

Towards Sustainable Education: Exploring the Intention to Pursue Vocational Higher Education among Senior High School Students in Ningxia, China

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Abstract: As part of the national agenda to inculcate more skilled and technical talents to boost the economy, China has created the most extensive vocational education in the world. Yet enrolment for vocational higher education is still relatively low, and this can derail its national agenda. This study aims to explore the intention to pursue vocational higher education among general senior high school students in Ningxia using the Theory of Planned Behaviour. Data was collected from 432 senior high school students in Ningxia, China, using a survey instrument which contains four variables with 28 items. These independent variables are attitude towards pursuing vocational higher education, subjective norms, perceived behavioural control; while intention to pursue vocational higher education is the dependent variable. All four variables have moderate to strong positive correlations with each other. Multiple regression analysis showed that attitude and subjective norms predict the intention to pursue vocational higher education among the senior three general senior high school students. However, perceived behavioural control does not have this predictive power. This study is significant as it sheds more light into what factors contribute to the intention to pursue a vocational higher education in Ningxia using the Theory of Planned Behaviour,. Finally, based on the findings of this study, recommendation were put forward for policy makers to increase enrolment for higher vocational education to meet the country's demand for skilled workers.

Keywords: Attitude, Perceived Behavioural Control, Subjective Norm, vocational higher education, Theory of Planned Behaviour

1. Introduction

Education is fundamental to a nation's well-being and is the foundation for a strong country (Muftahu et al, 2023). Since the ancient times, China has attached great importance to education and given priority to its development. In present day China, it has established the most extensive education system in the world. The status of vocational education has been enhanced, a modern vocational education system from secondary to undergraduate level strengthened and the quality of vocational education improved (Gao, 2015). In line with United Nation's Sustainable Development Goal (SDG) 4: Quality Education, many nations around the world including China is committed to ensure inclusive and equitable quality education and promote lifelong learning opportunities for all

(United Nation Sustainable Development Goals, 2016). Goal Target 4.3 outlines the target that by 2030, China will ensure equal access for all women and men to affordable and quality technical, vocational and tertiary education, including university. This is directly linked Goal Target 4.4, where, by 2030, China will substantially increase the number of youths and adults who have relevant skills, including technical and vocational skills, for employment, decent jobs and entrepreneurship (United Nation China, 2024). To date, China has made important contributions to the training of skilled talents, guaranteeing the rights of hundreds of millions of Chinese people to receive education and significantly improving the whole nation. By the end of 2022, China had 1,521 higher vocational education institutions, (Ministry of Education of the People's Republic of China, 2023). In the fields of modern manufacturing, strategic emerging and modern service industry, more than 70% of the new front-line employees came from these institutions (Ding, 2022). The direct pathway to enter higher vocational education institutions include both vocational high schools and general senior high schools.

Located in northwest China and the upper reaches of the Yellow River, Ningxia Hui Autonomous Region, commonly known as Ningxia or Ning, is one of China's five ethnic autonomous regions (Ministry of Commerce, 2009). Ningxia covers a land area of 66,400 square kilometres (General Office of the People's Government of the Autonomous Region, 2021) and consists of five prefectural-level cities, including Yinchuan, Shizuishan, Wuzhong, Guyuan and Zhongwei, and 22 counties. By the end of 2022, Ningxia had a permanent population of 7,280,000 (Ningxia Hui Autonomous Region Bureau of Statistics & National Bureau of Statistics Ningxia Survey Team, 2023) and a total of 12 higher vocational institutions (Ministry of Education of the People's Republic of China, 2023). In 2022, these higher vocational colleges admitted 20,988 students and produced 19,010 graduates (Ministry of Education of the People's Republic of China, 2023).

Based on regional economic development data, these vocational education institutions provide many technical and skilled personnel for the society and accumulate human resources for the sustainable development of Ningxia local economy. Based on data from Ningxia Hui Autonomous Region Bureau of Statistics (2023), Ningxia's economy has been developing steadily. In 2022, the GDP per capita of all residents in Ningxia was 69,781 yuan (Ningxia Hui Autonomous Region Bureau of Statistics, 2023). However, there is a gap compared with China's national GDP per capita of 85,698 yuan in 2022 (National Bureau of statistics, 2023). A large part of the reason lies in the lack of competitive strength of local enterprises in Ningxia, and the lack of high-quality industrial workers and highly skilled talents. If this situation is not remedied, it poses serious challenges to develop Ningxia's economy (Pan, 2020).

