
Original Article

Examining Cambodian upper secondary school students' perceptions of TVET as a career choice: A cross-sectional study

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Abstract

This study aims to examine Cambodian upper secondary school students' perceptions of TVET as a career choice. The study was designed as a cross-sectional study, using an online questionnaire survey administered through Google Forms for data collection. Based on 414 responses, the study showed that Cambodian upper secondary school students had moderately positive perceptions of TVET as a career choice. Nearly half (49.3%) of the students lacked knowledge about TVET. The results also revealed that school teachers (58.7%), social media (12.8%), school websites (10.6%), and education fairs (9.9%) were cited as the most common means of gaining knowledge about TVET. Additionally, a positive correlation was found between students' perceptions of TVET and their likelihood of choosing it as a career path ($r = 0.821, p < 0.001$). Further analysis showed that perceptions of TVET significantly influenced students' career choices ($\beta = 0.821, t(412) = 29.23, p < 0.001$). This suggests that improvement in students' perceptions of TVET can increase the likelihood of them choosing TVET as a career path. The study concludes with a discussion of limitations and recommendations for future research.

Keywords: TVET; perceptions of TVET; career choice; Cambodian upper secondary school students

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Introduction

Higher education plays an important role in transforming students into human capital required to promote social well-being and sustainable development (Farooq et al., 2011; Heng, 2024; Oeun & Heng, 2024). Within this context, technical and vocational education and training (TVET) is a vital educational pathway that provides students with essential knowledge and practical skills needed in the current job market (International Labor Organization [ILO], 2023). It also enables students to leverage technological advancements to stay relevant in a rapidly changing world (ILO, 2023). The role of TVET is even more important in developing countries in promoting social inclusion and fostering economic growth (Chang, 2021). It helps students obtain competencies in a short period of time, allowing them to begin their work immediately after graduation (Chea et al., 2020).

In the Cambodian context, TVET plays a pivotal role as it produces skilled labor for the job market (Chea, 2016; Ven & Veung, 2020). Cambodian students can decide to continue their higher education via university or TVET pathways after they complete high school (Veung, 2024). TVET is considered a great opportunity for students who do not pass their national Grade 12 exams, as it can help them acquire skills necessary for employment (Chhun, 2016). Since not many Cambodian students want to pursue their professions in technical and vocational skills, students who excel in TVET skills are highly needed (Chea, 2016). According to Heng and Sol (2023) and Madhur (2014), TVET programs are also accessible to students who complete Grade 9. TVET programs can offer students different levels of training, such as vocational certificates (C1, C2, and C3), higher diplomas, bachelor's degrees, and postgraduate studies (Khorn, 2023; Madhur, 2014).

The Cambodian government and its development partners have been actively working to enhance the TVET sector (Ministry of Labor and Vocational Training [MoLVT], 2017). For example, to effectively implement the National Technical Vocational Education and Training Policy, a four-pillar framework was established, focusing on improving quality, increasing access, promoting public-private partnerships, and enhancing governance (MoLVT, 2017). MoLVT is also dedicated to modernizing the TVET system under the principles of 'one youth, more than one skill' through quality improvement, expanded training, and stronger public-private collaboration (National Institute of

[Statistics, 2019](#)). Additionally, scholarships are available for disadvantaged students, particularly women and indigenous populations ([MoLVT, 2017](#)). The government recently launched TVET programs for 1.5 million disadvantaged youth to boost enrollment and economic growth ([Khmer Times, 2024](#)). However, attracting students from poor households remains challenging despite the provision of a monthly allowance of 280,000 riels (US\$70) for TVET enrollment ([Chheuy, 2024](#)).

Despite its contribution to economic growth and the skills it offers in Cambodia, TVET receives little public recognition, especially from students ([Chea, 2016](#); [Chea et al., 2021](#); [Fernandez & Choi, 2013](#); [MoLVT, 2021](#)). Many Cambodian high school students in rural areas are not aware of or interested in TVET programs ([Chea, 2016](#); [Khan, 2013](#)). These high school students have limited knowledge of and access to TVET information, including program offerings, entry requirements, and tuition fees ([Khan, 2013](#)). As students are unaware of and do not value this education pathway, enrollment in TVET is low ([Song, 2022](#)). The low enrollment in TVET stemmed from negative perceptions of TVET among young Cambodian people ([Chea, 2016](#); [Madhur, 2014](#); [Khieng et al., 2015](#)). These young people perceive TVET skills as blue-collar and lower-paid jobs ([Asian Development Bank \[ADB\], 2016](#)). As [Khieng et al. \(2015\)](#) noted, TVET and its institutions are not widely known and are perceived as having low value by most students and parents.

Against this background, this study aims to examine the perceptions of upper secondary school students about TVET as a career choice. Previous studies have examined topics related to competency-based TVET ([Chea et al., 2020](#)), the current status and future development of TVET ([Yok et al., 2019](#)), permeability in Cambodian post-secondary education and training ([Chea et al., 2021](#)), skills shortages and skills gaps ([Bruni et al., 2013](#); [Madhur, 2014](#)), development through vocational training ([Miller, 2020](#)), skill development and skill formation systems ([Ing, 2022](#); [Veung, 2021](#)), contributions of vocational skills to Cambodia's economy ([Ven & Veung, 2020](#)), vocational skills development and industrial transformation in Cambodia ([Veung & Ven, 2021](#)), and promoting TVET among students in Cambodia ([Chea, 2016](#)). However, there is still a gap in knowledge about Cambodian upper secondary school students' perceptions of TVET as a career choice. Therefore, the present study attempts to bridge this

knowledge gap by examining how Cambodian upper secondary school students perceive TVET as a career choice.

This study is guided by two main research questions:

1. What are Cambodian upper secondary school students' perceptions of TVET as a career choice?
2. Do students' perceptions of TVET predict their career choice in TVET?

