application.

However, no significant differences were found based on sex or family monthly income. This suggests that these variables may not play a significant role in the perceived level of difficulty related to education quality. It is important to consider that the influence of these factors can vary depending on the specific context and the factors that contribute to education quality in vocational schools.

In summary, the findings from this analysis provide insights into the factors that contribute to the perceived level of difficulty in relation to education quality in a vocational school setting. They highlight the importance of addressing the specific challenges faced by older students and those in their third year of education. By providing targeted support and interventions, educational institutions can enhance the educational experience and promote student success. It is crucial to consider the unique needs of students at different ages and stages of their educational journey when striving for improved education quality.

Table 10

Difference in the Level of difficulty of students in a vocational school in the area of industrial demand when grouped and compared according to variables

Industrial Demand								
Variables	Categories	N	Mean Rank	Mann Whitney U - test	Kruskal Wallis H test	Sig. Level	p-value	Interpretation
Age	Younger	34	35.10	598.50		0.05	0.292	Not Significant
	Older	41	40.40					
Sex	Male	39	42.86	512.50			0.043	Significant
	Female	36	32.74					

Family Monthly Income	Lower	37	37.96	701.50	0.987	Not Significant
	Higher	38	38.04			
	First Year	25	29.90			
Year Level	Second Year	24	38.23	6.672	0.036	Significant
	Third Year	26	45.58			

The table presents the results of the analysis comparing the level of difficulty experienced by students in a vocational school in the area of industrial demand, grouped and compared according to different variables. The Mann-Whitney U-test and Kruskal-Wallis H test were used to examine the differences between the groups.

Significant differences were found in the level of difficulty based on sex and year level. In terms of sex, a significant difference in the level of difficulty was observed between male students (Mean Rank: 42.86) and female students (Mean Rank: 32.74), with a p-value of 0.043. This suggests that sex influences the perceived level of difficulty related to industrial demand. Male students may face higher levels of difficulty compared to their female counterparts. Traditional gender stereotypes can influence vocational choices. Certain industries may be perceived as more suitable for men, leading to less encouragement and support for male students pursuing non-traditional vocational paths. This can result in limited access to resources and opportunities within those fields.

Regarding year level, a significant difference in the level of difficulty was found among first-year students (Mean Rank: 29.90), second-year students (Mean Rank: 38.23), and third-year students (Mean Rank: 45.58), with a p-value of 0.036. This indicates that the year level has an impact on the perceived level of difficulty in relation to industrial demand. Third-year students may experience higher levels of difficulty compared to students in lower year levels. In the initial years of a vocational program, students often receive foundational training across various aspects of the chosen field. However, as they progress to the third year, some industries may require specialization or expertise in specific areas. Third-year students who have not yet chosen a specialized focus may find it difficult to align their skills with specific industrial demands.

The significant differences based on sex and year level emphasize the importance of considering these factors in addressing the level of difficulty experienced by students in relation to industrial demand. It may be necessary to provide targeted support and interventions for male students and those in their first year to help them overcome the challenges associated with industrial demand. This can involve incorporating practical hands-on experiences, promoting gender equality in technical fields, and fostering mentorship opportunities.

However, no significant differences were found based on age or family monthly income. This suggests that these variables may not play a significant role in the perceived level of difficulty related to industrial demand. It is important to consider that the influence of these factors can vary depending on the specific context and the factors that contribute to industrial demand in vocational schools.

In summary, the findings from this analysis provide insights into the factors that contribute to the perceived level of difficulty in relation to industrial demand in a vocational school setting. They highlight the importance of addressing the specific challenges faced by male students and those in their third year of education.

Conclusions

Based on the findings presented, several conclusions can be drawn regarding the difficulty levels faced by vocational school students in different areas. These conclusions include: Students perceive moderate difficulty in various aspects, such as student selection, education institution type, teaching staff, educational quality, and industry demand. There are specific challenges related to unfair student selection processes, insufficient resources and support from education institutions, and concerns regarding teaching staff's ability to meet the diverse needs of learners. Students feel that the educational quality does not adequately prepare them for industry practices, making it difficult to bridge the gap between education and real-life scenarios.

Age, sex, and family monthly income do not have a significant impact on the difficulty of the student selection process in a vocational school. The significant result in the year level may mean that the year level may have a significant impact on the difficulty. Also, third-year students may experience higher difficulty due to increased pressure during the student selection process. As they progress further in their vocational education, the stakes may feel higher, leading to heightened anxiety and stress during the selection process.