China has the most extensive vocational education in the world. It has grown by leaps and bounds in a relatively short period, providing opportunities for skills training to boost the economy for millions of students from low-income families (Jing & Chung, 2022). According to Pavlova (2014) vocational education is closely related to the economy and society, with its direct and impactful contributions on societies and communities. Vocational education is the main vehicle to develop more technical talents in China and it is the impetus for China to move towards Industry 4.0 (Chen & Zhang, 2017). With China set to be the biggest economy globally by 2035 (Li, 2023), increasing the enrolment in vocational schools and vocational higher institutions are aligned towards meeting this monumental milestone. As of 2022, China has some 11,300 vocational schools enrolling a total of 30.88 million students and 10 million graduates per year (Koty, 2022).

Despite the growing acknowledgement of the importance of vocational education in addressing industry demands and economic growth, students' intention to attend higher vocational institutions in China is still relatively low (Guan & Dai, 2018). Literature shows that the factors influencing students' low intention to attend vocational college mainly includes social prejudice that vocational education is considered as lower grade that it produces low-paying blue collar workforce (Huang & Chen, 2021), lack of interest among students, fear of not passing the vocational education examination, students' parents support and family economic conditions (Gao, 2015); the lack of attraction of vocational education itself (Liu, 2014); local government policy control (Wang, 2013); and misalignment of majors or disciplines earned in secondary vocational schools (Chen, 2019). In a separate survey, it was found that 70.26% of secondary vocational school students and 73.48% of higher vocational college students indicated that the degree of social acceptance was the main stigma facing higher vocational education (Wang et al., 2021).

Apart from that, in modern-day China, service jobs are in higher demand and pay more than they did in previous years. The high-end manufacturing and production industries have also expanded in China to meet the increasing demand for goods such as electrical vehicles (Yu, 2022). Recognising this trend, the Chinese government announced during the discussion of vocational education laws in 2021, that 30 million and 40 million skilled workers will be needed in key manufacturing and service industries respectively. Despite this anticipated demand, only one million vocational school students graduate with adequate skills every year.

One of the ways to overcome the shortage of vocational graduates is to encourage the general senior high schools students to attend vocational higher college upon finishing their senior three studies. However, literature search also reveals that there are limited studies done to investigate general senior high school students' intention to pursue vocational higher education (Chung et al, 2024). Furthermore, even fewer studies have used Theory of Planned Behaviour to investigate Chinese senior high school students' intentions to pursue vocational higher education. Based on issues and research gap identified above, this study aims to investigate the relationship between attitude towards pursuing higher vocational education, subjective norms, perceived behavioural control and intention to pursue vocational higher education among senior high school students in Ningxia, China, using the Theory of Planned Behaviour. The following research questions steer the direction of this study (1) What is the relationship between attitude and intention to pursue vocational higher education among senior high school students in Ningxia, China? (2) What is the relationship between subjective norm and intention to intention to pursue vocational higher education among senior high school students in Ningxia, China?, and (3) What is the relationship between perceived behavioural control and intention to pursue vocational higher education among senior high school students in Ningxia, China?

2. Literature Review

Theory of Planned Behaviour (Ajzen, 1991) is one of the most popular theories of attitude-behaviour relationship in social psychology. This theory comprehensively explains psychological factors and external factors that affect individual behavioural performance, and has been widely applied in many behavioural fields (Lim & Dubinsky, 2005), and has been proven to significantly improve the explanatory and predictive power of research on behaviour. Before diving into this underpinning theory, it is crucial to review two other theories which are closely related to it.