Literature review

Understanding TVET

TVET is widely described as education, training, and skills development in different occupational fields, including production, services, and livelihoods (UNESCO-UNEVOC, n.d.). It involves work-based learning, continuing professional development, and skills development tailored to national and local contexts (UNESCO-UNEVOC, n.d.). TVET refers to education and training programs designed for a specific job, and it generally includes practical training as well as the study of relevant knowledge (Organization for Economic Co-operation and Development [OECD], 2010). According to the MoLVT (2017), TVET is defined as an “indispensable component for socio-economic development as it assists learners in gaining knowledge, technical skills, and competency to become skilled workers and technicians, and it significantly contributes to the socio-economic development of the nation” (p. 1). In essence, TVET encompasses education, training, and skills development across diverse occupational fields, incorporating practical learning and tailoring to specific job requirements and national development needs.

The significance of TVET

TVET is vital for economic and social development as a tool for productivity enhancement and poverty reduction (Pavlova, 2014). Rajadurai et al. (2018) noted that TVET is viewed as a means of developing a nation. According to the OECD (2019), TVET plays an important role in preparing young people for jobs and addressing the labor market demands. Countries have increasingly recognized that high-quality TVET can contribute to economic competitiveness (Organization for Economic Co-operation and Development [OECD], 2019). It has become the strategic and operational priority of the Group of Twenty (G20) countries, OECD, the International Labor Organization (ILO), the United Nations Educational, Scientific and Cultural Organization (UNESCO), the

Association of Southeast Asian Nations (ASEAN), and the Southeast Asian Ministers of Education Organization (SEAMEO) ([Paryono, 2017](#)).

In the Cambodian context, TVET has been acknowledged by the government for its role in developing a high-quality workforce to better address labor market needs and contribute to the national development agenda ([Song & Chea, 2023](#); [Ven & Veung, 2020](#)). According to [Khorn \(2023\)](#), TVET plays four main important roles, such as providing personal and professional development, supporting the education sector, supporting the private sector, and boosting the economy. [Khorn \(2023\)](#) also noted that TVET is crucial for “improving people's livelihoods and providing Cambodian workforces or human resources with the knowledge, competence, skills, working attitudes, professional ethics, high productivity, and competitiveness needed for lifetime employment” (p. 193). In addition, TVET will also contribute to improvement in economic competitiveness and labor force diversification ([Open Development Cambodia, 2022](#)). As reported in the new media, TVET programs in Cambodia have become vital to the country's strategy for poverty alleviation, the promotion of social mobility, and improvement in the standard of living ([Angkor Times, 2024](#)). In this sense, TVET plays a crucial role in economic and social development as it contributes to enhancing productivity, reducing poverty, and preparing young people for jobs.

Students' perceptions of TVET

Perception is a process of selecting, organizing, and interpreting information inputs to form meaning and illustrate a picture of the world ([Tlapana & Myeki, 2020](#)). Previous studies have used perceptions to understand students' decisions to continue their studies, particularly in the TVET sector ([Sibiya, 2021](#); [Shaari et al., 2024](#); [Tlapana & Myeki, 2020](#)), with some studies showing that students had a favorable attitude toward TVET programs ([Nirmala & Lelissa, 2013](#)). [Hojeij and Marzouqi \(2022\)](#), who conducted a study to examine female students' perceptions of TVET in the United Arab Emirates, found that female students had an overall positive educational experience in TVET, as they believed their vocational education could enable them to have a better future.

[Tlapana and Myeki \(2020\)](#) found that South African high school students' perceptions of TVET are shaped and informed by a few key reasons, such as the image and reputation of TVET institutions, the positioning and marketing of TVET institutions, and the ability to comprehend what TVET institutions

provide. However, they noted that because of negative perceptions of TVET entities, students have a lack of confidence in the institution to help them have a prosperous future. It was also found that the last option to go for TVET colleges is for students who are denied by universities (Tlapana & Myeki, 2020).

Another study in South Africa by Sibiya et al. (2021) examined TVET engineering students' perceptions of their qualifications and employment prospects. The study (n = 113) resulted in mixed perceptions. It showed that TVET engineering qualifications did not guarantee employment due to a lack of jobs in the South African economy. However, the study also showed that "some participants perceived a TVET engineering qualification to be in demand, and this demand is attributed to the electricity crisis/load-shedding in South Africa" (p. 130). In addition, students perceived unemployment as a function of job scarcity instead of a lack of skills (Sibiya et al., 2021).

In Malaysia, Zhi and Atan (2021) found that students had positive attitudes toward TVET. The students perceived that vocational education was better than academic education, as it provided useful knowledge and skills and suggested a better job in the future. The students also encouraged their siblings and friends to pursue TVET (Zhi & Atan, 2021). A recent study by Shaari et al. (2024) also found positive attitudes toward TVET among Malaysian secondary students. The study revealed that TVET literacy could decrease the negative mindset of TVET and attract more students to choose TVET and participate in the pool of skilled laborers (Shaari et al., 2024).

Perceptions of TVET as a career choice

Career choice is important for every individual. It is defined as a process that describes a decision that a person makes when choosing a particular career (Humayon et al., 2018). According to Maina (2013, as cited in Humayon et al., 2018), career choice is "the selection of a course of study which leads to a specific profession according to one's interest, passion and ability" (p. 132). Making a career decision is a vital stage in determining success in every student's life (Kazi & Akhlaq, 2017). A career choice can be one of many crucial decisions that students will make in determining future success (Borchert, 2002). Career decisions are often influenced by economic realities and perceptions of job prospects (Boateng et al., 2024). In this context, students' views on TVET can significantly influence whether they consider it a viable pathway (Tlapana & Myeki, 2020). However, when TVET is seen as a path for underachievers or

academically weaker students, its appeal diminishes ([Alhassan et al., 2024](#); [Omar & Desa, 2023](#)).