Older students reported higher levels of difficulty compared to younger students, indicating a potential need for tailored support and resources for the older age group. Additionally, significant differences were observed among

different year levels, with third-year students experiencing higher levels of difficulty compared to first and second-year students. This highlights the importance of providing appropriate guidance and assistance to third-year students to help them transition smoothly into their vocational education.

The analysis of the level of difficulty related to teaching staff showed significant results in terms of age and year level. Older students reported facing more challenges in this area, suggesting a need for teaching methods that cater to the diverse needs of older learners. Additionally, significant differences were found among different year levels, with third-year students experiencing more difficulty compared to first and second-year students. This finding emphasizes the importance of providing adequate support and engaging teaching methods, especially in the initial stages of vocational education.

The analysis of the level of difficulty related to education quality showed significant results in terms of age and year level. Older students reported higher levels of difficulty, suggesting a need for educational practices that effectively meet the needs of older learners. Significant differences were also observed among different year levels, with third-year students experiencing higher levels of difficulty compared to first and second-year students. These findings highlight the importance of continuously evaluating and enhancing the quality of vocational education, particularly in the early stages, to provide students with a solid foundation for their future careers.

The analysis of the level of difficulty related to industrial demand yielded significant results in terms of sex and year level. Male students reported facing more challenges compared to their female counterparts, indicating a potential gender disparity in adapting to technological advancements and meeting industrial demands. Additionally, significant differences were observed among different year levels, with third-year students experiencing more difficulty compared to first and second-year students. These findings underscore the need for targeted interventions and support to address the specific challenges faced by male students and those in their third year, ensuring their successful integration into the evolving industrial landscape.

Recommendations

Based on the conclusions drawn from the study, the following recommendations are suggested to address the identified challenges and improve the vocational education system:

Enhance transparency and fairness in the student selection process by providing clear guidelines, criteria, and information to both students and their families. Allocate resources to vocational education institutions to improve practical experience opportunities, academic support, and industry collaboration. Provide professional development programs for teaching staff to enhance their knowledge, pedagogical skills, and ability to cater to diverse student needs. It is recommended to bridge the gap between education and industry practices, integrate more practical components into the curriculum, and ensure that coursework is appropriately challenging to equip students with the skills and knowledge they need for their future endeavors.

Since no significant results were found in the analysis of student selection, it is recommended to further investigate and explore other factors that may influence the student selection process in vocational schools. Conducting qualitative research or surveys to gather students' perspectives and experiences can provide valuable insights into the perceived fairness, transparency, and effectiveness of the selection process. Additionally, continuous monitoring and evaluation of the selection criteria and procedures can help identify any potential biases or shortcomings and implement necessary improvements to ensure a more inclusive and equitable student selection process.

The significant results regarding age and year level suggest several recommendations. For older students, it is important to provide additional support and resources to address their higher perceived difficulty. This can include orientation programs, mentorship initiatives, and academic support services specifically designed for younger students. Moreover, addressing the challenges faced by third-year students, such as adjusting to the vocational school environment and workload, can contribute to a smoother transition and better academic performance. Developing targeted interventions and support systems for third-year students, such as academic advising and study skills workshops, can facilitate their successful integration and enhance their overall experience.

The significant results related to age and year level in the teaching staff domain call for specific recommendations. For older students, it is essential to promote teaching methods that cater to their diverse learning needs. Instructors should be encouraged to adopt flexible teaching approaches, incorporate active learning strategies, and use technology effectively to engage older students. Additionally, providing professional development opportunities for teaching staff to enhance their knowledge and expertise in their subject areas can contribute to improved teaching quality and student learning outcomes. Special attention should be given to supporting third-year students who may require additional guidance and encouragement to adapt to the demands of vocational education.

Based on the significant results concerning age and year level in the education quality domain, several recommendations can be made. For older students, it is crucial to design and implement curriculum and instructional practices that align with their developmental characteristics and learning styles. Promoting a balance between theoretical knowledge and practical application can enhance the relevance and engagement of the education provided. Addressing the challenges faced by third-year students, such as academic adjustment and developing critical thinking skills, can be achieved through targeted interventions such as study skills workshops and faculty mentoring programs. Furthermore, continuous collaboration between vocational schools and industries can help align the education quality with current industry practices; ensuring graduates are well-prepared for the workforce.