2.1 Theory of Multi-Attribute Attitude

Theory of Multi-Attribute Attitude is a theory used to measure and predict attitudes. The theory believes that an individual's behaviour is influenced by self-perception or conformity psychology, and an individual's attitude towards pursuing performing the behaviour will affect the evaluation of the expected behavioural outcome (Fishbein,1963). For example, if a student decides to go to a higher vocational college based on his attitude towards pursuing higher vocational education, this belongs to the dimension of self-cognition. Meanwhile if the same student decides to go to higher vocational college based to the attitude of the whole class toward higher vocational education, then this falls under the dimension of conformity psychology. Theory of Multi-Attribute Attitude has also been used to explain buying behaviour for a wide range of products.

2.2 Theory of Reasoned Action

Theory of Reasoned Action is proposed by Fishbein and Ajzen on the basis of Theory of Multi-Attribute Attitude. This theory believes that behavioural attitude and subjective norm affect behavioural intention, and behavioural intention directly affect actual behaviour (Fishbein & Ajzen, 1975), which provides a new perspective for the study of individual behaviour. However, studies have found that Theory of Reasoned Action has weak predictive power in the case of non-individual intention fully control behaviour. It believes that behavioural intention is only affected by individual intention and social environment, but ignores that in actual situations, most behaviours intention

depend on objective factors (social policies, environmental conditions, financial resources, etc.) and individual behavioural capacity (Duan, 2008).

2.3 Theory of Planned Behaviour

Since Theory of Multi-Attribute Attitude only focuses on the influence of attitude on behaviour, Theory of Reasoned Action assumes that individual behaviour is controlled by the intention, and there are limitations that it is difficult to explain the behaviour that is not completely affected by the intention, which seriously restricts the wide application of the theory. Therefore, in order to expand the scope of application of the theory, Ajzen (1985) added perceived behavioural control variables on the basis of Theory of Reasoned Action and proposed Theory of Planned Behaviour. In 1991, Ajzen published the article entitled Theory of Planned Behaviour, which marked the maturity of Theory of Planned Behaviour. Theory of Planned Behaviour is consistent with Theory of Reasoned Action. Both believed that the actual behaviour of an individual depends on behavioural intention. Among the three variables affecting behavioural intention, the previous two variables are also attitude and subjective norm. The newly introduced perceived behavioural control variable refers to the degree of difficulty an individual perceives to implement a specific behaviour. Theory of Planned Behaviour states that an individual's behaviour depends on behaviour intention, which is determined by attitude, subjective norm and perceived behavioural control. That is, the more positive the individual's attitude towards pursuing the implementation of the behaviour, the greater the perception of external pressure, and the more perceived control over the specific behaviour, the stronger the individual's intention to implement the behaviour, and the easier the corresponding specific behaviour will be implemented. On the other hand, Theory of Planned Behaviour believes that perceived behavioural control can directly predict the possibility of behaviour occurrence, but the accuracy of prediction depends on the true degree of perceived behavioural control. Attitude, subjective norm, and perceived behavioural control are conceptually distinct, but sometimes they may share a common belief base, so they are both independent and interrelated. Theory of Planned Behaviour's model, as shown in Figure 1 (Ajzen, 1991).

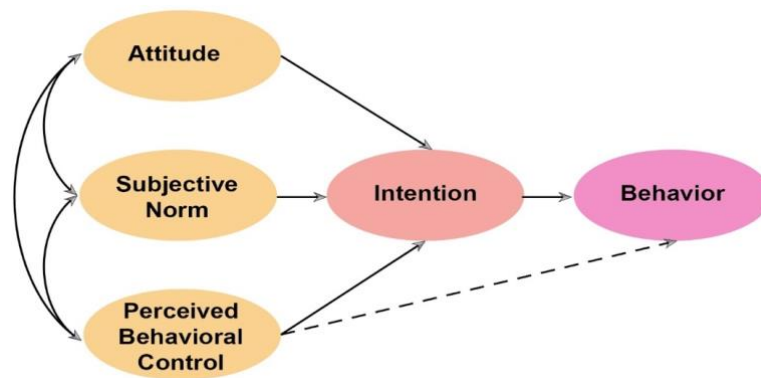


Fig.1 Theory of Planned Behaviour (Ajzen, 1991)