According to [Abayomi et al. \(2013\)](#), high schools have a high responsibility to prepare students to make informed career decisions. Furthermore, [Abayomi et al. \(2013\)](#) also noted that at this stage, students may start thinking about their career options by considering skills that will navigate them in “that direction” and “pursue accordingly” (p. 2). The perceptions of career prospects and employability are a critical factor in students' decisions to participate in TVET ([Boateng et al., 2024](#)). As [Zulkarnain and Yasin \(2023\)](#) noted, employability has become a concerning problem on a global scale, especially as the world moves towards the Fourth Industrial Revolution. The student's success is determined by the career they choose; therefore, if they choose the wrong one, the possibility of failing is much higher than succeeding ([Hoti & Zenuni, 2024](#)). According to [Zhi and Atan \(2021\)](#), TVET can lead students to the work they want, as people with a TVET diploma are attractive in labor markets and are likely to be guaranteed future employment.

In Ghana, [Boateng et al. \(2024\)](#) examined students' choice of the TVET pathway. The study (n = 245) found that practical skills, opportunities for self-employment, and job prospects motivated them to choose TVET skills as a career choice. The study also showed that practical components, instructional methods, accessibility of materials and equipment, and the general school environment were cited by the students as main reasons for their interest and satisfaction with TVET programs ([Boateng et al., 2024](#)).

[Singoei \(2021\)](#) assessed career choices in information technology among TVET students. The results showed that personality, career opportunities, environment, and other support systems, such as parents, teachers, counselors, and friends, had significant effects on the students' career choices in TVET. Moreover, the results also found that personality and career opportunity factors played a crucial role in students' decisions to choose the right career, as they tended to choose a career that was in line with their career type ([Singoei, 2021](#)).

According to the [International Research and Exchanges Board \(2024\)](#), which examined the perceptions of Palestinian youth (n = 460) about TVET as an education path, nearly half (46%) of the youth had negative perceptions of

TVET. The results also showed that the most cited reasons for this negative perception were “a negative reputation, low access to the job market, and low social status,” as well as the “low quality of education and the difficulty in transferring to university after completing TVET as contributing factors” (p. 21).

A study by [Wangdi \(2022\)](#) found that TVET indeed provides skills and enhances Bhutanese trainees’ employability. The findings also showed that Bhutanese trainees were happy with the skill programs that they were taking, and they gained confidence for self-employment and developed great aspirations to go abroad for employment. The study also found that parents’ and children’s attitudes toward TVET have changed from negative to positive ([Wangdi, 2022](#)).

In Malaysia, [Nordin and Omar’s \(2024\)](#) study that investigated upper secondary school students’ readiness to pursue TVET found positive attitudes toward TVET due to effective teaching and learning experiences students had and the supportive learning environment in enhancing TVET readiness among students. It was suggested that policymakers and educators need to bolster TVET as a compelling educational and career pathway and foster a conducive environment for students to thrive in the technical and vocational realm ([Nordin & Omar, 2024](#)).

Research on students’ perceptions of TVET in Cambodia

In Cambodia, there is low interest and misperceptions of TVET ([Khieng et al., 2015](#); [Yok et al., 2019](#)). The need for skilled workers with technical and vocational knowledge is high; however, students’ interest in TVET programs remains low as they often perceive TVET skills as a dead-end pathway ([Yok et al., 2019](#)). As [Khieng et al. \(2015\)](#) noted, high school students are often unaware that they can pursue TVET studies from a certificate (consisting of three levels: Certificates 1–3) to master's degrees or doctorate levels.

According to [Khieng et al. \(2015\)](#), misperceptions of TVET remain a major challenge in promoting and developing TVET. The misperceptions include “TVET jobs are not for women, for laborious, dirty, outdoors and under the sun (blue-collar jobs), for those who are not smart, who had low grades at school and dropouts, for the poor/those with low economic status and those in rural areas (peasants) as well as university degrees give better chances of landing a

job than TVET degrees” (Khieng et al., 2015, p. 107). Khieng et al. (2015) also added that the majority of TVET programs concentrate on technical skills, including electrical, mechanical, electronic, and civil engineering, which frequently involve heavy work and sometimes work in hazardous and unclean environments, making them unsuitable for women.

Chhoeung (2011) examined the perceptions of Grade 12 students (one school in Phnom Penh and another in Kampong Speu) about TVET, aiming to explore factors that influenced their school or career options. The results showed that the factors influencing the students’ school or career options were personal interest, parents, gender, school fees, and institutional and geographic factors. The results also showed that parents were the main factors influencing students’ career options, followed by their personal interests (Chhoeung, 2011).

According to ADB (2016), Cambodian students’ negative perceptions of TVET stemmed from a genuine lack of interest among the students themselves. Students viewed that TVET could offer skills that would suggest a blue-collar profession and lower-paid occupations, while education through universities was for professionals who would have more attractive salaries (ADB, 2016). However, Chea (2016) found that upper secondary students (n = 228) in Phnom Penh had positive views of TVET. Although they had positive perceptions of TVET, their interest in pursuing TVET studies or careers remained low, potentially due to a lack of knowledge about TVET skills and labor market needs. The study also showed that social media and the internet were the most effective channels for disseminating information about TVET (Chea, 2016).

Despite these extant studies, to the best of our knowledge, research exploring Cambodian upper secondary school students’ perceptions of TVET as a career choice is still limited, leaving a relatively huge knowledge gap concerning this topic. The present study, therefore, aims to bridge this gap by exploring Cambodian upper secondary school students' perceptions of TVET as a career choice.

Methodology

Research design

This research was designed as a cross-sectional study to examine Cambodian upper secondary school students' perceptions of TVET as a career choice. It used an online questionnaire survey (Creswell, 2014) and a simple random strategy (Kumar, 2011) for data collection. Creswell (2014) noted that a survey can offer a quantitative assessment of the trends, attitudes, and opinions of the population, which is deemed appropriate for this study. According to Denscombe (2010), an online survey offers an inexpensive and fast alternative to other forms of surveys, such as postal and telephone surveys. Therefore, this research design and data collection method were considered appropriate for the present study.