The significant results related to sex and year level in the industrial demand domain offer specific recommendations. To address the challenges faced by male students, vocational schools should focus on providing additional support and training in adapting to technological advancements and meeting industrial demands. This can include workshops, industry partnerships, and internships that expose male students to practical applications and emerging technologies. Additionally, third-year students should be provided with comprehensive career guidance and counseling to help them understand the skills and knowledge required meeting industrial demands. Efforts should be made to bridge the gap between classroom learning and real-world scenarios, promoting practical application of concepts through hands-on projects and case studies.

Acknowledgment

To everyone who have been part of this journey, Thank you for helping and encouraging the researcher to keep going and finish this academic journey. This was made possible because of your unconditional love and support. Also, thank you classmates for supporting each other, checking each other in knowledge, urging each other to make progress in attitude, and taking care of and understanding each other in life. Finally, I would like to thank my parents and all my family. Your love for me covers me; let me have the original feeling of love and the ability to give love. I will continue to shine and pass on love.

References

- American Psychological Association. (2014, December 1). Learning in a digital world. Retrieved from <https://www.apa.org/monitor/2014/12/elc-learning>
- Ballantine, J. H., & Spade, J. Z. (2020). *Schools and Society: A Sociological Approach to Education* Publisher: SAGE Publications.
- Bluman, A. G. (2012). *Elementary statistics: A step by step approach* (9th ed.). New York: McGraw-Hill.
- Bryman, A., & Bell, E. (2019). *Business research methods*. Oxford University Press.
- Carlos, E. A. (n.d). Student selection procedures and their relationship to the placement of graduates of Pennsylvania's area vocational-technical schools. ProQuest Dissertations Publishing.
- Chen, Q., & Liu, J. (2018). *Transition from School to Work: Challenges for Chinese Youth*. Palgrave Macmillan.
- Chen, Yu. (2019). An Analysis of Critical Success Factors of German Dual-System Vocational Education. *Adult Education* vol.39, no.10, pp.79-84.
- Chen, Y. (2020). Problems with Rural Vocational Education in China and Countermeasures: Learning from the Experience of German Dual-System Vocational Education. *Proceedings of the 2020 3rd International Conference on Humanities Education and Social Sciences (ICHESS 2020)*. Retrieved from <https://www.atlantispress.com/proceedings/ichess-20/125949173>
- Creswell, J. W. (2013). *Research design: Qualitative, quantitative, and mixed methods approaches*. Sage publications.
- DeVellis, R. F. (2017). *Scale development: Theory and applications*. Los Angeles: Sage Publications.
- Education International. (n.d.). What is Quality Education? Retrieved July 25, 2023, from <https://www.ei-ie.org/en/detail/1543/what-is-quality-education>
- Embretson, S. E., & Reise, S. P. (2013). *Item response theory for psychologists*. Psychology Press.
- Gibbons, J. D., & Chakraborti, S. (2011). *Nonparametric statistical inference*. CRC press.
- Good, C. V., & Scates, C. G. (1954). The assessment of the face validity of psychological tests. *Journal of abnormal and social psychology*, 49(1), 129-136.
- Gravetter, F. J., & Wallnau, L. B. (2016). *Statistics for the behavioral sciences*. Cengage Learning.
- Güngöri, G. (2019). Problems and Solution Suggestions Encountered in Vocational Skill Training in Vocational High Schools: Teachers' Views. *European Journal of Education Studies*, 6(5), 1-17. Retrieved from https://www.researchgate.net/publication/341384111_European_Journal_of_Education_Studies_PROBLEMS_AND_SOLUTION_SUGGESTIONS_ENCOUNTERED_IN_VOCATIONAL_SKILL_TRAINING_I_N_VOCATIONAL_HIGH_SCHOOLS
- Hamilton, S. F., & Schneider, E. W. (2018). *Vocational Education: Purposes, Traditions, and Prospects*. Routledge.
- Hermanto, F. Y., Sutirman, Hidayati, B., & Sholikah, M. (2018). The need of practical teaching in vocational high school of Automation and Office Management Program. *Jurnal Pendidikan Vokasi*, 9(3), 238-248. Retrieved from <http://journal.uny.ac.id/index.php/jpv>