Theory of Planned Behaviour is a well-known theory in social psychology that studies individual intention and behaviour. This theory believes that intention and behaviour are highly correlated, and that intention is the determinant of whether or not the behaviour is executed. This construct is often used to predict and explain the actual behaviour performance. Therefore, Fishbein and Ajzen (1975) also call the theoretical model of planned behaviour the intention model. Behaviour intention is also affected by three variables: behavioural attitude, subjective norm and perceived behavioural control. In the meta-study of Theory of Planned Behaviour, Armitage and Conner (2001) found that attitude, subjective norms and perceived behavioural control could explain 39% of intentional variance and 27% of behavioural variance. Many researchers have found in their studies that perceived behavioural control is an important explanatory factor and predictor of behaviour (Goin, 1993; Blue, 1995; Conner & Spark, 1996; Ajzen & Fishbein, 2010). In this study, general

senior high school students' intention refers to the positive or negative reaction tendency of general senior high school students to choose vocational higher education after finishing their high school.

3. Methodology

3.1 Instrument and its reliability

This study employed a non-experimental quantitative design. The survey instrument, which is a set of questionnaire, was adopted and adapted based on Ajzen's Theory of Planned Behaviour (1991), Intention of Secondary Vocational Students to Enter a Higher College (Wang, 2020) and Willingness of Senior High School Students to Choose Chemistry Course (Niu, 2019). It has two sections. The first section is to collect basic information of respondents. The second section contains four constructs: attitude, subjective norm, perceived behavioural control and intention, with a total of 28 items. These items were measured using six-point Likert scale, with anchors ranging from 1 (strongly disagree) to 6 (strongly agree). After entering the data to Statistical Package for Social Science (SPSS) Version 26, internal consistency of the scales was first checked. According to Nunnally (1978), as rule of thumb, a Cronbach's alpha value of between 0.6 to 0.7 is considered as acceptable, while 0.8 or higher indicates a good reliability. The overall internal consistency can be in Table 1 and it shows that the four dimensions have good reliability.

Table 1. Reliability coefficient of four constructs

Dimension	No of items	Cronbach's Alpha
Attitude	6	0.819
Subjective norm	9	0.948
Perceived behavioural control	9	0.887
Intention	4	0.900

3.2 Context and participants

The respondents in this study are senior three students from 13 high schools in Ningxia, China. Data was collected between August and October 2023 via a random convenience sampling. Permission was obtained from the Ministry of Education in Ningxia before the questionnaire was sent out via school teachers in these 13 schools. A total useable 432 responses were returned. Table 2 depicts the demographic background respondents. Out of the 432 respondents, 192 or 44.4% are male while the remaining 240 or 55.6% are female. All of them are 18 years old. In terms of academic results, it is calculated by combining marks for subjects like Chinese, Mathematics, English and Science. As can be seen in Table 2, as many as 26.2% of the respondents obtained grade A, followed by 19.7% who obtained Grade B, and 54.1% obtained Grade C, D and E. Next, one in every three respondents (33.8%) are the only children in the family. The overall income of respondents' families is good, with 24.1% having a monthly income of less than RMB5,000, 5.8% having an uncertain income, and 40.1% having a monthly income of RMB10,000 or more.

Table 2. Demographic Background

Demographic	N	%
Gender		
Male	192	44.4
Female	240	55.6
Exam Scores		
A (405 marks and above)	113	26.2
B (360 marks to 404 marks)	85	19.7
C (315 to 359 marks)	86	19.9
D (270 to 314 marks)	96	22.2
E (less than 270 marks)	52	12.0

Demographic	N	%
Single Child		
Yes	146	33.8
No	286	66.2
Family Monthly Income		
Not fixed	25	5.8
below RMB5000	104	24.1
RMB 5000 to 9999	130	30.1
RMB10000 to 14999	104	24.1
RMB15000 to 20000	38	8.8
above RMB20000	31	7.2