Research setting

The present study took place at one general public high school located in Preynhea village, Ph'av commune, Batheay district, Kampong Cham province, Cambodia. The researchers chose to conduct the study at this general public high school for two key reasons. First, it is a reason for convenience in data collation, as one of the researchers is an English teacher in the school. Marshall and Rossman (2010) have noted that researchers have a much better chance of gaining access to their research site if they know the area well. Another reason is that at the upper secondary level, students may start to think about their career goals. As Abayomi et al. (2013) noted, high schools have a significant responsibility in preparing students to make informed decisions about their career path. In Cambodia, people who live in rural areas are not aware of TVET (Suy, 2020). Particularly, upper secondary school students had a lack of knowledge of TVET, stemming from misperceptions and a lack of access to information (Chea, 2016; Khan, 2013). Therefore, the targeted high school provided an ideal setting to explore Cambodian upper secondary school students' perceptions of TVET as a career choice.

Research sample

The study aims to examine Cambodian upper secondary school students' perceptions of TVET as a career choice. According to the target school's enrollment statistics for 2024-2025, there were 1,098 (483 females) upper secondary school students who enrolled in Grades 10, 11, and 12. The target population involved in this study was Cambodian general high school students

who enrolled in Grade 11 and Grade 12. There are two main reasons for selecting 11th and 12th grade students. First, they are senior students who will spend a couple of years in high school before they graduate and pursue post-high school education. Second, these students already chose their track of education between science and social science. There were 411 students (172 females) enrolled in Grade 11 and 345 students (139 females) enrolled in Grade 12. Thus, the student population was 756 (311 females). As the study employed a simple random sampling strategy for data collection, these 11th and 12th grade students were invited and had an equal chance to complete the survey through *Google Forms*. The calculation based on the formula suggested by [Yamane \(1973\)](#) produced a minimum sample of 342 Cambodian upper-secondary school students.

This study employed the Yamane formula ([Yamane, 1973](#)) to compute the sample size, with a degree of precision of 95%. The formula is as follows:

$$n = \frac{N}{1 + Ne^2}$$

n = sample size,

e = error (0.04) or a level of reliability of 96%

N = the total population of Cambodian upper secondary school students in Grade 11 and Grade 12, which is 756.

Therefore, the minimum sample for this study is 342, as calculated below:

$$n = \frac{756}{1 + 756(0.04)^2} = 342.14 \text{ or } 342$$

In this study, the participants were 414 Cambodian upper secondary school students (62.8% females) who studied in Grade 11 (69.6%) and Grade 12 (30.4%). Over two-thirds of them (71%) were enrolled in the social science track, and 29% in the science track. Their ages were 15-16 years old (40.3%), 17-18 years old (57.5%), and 19-20 years old (2.2%) (see Table 1).

Table 1. *Participants' demographic information* (n = 414)

		Frequency	Percent
Gender	Male	154	37.2
	Female	260	62.8
Age	15-16	167	40.3
	17-18	238	57.5
	19-20	9	2.2
Grade	Grade 11	288	69.6
	Grade 12	126	30.4
Study track	Social science	294	71.0
	Science	120	29.0

Research instrument

The data were collected using an online questionnaire distributed via *Google Forms*. The questionnaire was written in Khmer, the participants' native language, to ensure clarity and prevent language-related misunderstandings. The questionnaire was developed based on the information from the literature review, in particular [Boateng et al. \(2024\)](#), [Chea \(2016\)](#), [Khieng et al. \(2015\)](#), [Nordin and Omar \(2024\)](#), and [Zhi and Atan \(2021\)](#). The questionnaire survey adopted a five-point Likert scale (from 1 = Strongly Disagree to 5 = Strongly Agree). The survey consists of 32 questionnaire items, categorized in three main sections, such as (1) students' demographic information (with 8 question items), (2) students' perceptions of TVET (with 13 question items), and (3) students' perceptions of TVET as a career choice (with 11 question items). The section on students' perceptions of TVET was adapted from studies by [Chea \(2016\)](#) on promoting TVET among students in Cambodia and [Khieng et al. \(2015\)](#) on employment and empowerment in Cambodia. The section on students' perceptions of TVET as a career choice was adopted from studies by [Boateng et al. \(2024\)](#) on factors influencing students' choice of TVET, [Nordin and Omar \(2024\)](#) on factors influencing TVET readiness among public secondary school students, and [Zhi and Atan \(2021\)](#) on factors influencing students' attitudes toward TVET.

Data collection and analysis

To collect data, a questionnaire link was distributed to Cambodian upper secondary school students through Telegram groups. The researchers asked permission to go to different classrooms to inform students about the research and sought support from colleagues to share the questionnaire link with their students through Telegram groups. Prior to the official data collection, the

questionnaire was piloted with nine Cambodian students (4 from Grade 11 and 5 from Grade 12) to ensure comprehensibility, clarity, and relevance. Based on their feedback, refinements were made to improve wording, structure, and reliability. For example, 'gender: male and female' was revised to 'sex: male and female,' and 'write your age below' was revised to 'write your age below (e.g., 18 years old)'. The survey was open for approximately three weeks, from December 2024 to January 2025. It took approximately 15 to 20 minutes to complete the questionnaire.

Table 2. *Reliability test*

Variables	Number of items	Cronbach's alpha
Perceptions of TVET	13	0.971
TVET as a career choice	11	0.982
Overall	24	0.983

There were 439 responses to the online questionnaire survey; however, 25 responses missed selecting some question items and wrote their names in the age section, leading to the inability to define their ages, and were excluded from the data analysis. Thus, the analysis included a total of 414 valid responses from Cambodian upper secondary school students.

The collected data were analyzed using the Statistical Package for the Social Sciences (SPSS) version 26. To analyze the data, the responses from Google Forms were imported into Microsoft Excel for data cleaning and preparation. They were then imported into SPSS for coding and analysis. An internal reliability analysis was computed, producing a Cronbach's alpha of 0.983, indicating very good internal consistency across 24 questionnaire items (see Table 2). Both descriptive and inferential statistical methods were used, including mean, frequency, standard deviation, Pearson correlation, and simple linear regression. Mean score interpretation followed [Yaacob et al. \(2019\)](#), as outlined in Table 3.