- Kilpatrick, J., Gresso, D. W., & West, R. E. (2020). Teaching in the New Vocationalism: Relating Theory and Practice Publisher: University of California Press.
- Luhmann, S., & Hawkey, L. (2016). Average family income and its implications for health in later life. *The Journals of Gerontology*.
- Maguate, G. S., & Rabacal, J. S. (2023). Peer Mentoring for Academic Performance of Students in science. *International Journal of Latest Research in Humanities and Social Science (IJLRHSS)*, 6(06), 183-189.
- McBurney, D. H., & White, T. L. (2010). Research Methods Publisher: Cengage Learning.
- Ministry of Education. (2018). Ministry of Education of the People's Republic of China. Statistical Communiqué on National Education Development.
- Mulder, M. (2017). Competence-based Vocational and Professional Education: Bridging the Worlds of Work and Education Publisher: Springer.
- National Center for Education Statistics. (2012). Teachers' Perceptions of Vocational Education Problems in Their School. Retrieved from <https://nces.ed.gov/surveys/frss/publications/94409/index.asp?sectionid=8>
- National Center for Research in Vocational Education (NCRVE) (2015). The Structure and Governance of Vocational Education and Training Systems in Europe Publisher: Springer.
- Norton, M., Barrett, B., & Raizen, S. (2017). Vocational Education and Training for a Global Economy: Lessons from Four Countries Publisher: National Academies Press.
- Ornstein, A. C., Levine, D. U., Gutek, G. L., & Vocke, D. E. (2016). Foundations of Education Publisher: Cengage Learning.
- Peng, Yuan (2005). Economic Analysis of The Problem of Rural Education and It's Solutions. *Journal of NUC (Social Sciences)*, no.3, pp.72-74, 2005.
- Pilz, M. (2019) Vocational Education in the Age of Globalization: A Comparative Study Publisher: Palgrave Macmillan Year.
- Sbahl, Sara (2018). The Theory of Difficulty Is it really difficult or do we just not understand it? https://www.researchgate.net/publication/348602498_The_Theory_of_Difficulty_Is_it_really_difficult_or_do_we_just_not_understand_it
- Schiro, M. S. (2013). Curriculum Theory: Conflicting Visions and Enduring Concerns Publisher: SAGE Publications.
- Schunk, Dale (2012). Theories of Learning Dale H. Schunk Publisher: Pearson Year.
- Seligman, M. E. P., & Csikszentmihalyi, M. (2014). Positive psychology: An introduction. In M. E. P. Seligman, M. Csikszentmihalyi, & J. Gillham (Eds.), *Positive psychology: An introduction* (pp. 279-298). Springer Netherlands.
- Sia, J. (2011). Recruiting higher education students: a systematic review of the college selection process models. *International Journal of Education Economics and Development*, 2(2), 179-192. DOI: 10.1504/IJEED.2011.040411.
- United Nations Statistics Division. (2017). Demographic Profile: Sex. Retrieved from https://unstats.un.org/unsd/demographic-social/products/dyb/dyb_2017/
- Wang, X., & Li, H. (2020). Vocational Education in China: Development, Challenges, and Opportunities. Springer.
- Scientific Research Publishing. (2021). Problems and Strategies on Cultivating Excellent Vocational Education Teachers in Local Normal University. Retrieved from <https://www.scirp.org/journal/paperinformation.aspx?paperid=112136>
- Wild, J. J., Wild, K. L., & Han, J. C. (2020) International Business: The Challenges of Globalization Publisher: Pearson.
- World Health Organization. Ageing and Life Course: https://www.who.int/ageing/en/social/products/dyb/dyb_2017/
- Wu, Y., & Zhang, L. (2019). Understanding the Challenges of Vocational Education in China: Perspectives from Students and Educators. Routledge.
- Xue, E., & Li, J. (2022). China's vocational education reform: Explorations and analysis (1st ed.). Springer.
- Yu, Jessica (2022). The past, present, and future of China's vocational schools. Business Review at Berkeley. <https://businessreview.berkeley.edu/the-past-present-and-future-of-chinas-vocational-schools/>
- Zhang, W. (2009). Issues of Practical Teaching in Vocational-Technical Schools in China and Their Countermeasures. *International Education Studies*, 2(4), 1-4. Retrieved from https://www.researchgate.net/publication/42386213_Issues_of_Practical_Teaching_in_Vocational-Technical_Schools_in_China_and_Their_Countermeasures