4. Findings and discussions

4.1 Constructs statistics and correlations

Before presenting the findings based on the research questions, this section presents the descriptive statistics and correlations of the four constructs. Table 3 shows the overall mean scores, standard deviation and correlation among attitude, subjective norm, perceived behavioural control and intention. The correlation matrix shows a significant positive correlation between attitude, subjective norms and perceived behavioural control and the intention to pursue vocational higher education among senior high school students. There is a strong and positive correlation between attitude and intention to pursue vocational higher education, with a correlation coefficient of 0.712. Likewise, there is a moderate and positive correlation between subjective norm and the intention to pursue vocational higher education, with $r = 0.692$. The correlation coefficient between perceived behavioural control and the intention to pursue vocational higher education is 0.583, which is a positive and moderate correlation. All these correlations have $p < 0.01$. This finding is similar to Wang (2020) and Wang et al (2021), where they find that secondary vocational school students in underdeveloped western China possess the intention to enter vocation higher education. These intentions are positively and strongly correlated with their attitudes toward entering vocational higher education, while it is moderately correlated with subjective norms and perceived behavioural control.

Table 3. Mean, standard deviation and correlation matrix of the four constructs

Constructs	Mean score	AT	SN	PBC	I
Attitude (AT)	3.55	1			
Subjective norm (SN)	3.21	.734**	1		
Perceived behavioural control (PBC)	3.87	.831**	.709**	1	
Intention (I)	2.99	.712**	.696**	.583**	1

** . Correlation is significant at the 0.01 level (2-tailed).

4.2 Construct statistics

As shown in Table 4, the Attitude construct contains six items with an overall mean of 3.55 and the mean scores of six items are between 2.54 to 4.47. Among which “My current academic achievement is good enough for me to enter vocational higher institution” with the highest mean score of 4.47. “I think attending a vocational higher institution will give me more free time” came in second, while “I feel eager to attend vocational higher institution” has the lowest mean score of 2.54. This shows that senior high school students’ intention to attend vocational higher institution is highly affected by their current performance in general senior high school.

Table 4. Mean scores for Attitude

Item	Mean	Std. Deviation
I think attending a vocational college can improve my educational level	3.45	1.53
My current academic achievement is good enough for me to enter vocational college	4.47	1.65
Attending a vocational college can help me get a better job	3.83	1.51
I think attending a vocational college will give me more free time	3.97	1.50
I think attending a vocational college is a very good choice for me personally	3.05	1.58
I am eager to attend vocational college	2.54	1.56
Overall mean	3.55	1.52

The subjective norm dimension contains nine items, the overall mean value is 3.21. The mean value of nine items is between 3.01 to 3.38. Among them, “I will follow my parent’s advice on whether or not to attend a vocational higher education” has the highest mean of 3.38. The second is “My parents’ opinions will influence my intention to attend a vocational higher education’ with a mean score of 3.36. “I will follow the advice of my classmates/friends on whether or not to attend a vocational higher education” has the lowest mean score of 3.01. These data show that important groups have an impact on senior high school students’ intention to vocational higher education, especially what their parents have to say, compared to their teachers and peers’ opinion.

Table 5. Mean scores for Subjective Norm

Item	Mean	Std. Deviation
My parents' opinions will influence my intention to attend a vocational college	3.36	1.61
My parents' encouragement will strengthen my determination to attend a vocational college	3.27	1.61
I will follow my parent’s advice on whether or not to attend a vocational college	3.38	1.62
My teachers' opinions will influence my intention to attend a vocational college	3.21	1.52
My teacher’s encouragement and help will strengthen my determination to attend a vocational higher education	3.32	1.51
I will follow my teacher's advice on whether or not to attend a vocational college	3.18	1.52
What my classmates/friends think will influence my decision to attend a vocational college	3.03	1.52
The encouragement from my classmates/friends will strengthen my determination to attend a vocational college	3.10	1.53
I will follow the advice of my classmates/friends on whether or not to attend a vocational college	3.01	1.55
Overall mean	3.21	1.31

The perceived behavioural control construct contains nine items, and the overall mean of perceived behaviour control is 3.87. The mean scores for the nine items is between 3.74 and 4.09. Among them, the item “The reputation, major, faculty and other factors of vocational colleges will affect my choice of vocational colleges” has the highest mean score of 4.09. It shows that senior high school students consider more factors such as reputation, major, teachers and other factors of vocational colleges when choosing to attend higher vocational education colleges. “I will consider whether to attend a vocational college based on my academic achievements” has a mean score of 3.98 while “The relevant national subsidy policies will have an important impact on my choice of vocational college” recorded the lowest mean score of 3.74, which shows that senior high school

students are not too concerned about the relevant national subsidy policies when choosing higher vocational education institution.