Table 3. *Mean range interpretation*

Weighted mean interval scale	Mean interpretation
4.21–5.00	Very high

3.41–4.20	High
2.61–3.40	Moderate
1.81–2.60	Low
1.00–1.80	Very low

Ethical considerations

Ethical standards were checked throughout the research process. First, the researchers asked permission from the school principal, informing him about the purpose of the study. Second, specific personal information, such as names, phone numbers, and email addresses, was not gathered because it could lead to the identification of the participants. Participation in the survey was based on voluntarism and anonymity, and the participants could complete the survey at their convenience. They were also informed that they were able to withdraw from the study at any time without having to give reasons or explanations.

Results

Students' plan to continue higher education after completing Grade 12

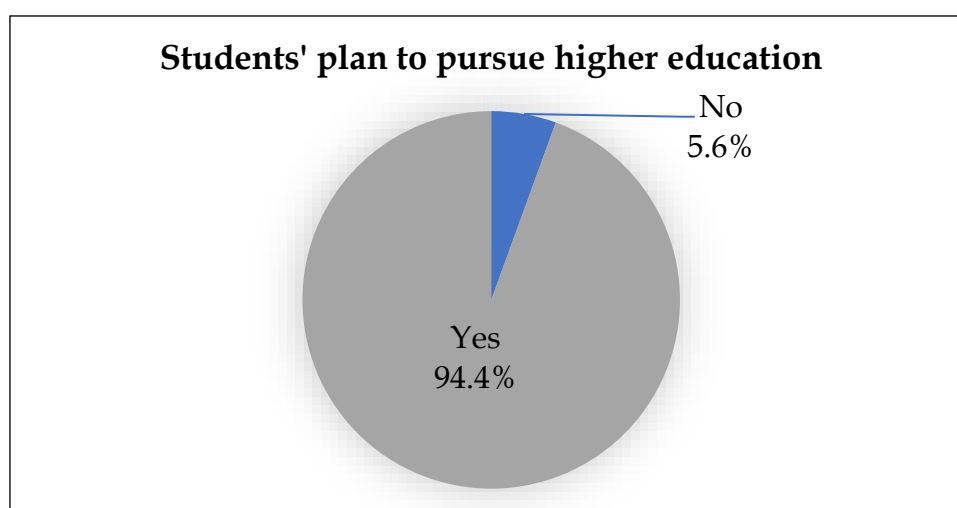


Figure 1. Students' plan to pursue higher education after completing Grade 12

Figure 1 shows Cambodian upper secondary school students' plan to pursue their higher education after completing Grade 12. Overall, 94.4% of the students planned to continue their higher education after completing Grade 12, while only 5.6% did not have such a plan.

Types of higher education institutions to continue post-secondary education

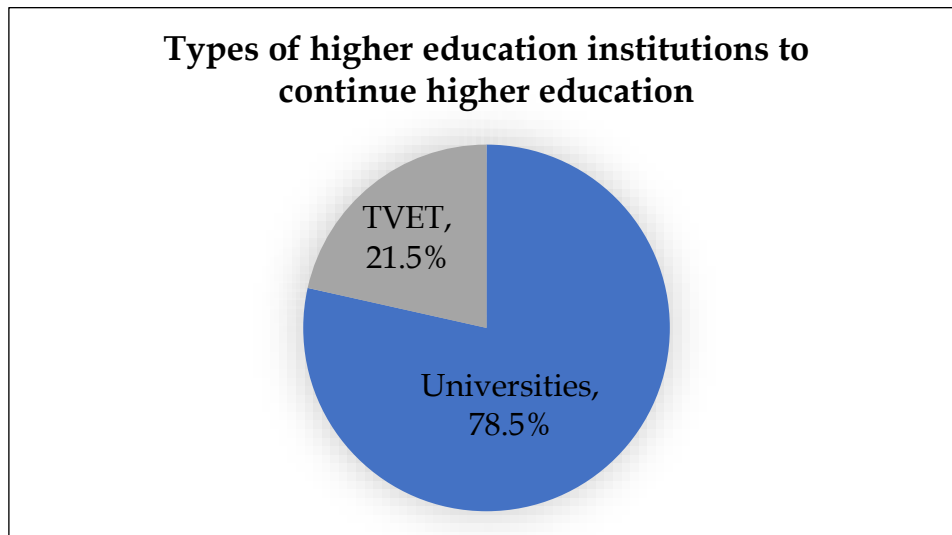


Figure 2. Types of higher education institutions to continue higher education

Figure 2 shows the two types of higher education institutions that Cambodian upper secondary school students plan to continue their higher education at. Overall, over two-thirds (78.5%) of the participants planned to continue their higher education at universities, while only 21.5% planned to pursue it at TVET institutions.

Students' knowledge of TVET

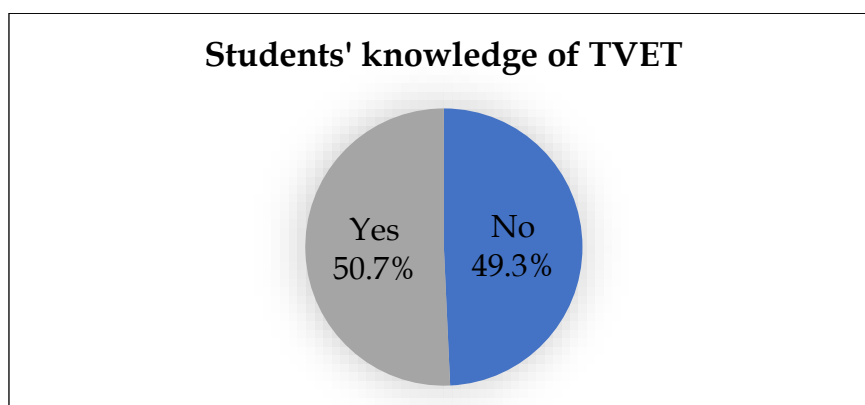


Figure 3. Students' knowledge of TVET

Figure 3 shows the results of students' knowledge of TVET. Overall, almost half (49.3%) of the participants reported that they had never heard or known about TVET. In addition, the students were also asked how they heard or knew about TVET.