Table 6. Mean scores for perceived behavioural control construct

Item	Mean	Std. Deviation
I will consider whether to attend a vocational college based on my academic achievements	3.98	1.55
My current technical skills will allow me to get good results in vocational college	3.94	1.62
My current interests will help me to do well in vocational college	3.85	1.62
I believe I can get good results if I attend vocation college	3.87	1.62
I believe attending vocational college is easy compared to university	3.79	1.61
The difficulty and format of the exam have a great influence on whether I choose to attend a vocational college	3.80	1.49
I will decide whether to attend vocational college or not according to my family's financial situation	3.76	1.50
The relevant national subsidy policies will have an important impact on my choice of vocational college	3.74	1.52
The reputation, major, faculty and other factors of vocational colleges will affect my choice of vocational college	4.09	1.53
Overall mean	3.87	1.13

The intention construct has four items to measure respondents' intention to attend vocational higher institution after finishing general senior high school. The overall mean of intention to is 2.99. The mean scores for the four items is between 2.74 to 3.64. The data shows that respondents will choose vocational higher education if they do not do well in the university entrance exam or *gaokao*, with the highest mean score of 3.64; while "I will choose vocational higher education even if I have other options" has the lowest mean score of 2.74. This shows that generally the respondents tend not to agree that they will choose to attend vocational higher education. This is supported by Liu (2014) in a study conducted in Chengdu, where more than 2,000 third-grade students of secondary vocational schools shows the lack of interest among students themselves.

Table 7. Mean scores for intention

Item	Mean	Std. Deviation
I intend to attend a vocational college after finishing high school	2.81	1.60
I prefer to go to a vocational college rather than other university	2.79	1.62
I will choose vocational college even if I have other options	2.74	1.62
I will choose vocational college if I do not do well in <i>gaokao</i>	3.64	1.54
Overall mean	2.99	1.40

4.3. Relationship among the Variables

To answer the research questions set out in this study, multiple regression analysis was conducted to test if attitude, subjective norm, and perceived behavioural control positively and significantly predicts the respondents' intention to attend vocational higher education. As shown in the model summary and ANOVA in Table 8, the overall regression is statistically significant with R square = 0.56, $F(3, 428) = 181.612$, $p = .000$. This result shows that attitude, subjective norm and perceived behavioural control collectively predict up to 56 percent of senior high school students' intention to pursue vocational higher education. The remaining 44 percent of their intention is determined by other variables not undertaken in the current study. The coefficients table shows the most significant and positive predictors of intention is attitude, followed by subjective norm, while

perceived behavioural control is not a positive not significant predictor. This is supported partly by Wang (2020) where students' attitudes towards entering higher education have the greatest influence on their intention of entering higher education; followed by perceived behavioural control, while subjective norms have the least influence.

Table 8. Multiple regression analysis
Model summary

Model	R	R square	Adjusted R Square	Std error of the estimate
1	.748 ^a	.560	.557	.93374

a. Predictors: (Constant), perceived behavioural control, subjective norm, attitude

ANOVA

Model		Sum of Square	df	Mean Square	F	Sig.
1	Regression	475.023	3	158.341	181.612	.000 ^b
	Residual	373.157	428	.872		
	Total	848.180	431			

a. Dependent Variable: Intention

b. Predictors: (Constant), perceived behavioural control, subjective norm, attitude