Means of knowledge of TVET

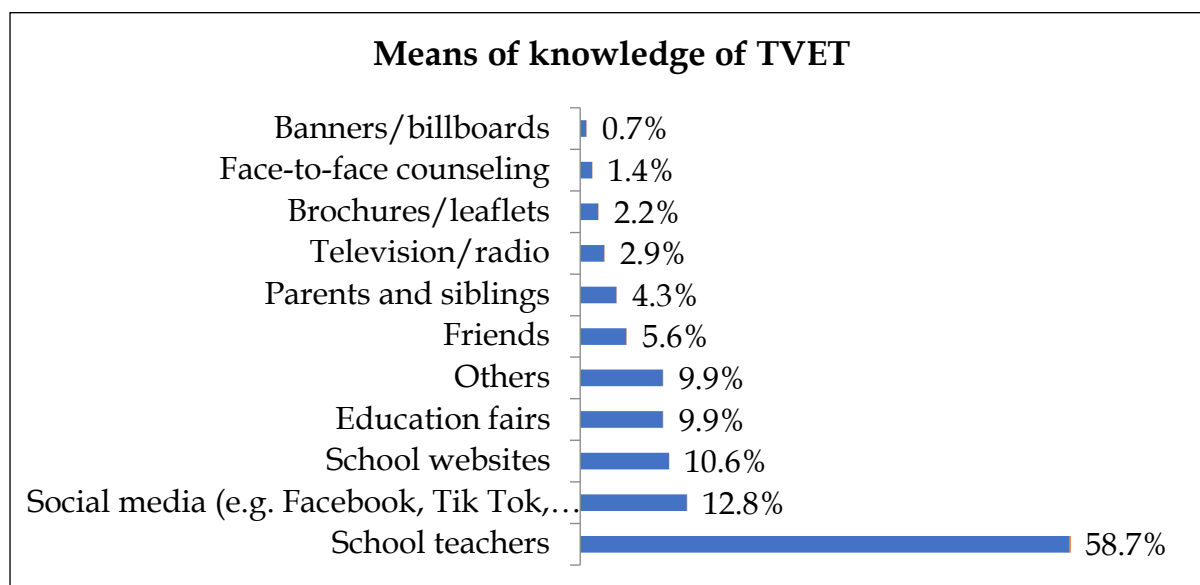


Figure 4. Means of knowledge of TVET cited by students from multiple-choice answers

When asked about how they know about TVET, the participants selected various means that allow them to know about TVET. As shown in Figure 4, nearly two-thirds (58.7%) of the participants knew about TVET through 'school teachers'. Others reported that they heard or knew about TVET through 'social media (e.g., Facebook, TikTok, YouTube)' (12.8%), 'school websites' (10.6%), 'education fairs' (9.9%), 'friends' (5.6%), 'parents or siblings' (4.3%), 'television/radio' (2.9%), 'brochures/leaflets' (2.2%), and 'face-to-face counseling' (1.4%). These results suggest that school teachers, social media, and education fairs are the most effective means of circulating information about TVET to students.

Cambodian upper secondary school students' perceptions of TVET

Table 4. *Cambodian upper secondary school students' perceptions of TVET* (n = 414)

Statement	Min	Max	Mean	SD
TVET provides useful knowledge and skills.	1	5	2.98	1.27
TVET enables me to continue higher education from a bachelor's degree to a doctoral degree.	1	5	3.02	1.26
TVET enables a better future in terms of career and education.	1	5	3.01	1.30
TVET provides youth skills development.	1	5	3.01	1.29
TVET is important for the Cambodian labor market.	1	5	2.99	1.29

TVET is important for Cambodia's socioeconomic development.	1	5	2.99	1.27
TVET is better than academic education.	1	5	2.78	1.22
TVET skills have a low social status.	1	5	2.67	1.24
TVET is the last option for education for students who are denied by universities.	1	5	2.82	1.25
Studying TVET is a dead-end pathway for education.	1	5	2.60	1.22
TVET jobs are blue-collar jobs (e.g., laborious, dirty, outdoors, and under the sun).	1	5	2.59	1.23
TVET skills command low salaries.	1	5	2.55	1.18
TVET skills are not suitable for women.	1	5	2.50	1.23
Overall			2.81	1.25

As shown in Table 4, the students reported a moderately positive perception of TVET ($M = 2.81$, $SD = 1.25$). The results also showed that Cambodian upper secondary school students had a moderate level of agreement with statements such as 'TVET enables me to continue higher education from a bachelor's degree to a doctoral degree' ($M = 3.20$, $SD = 1.26$), 'TVET can enable a better future in terms of career and education' ($M = 3.01$, $SD = 1.30$), and 'TVET provides youth skills development' ($M = 3.01$, $SD = 1.29$). They also had moderately positive perceptions in relation to statements such as 'TVET is important for the Cambodian labor market' ($M = 2.99$, $SD = 1.29$), 'TVET is important for Cambodia's socioeconomic development' ($M = 2.99$, $SD = 1.27$), and 'TVET provides useful knowledge and skills' ($M = 2.98$, $SD = 1.27$). They also tended to have moderately positive perceptions that 'TVET is better than academic education' ($M = 2.78$, $SD = 1.22$). On the other hand, students showed less agreement or even disagreement with statements that indicate negative perceptions of TVET, such as 'TVET is the last option for education for students who are denied by universities' ($M = 2.82$, $SD = 1.25$), 'TVET skills have a low social status' ($M = 2.67$, $SD = 1.24$), 'TVET is a dead-end pathway for education' ($M = 2.60$, $SD = 1.22$), 'TVET jobs are blue-collar jobs' ($M = 2.59$, $SD = 1.23$), 'TVET skills command low salaries' ($M = 2.55$, $SD = 1.18$), and 'TVET skills are not suitable for women' ($M = 2.50$, $SD = 1.23$).

*Cambodian upper secondary school students' perceptions of TVET as a career choice*Table 5. *Cambodian upper secondary school students' perceptions of TVET as a career choice (n = 414)*

Statement	Min	Max	Mean	SD
I study TVET to pursue higher education.	1	5	2.87	1.23
I study TVET to develop my technical and vocational skills.	1	5	2.96	1.26
TVET can help lead me to the job I want.	1	5	3.00	1.26
TVET increases students' employability.	1	5	2.97	1.24
TVET provides practical skills and knowledge for jobs.	1	5	2.97	1.25
TVET diplomas are attractive in labor markets.	1	5	2.90	1.25
TVET diplomas guarantee future employment.	1	5	2.90	1.23
TVET skills are highly demanded in industrial sectors such as manufacturing and construction.	1	5	2.88	1.22
TVET skills can increase the opportunities for self-employment or business ownership.	1	5	2.94	1.26
TVET graduates have the most likelihood of employment.	1	5	2.81	1.27
TVET skills can help obtain a good salary.	1	5	2.91	1.26
Overall			2.92	1.25

As shown in Table 5, the students reported a moderately positive perception of TVET as a career choice ($M = 2.92$, $SD = 1.25$). Specifically, Cambodian upper secondary school students had moderately positive perceptions of TVET as a career choice through their agreement with statements such as 'TVET can help lead me to the job I want' ($M = 3.00$, $SD = 1.26$), 'TVET increases students' employability' ($M = 2.97$, $SD = 1.24$), 'TVET provides practical skills and knowledge for jobs' ($M = 2.97$, $SD = 1.25$), 'I study TVET to develop my technical and vocational skills' ($M = 2.96$, $SD = 1.26$), 'TVET can increase the opportunities for self-employment or business ownership' ($M = 2.94$, $SD = 1.26$), and 'TVET skills can help obtain a good salary' ($M = 2.91$, $SD = 1.26$). The results also revealed that the students tended to remain moderately positive, though to a lesser extent, about TVET as a career choice, with statements such as 'TVET diplomas are attractive in labor markets' ($M = 2.90$, $SD = 1.25$), 'TVET diplomas guarantee future employment' ($M = 2.90$, $SD = 1.23$), 'TVET skills are highly demanded in industrial sectors such as manufacturing and construction' ($M =$

2.88, SD = 1.22), 'TVET graduates have the most likelihood of employment' (M = 2.81, SD = 1.27), and 'I study TVET to pursue higher education' (M = 2.87, SD = 1.23).

Do students' perceptions of TVET predict their career choice in TVET?

Table 6. *Correlation between students' perceptions of TVET and their career choice*

	Perceptions of TVET	Career choice
Perceptions of TVET	-	.821**
Career choice	.821**	-

** Correlation is significant at the 0.001 level (2-tailed).

A Pearson correlation coefficient was performed to assess the relationship between students' perceptions of TVET and their career choice. As shown in Table 6, there was a strong positive correlation between students' perceptions of TVET and their career choice ($r = 0.821$, $p < 0.001$). This suggests that students with more positive perceptions of TVET are more likely to choose TVET as their career path.

Table 7. *Simple linear regression analysis of students' perceptions of TVET as a career choice*

Variable	B	SE	β	t	Sig.	VIF
Perceptions of TVET	0.875	0.030	0.821	29.230	0.000	1.000
R^2	0.675					
Adjusted R^2	0.674					
$F(1, 412)$	854.375					

In addition, a simple linear regression was performed to examine the influence of students' perceptions of TVET on their career choice. As shown in Table 7, there is a strong, positive, and statistically significant relationship between perceptions of TVET and career choice. The overall model was significant, $F(1, 412) = 854.375$, $p < 0.001$, with an R^2 of 0.675, suggesting that 67.5% of the variance in students' career choice is explained by their perceptions of TVET. Students' perceptions of TVET are a significant predictor of their career choice of TVET ($B = 0.875$, $SE = 0.030$, $\beta = 0.821$, $t(412) = 29.230$, $p < 0.001$). This suggests that the improvement in the perceptions of TVET can increase the likelihood of choosing TVET as a career path among Cambodian upper secondary school students by 0.82 times.

Discussion

This study sought to examine Cambodian upper secondary school students' perceptions of TVET as a career choice. The results showed that about half (50.7%) of the students had known TVET, and only 21.5% of them had a plan to pursue higher education at TVET institutions, while a majority (78.5%) planned to pursue their higher education at universities. The results also showed that school teachers, social media (e.g., Facebook, TikTok, YouTube), and education fairs were the key means for them to access information about TVET. These results align with previous research in Cambodia, as reported by [Chea \(2016\)](#), [Khan \(2013\)](#), [Khieng et al. \(2015\)](#), and [Song \(2022\)](#). For example, as [Chea \(2016\)](#) found, students learned about TVET information through social media and the internet. [Khan \(2013\)](#) also found that students had limited knowledge about TVET programs and limited access to information about TVET. Likewise, [Song \(2022\)](#) found that many Cambodian students were not aware of TVET and did not prioritize education through TVET, leading to low enrollment in TVET.

This study also showed that Cambodian upper secondary school students had a moderately positive perception of TVET. The study showed that, through TVET, students can continue higher education from a bachelor's degree to a doctoral degree, and TVET can enable a better future in terms of career, education, and skills development. They also tended to believe that TVET is important for the country's labor market and socioeconomic development and provides useful knowledge and skills. These results are consistent with previous research in different contexts, such as Cambodia ([Ven & Veung, 2020](#); [Veung & Ven, 2021](#)), Malaysia ([Shaari et al., 2024](#); [Zhi & Atan, 2021](#)), South Africa ([Sibiya et al., 2021](#); [Tlapana & Myeki, 2020](#)), and the United Arab Emirates ([Hojeij & Marzouqi, 2022](#)).