Coefficients^a

Model		Unstandardized Coefficients	Std. Error	Standardized Coefficients	t	Sig.
1	(Constant)	-.012	.162		-.073	.942
	Attitude	.584	.077	.471	7.583	.000
	Subjective norm	.463	.052	.433	8.848	.000
	Perceived behavioural control	-.142	.074	-.115	-1.929	.054

a. Dependent Variable: Intention

4.3.1 Relationship between attitude and intention

The coefficients values shown in Table 8 indicates that attitude towards attending vocational higher institution positively and significantly predicts the intention. This is shown in the standardized coefficient β of 0.471, $t(428) = 7.58$, $p < .05$. An increase of one-point in attitude will result in an increase of .584 in intention to attend vocational higher institution, as shown by the unstandardised coefficient. These results show that attitude is a significant predictor of intention to attend vocational higher institution. This finding is supported by a study in Singapore by Chua et al (2020) where attitude towards vocational education played an important role in shaping the intention pursue a vocational pathway. Griggs and Crawford (2017) in a study not directly related to vocational education, find that academic performance plays an important role in choosing education pathway post-secondary school. This is similar to the findings in this study where respondents scored the highest means for the item "My current academic achievement is good enough for me to enter vocational college, as seen in Table 4. Sahari (2019) finds that attitude plays an important role in influencing students towards entrepreneurial intention in Malaysia. Likewise, Santhanamery et al (2023) attitude exerts a significant relationship on entrepreneurial intention among university students in Malaysia.

4.3.2 Relationship between subjective norm and intention

Referring to the coefficients values shown in Table 8, subjective norm is shown to positively and significantly predict the intention to pursue higher vocational education. This is shown in the standardised coefficient β of 0.433, $t(428) = 8.85$, $p < .05$. An increase of one-point in subjective

norm will result in an increase of .463 in intention, as shown by the unstandardised coefficient. These results show that subjective norm is a significant predictor of intention. This is supported by the findings by Wang et al (2021) and Buang et al (2016). Their judgement has a close relation to subjective norms, where it is the belief that an important person or group of people will approve and support a particular intention, and later, behaviour. Subjective norms are determined by the perceived social pressure from others for an individual to behave in a certain manner and their motivation to comply with those people's views (Sahudin et al, 2023). The items descriptive in Table 5 shows that respondents show higher mean scores for items related to their parents' opinion and advice. This shows that these respondents are still practising the traditional Confucius teaching of filial piety (*xiao*). Apart from that, the findings in this study is also supported by Chen and Wang (2019) and Ayub (2017), where family background and parental expectations plays a positive roll on students' intentions to enrol in vocational higher education programs. Other than that, although not directly related to vocational education, findings by Johnson, Smith and Brown (2017) supports the results in the current study where peer relationships, social norms and impact students' educational pathways. In another study by Smith, Johnson and Lee (2016), they examined the role of teachers in shaping students' intentions to pursue vocational education and training (VET) and found that teacher attitudes, support, and guidance on students' perceptions of VET options and career pathways have a significant influence on student's intention. Based on a study by Hofman and Hofman (2001), they found that teacher attitudes, expectations, and guidance impact students' decisions regarding their educational pathways.

4.3.3 Relationship between perceived behavioural control and intention

As depicted in the coefficients values shown in Table 8, perceived behavioural control did not have a significant nor positive relationship with the intention to pursue higher vocational education. This was shown in the standardized coefficient β of $-.115$, $t(428) = -1.929$, $p > .054$. An increase of one-point in attitude will result in a decrease of .142 in intention to attend vocational college, as shown by the unstandardised coefficient. This also shows that perceived behavioural control is not a significant predictor of intention to attend vocational college among senior high school students in Ningxia. This findings is contrary to Wang et al (2021) where perceived behavioural control had a positive and significant relationship with intention to pursue vocational college among vocational high school students in western China. Sahari (2019) in his study also find that self-efficacy, which was a major part of perceived behavioural control was a significant predictor of entrepreneurial intention among university students in Malaysia. However, this is contrary to what Santhanamery et al discovered (2023).

Based on the findings above, senior three high school students in Ningxia, China generally have a favourable attitude towards pursuing vocational education, and that the important people in their lives do play a somewhat important part in their intention, although the believe that their ability to perform well in vocational higher education is within their control. However, they are more inclined to disagree that they have the intention to pursue higher vocational education. In summary, attitude and subjective norm are significant predictors of intention to attend vocational college, while perceived behavioural control is not.