The present study further revealed that Cambodian upper secondary school students did not perceive TVET to be associated with a dead-end pathway for education, blue-collar jobs, low salaries, and skills unsuitable for women. These results are contrary to earlier findings in the context of Cambodia by [Chea et al. \(2021\)](#), [Khieng et al. \(2015\)](#), and [Yok et al. \(2019\)](#). [Yok et al. \(2019\)](#), for instance, found that Cambodian students viewed TVET as a dead-end pathway of education, while [Khieng et al. \(2015\)](#) showed that Cambodian students perceived TVET jobs to be unsuitable for women while considering them to be for blue-collar jobs, less intelligent individuals or school dropouts, and inferior

job prospects. The results of the present study also differ from studies in other contexts, such as South Africa (Tlapana & Myeki, 2020) and Malaysia (Zhi & Atan, 2021). Tlapana and Myeki (2020), for example, found that TVET colleges become the last option for students who have been rejected by universities, while Zhi and Atan (2021) reported that jobs related to TVET were seen to have a low status in Malaysian society.

Regarding TVET as a career choice, this study showed that Cambodian upper secondary school students had a moderately positive perception of it. For example, the students tended to perceive that TVET can lead them to the job they want, increase their employability, provide practical skills and knowledge for jobs, develop technical and vocational skills, increase the opportunities for self-employment or business ownership, and help them obtain a good salary. They also appeared to believe that TVET diplomas are attractive in labor markets and guarantee future employment. Furthermore, TVET skills were believed to be highly demanded in industrial sectors such as manufacturing and construction, as TVET graduates have the most likelihood of employment. In addition, TVET was perceived by the participants as an opportunity to pursue higher education. These results align with those reported by previous research in different contexts, such as Bhutan (Wangdi, 2022), Ghana (Boateng et al., 2024), Malaysia (Nordin & Omar, 2024; Zhi & Atan, 2021), and Palestine (International Research and Exchanges Board, 2024).

Finally, the present study revealed that there was a strongly positive relationship between students' perceptions of TVET and their career choice ($r = 0.821, p < 0.001$). This means that students who have more positive perceptions of TVET are more likely to choose TVET as their career choice. The study also showed that students' perceptions of TVET have a significant influence on their career choice of TVET ($\beta = 0.821, F(1, 412) = 854.37, p < 0.001$). This suggests that improvement in perceptions of TVET can increase the likelihood of students' choice of TVET as a career path. These results are consistent with those reported by Nordin and Omar (2024) in Malaysia, Singoei (2021) in Kenya, and Tlapana and Myeki (2020) in South Africa.

Conclusion and implications

This study has examined Cambodian upper secondary school students' perceptions of TVET as a career choice. It revealed that students held moderately positive perceptions of TVET as a career choice. About half (50.7%)

of them reported their familiarity with TVET. Their primary sources of information about TVET were school teachers, social media (e.g., Facebook, TikTok, YouTube), and school websites, followed by education fairs, friends, and family. The study also identified a strong positive correlation between students' perceptions of TVET and their career choice.

In light of these results, the present research has a few implications. First, it is important to address the limited awareness of TVET among upper secondary school students, which may contribute to low enrollment in TVET programs. This lack of familiarity with TVET programs among students underscores the importance of expanding communication channels and increasing visibility among students. To address this issue, TVET promotion efforts should target secondary students and the general public. Developing targeted campaigns through diverse media channels, particularly social media, could enhance public awareness and positive perceptions of TVET.

Secondly, school teachers, social media, school websites, and education fairs were found to play a crucial role in informing students about TVET. Thus, it is important for school teachers to continue giving advice to their students. They should also seek to enhance their students' knowledge of TVET programs. Furthermore, it is also crucial for TVET institutions and relevant stakeholders to develop their social media channels and school websites to provide interesting and informative information about TVET. They should also produce more video content or podcasts about TVET and broadcast them on Facebook, YouTube, or TikTok to young Cambodian people, specifically high school students. They should also conduct more education and career fairs about TVET, particularly at secondary schools in rural areas.

Third, as the study has shown moderately positive perceptions of TVET and TVET as a career choice among students, it is essential for TVET institutions and relevant stakeholders to enhance the quality of TVET, design TVET curricula to align with the market needs, and build a better reputation and qualifications for TVET to attract more students to enroll in TVET programs.

Finally, the perceptions of TVET are found to be positively correlated with students' choice of TVET as a career path. In this context, TVET institutions and concerned stakeholders should invest more in strengthening TVET quality and

increasing the familiarity with TVET among secondary school students, so they may be more likely to enroll in TVET programs and choose TVET as their career choice.

This study is not without limitations. First, the study took place at only one high school, limiting the geographic and demographic representativeness of Cambodian secondary school students. Generalization is therefore impossible and impractical for the broader Cambodian student population across different regions, socioeconomic backgrounds, and school types. Second, this study involved only Grade 11 and 12 students, excluding younger students who might have different perceptions of TVET. Another limitation was that the study employed a cross-sectional design, using an online survey for data collection, which could cause the potential exclusion of students lacking reliable internet access or technology, and as a single-timepoint data collection, the study could not capture change in students' perceptions over time.

To address the above limitations and contribute to a deeper understanding of how Cambodian upper secondary school students perceive TVET as a career choice, future research should extend the scope of this study by exploring the perspectives of secondary school students from Grade 7 to Grade 12 about TVET programs and TVET as a career path. Future research should also examine the interest, motivation, and self-efficacy of upper secondary school students in TVET across provinces in Cambodia. In addition, research that investigates different aspects of this important topic is recommended to utilize qualitative or mixed-methods approaches to gain a more in-depth and comprehensive understanding of the complex personal, cultural, and socioeconomic factors that influence Cambodian students' attitudes toward TVET education. Moreover, a longitudinal or comparative research design is also suggested, in particular by investigating TVET and university students' perceptions of TVET to understand how they perceive TVET as a higher education pathway or career choice.

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