5. Conclusion

This study uses Theory of Planned Behaviour as a theoretical underpinning to investigate the intention to attend vocational higher education among 432 students from 13 general high schools in Ningxia, China. Descriptive analysis, correlation analysis and multiple regression analysis were used to answer the research questions to investigate the relationship between attitude, subjective norms and perceived behavioural control and their intention to attend vocational higher education. It was revealed that respondents generally tend not to agree that they would choose vocational higher education after finishing their high school. Furthermore, they also revealed that they would choose vocational higher education only if they do not do well in *gaokao* and if they did not have other options. They tend to agree that their attitude in pursuing vocational higher education is a favourable one as they believe they current academic results are good enough pursue vocational higher education.

As for subjective norms, respondents tend to agree that the important people in their lives will affect their decision to pursue vocational higher education. Parents have stronger influence over their teachers and their peers in influencing their intention. Perceived behavioural control has the highest mean score among the variables. These students take the reputation of the vocational higher education most seriously in deciding the education pathway. Other factors include the difficulty of examination, their current skills and family finances. They also generally have strong a self-efficacy as they believed they would do well in vocational college if they chose to pursue that path.

6. Suggestions for future research

From the findings above, in order for China to achieve United Nation's Sustainable SDG 4: Quality Education by 2030, policy makers for vocational education in China, particularly in Ningxia needs to implement comprehensive career guidance programs in general high schools to provide students with detailed information about the diverse vocational education opportunities available, potential career paths, and the associated benefits. Apart from that, public awareness campaigns at the regional level to dispel myths and misconceptions surrounding vocational education, emphasizing its importance and the valuable skills it imparts. Since parents have a strong influence on the students' intention, workshops and informational sessions for parents to educate them about the significance of vocational education and its role in preparing students for successful careers in urgently needed. Apart from that, collaborations between vocational colleges and industries to create internship programs, apprenticeships, and on-the-job training opportunities, showcasing the practical and real-world applicability of vocational skills. As to dispel the negative perceptions towards vocational education, a cultural shift that values and respects vocational education can be organised by highlighting the success stories of individuals who have achieved professional success through vocational pathways. Finally, a flexible educational pathways that allow students to seamlessly transition between academic and vocational tracks, accommodating varied career aspirations and learning preferences will be effective in overcoming the lack of intention to pursue vocational higher education. Implementing these recommendations requires collaboration among educational institutions, government bodies, industries, and community stakeholders. By addressing the multifaceted challenges hindering the interest in vocational education, Ningxia can foster a more inclusive and dynamic educational landscape. If the above steps are implemented, the gaps between demand and supply for skilled workers in the manufacturing and industries can be reduced.

There are several limitations in this study. First of all, the target population of this study includes all senior high school students registered in Ningxia region. However, in the actual survey, samples were collected from 13 public general senior high schools in Yinchuan City, Ningxia, without involving private senior high in other regions of Ningxia. Therefore the findings in this study cannot be generalised to the wider population in China. This study is a cross-sectional study, which only focuses on Ningxia senior high school students' intention to pursue higher vocational education, and has not measured their actual behaviour in pursuing attending vocational college, although some studies have supported the use of intention as a proxy for actual behaviour (eg. Chen & Chen, 2009; Kuo, 2008; Tsai, 2010). Finally, there is also a limited reference available in the Chinese context for comparison in the discussion section due to the lack of such studies conducted in China. Studies conducted using Theory of Planned Behaviour are even scarcer. As for studies conducted in other countries, many of them are dated. This has resulted in presentation of discussions from different context and slightly varied background. Limitations in this study have the potential to be transformed into direction for future research. As such, it is suggested that future studies can explore intention to pursue vocational higher education among private senior high school students, as well as students from other regions in Ningxia. A longitudinal study can be conducted to investigate if respondents who indicated their intention to pursue vocational college eventually did so. This will help policy makers to in vocational education in China to understand the dynamics and factors affecting this actual behaviour. Finally, with the findings from this study, it will add on to the body of knowledge that contributes to the study of intention to pursue higher vocational education using Theory of Planned Behaviour.

7. Co-Author Contribution

The authors affirmed that there is no conflict of interest in this article. Author 1 carried out the field work, prepared the literature review and did the data entry. Author 2 wrote the research methodology and oversaw the writeup of the whole article. Author 3 and Author 4 carried out the statistical analysis and interpretation of the results.

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