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Measuring Parents' Perceptions About Adolescents' Interactive Online Learning: A Case of the Vocational Enlightenment Education Online Program in a Middle School

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Abstract

Background and Aim: Traditionally, vocational schools in China have been perceived as educational institutions for adolescents with poor abilities. In contrast, the Vocational School Union middle school has implemented a new education path that employs the Vocational Enlightenment Education online program (VEEOP) as the carrier. This study investigates the factors influencing parents' interest, adolescents' interaction, and parents' attitudes toward using VEEOP.

Materials and Methods: This study emphasizes the critical role of VEEOP in education and the need for vocational enlightenment education to cultivate the artisan spirit. Despite the program's significance, research on Chinese parent's perceived vocational initiation education is limited. Therefore, this study is based on the theory of family resource management, the planned behavior theory, and the social learning theory. A quantitative research design was employed to investigate parents' perceptions of the usefulness, quality, and home environment of VEEOP after establishing the study context through a literature review.

Results: The results of the structural equation model show that the content quality of VEEOP was relatively stable on the whole, parents' perceived content quality (PPCQ), parents perceived Adolescents' intention to use (PITU), parents' perceived home environment (PPHE), social influence (SI), which significantly influences parents perceived Of Adolescents' Interactive Online Learning. Social influence (SI) and parents' perceived usefulness (PPU) significantly affected parents' perceived adolescents' intention to use (PITU). Parents' perceived adolescents' intention to use (PITU) has a mediating effect on parents' perceived usefulness (PPU) to parents' perceived adolescents' interactive online learning (PPIL). Parents' perceived adolescents' intention to use (PITU) has a mediating effect on social influence (SI) on parents perceived adolescents' interactive online learning (PPIL). Parents' perceived home environment (PPHE) has no significant influence on parents' perceived of adolescents' interactive online learning (PPIL).

Conclusion: Vocational enlightenment education is an important way for teenagers and children to better understand and explore careers, and a basic link to promote individual socialization and free and comprehensive development. It is of great significance in helping and guiding individuals to improve career cognition, cultivate career interests, design career planning, and promote career development. The findings reveal that parents hold distinct expectations regarding the quality of educational content, social influence, home environment, and interactive online learning. These expectations significantly influence their attitude towards their adolescents' use of these platforms and their level of support. Parents expect educational content that is both engaging and educational, promoting overall development. Parents' perception of social influence and the impact of peers play a crucial role in their educational decisions. Therefore, it is imperative to disseminate positive educational messages through social channels. The study highlights that the home environment is critical to adolescents' online learning, and factors such as parents' educational background, family economic status, and family education concepts affect adolescents' online learning experience to varying degrees. Thus, it is essential to consider these factors when designing and implementing online education strategies that better meet different families' needs.

Keywords: Parents' Perceptions; Vocational Enlightenment Education Program; Perceived of Adolescents' Interactive Learning; Social Influence; Perceived Usefulness; Perceived Home Environment; Perceived Adolescents' Intention to Use

Introduction

With a wide range of industries, a solid foundation, and a massive scale, China has become one of the most significant manufacturing countries in the world and has an increasingly strong demand for high-tech talents. Although colleges and universities continue to send many college students to society, there is a significant gap between the number of technical and professional blue-collar industrial workers and actual demand.

On October 12, 2021, the General Office of the Communist Party of China Central Committee and The General Office of the State Council issued the Opinions on Promoting the High-quality Development

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of Modern Vocational Education (from now on referred to as the Opinions), pointing out that it is necessary to "implement vocational enlightenment education in ordinary primary and secondary schools, and cultivate the awareness of mastering skills, hobbies, and career planning." As a new concept in academic circles, vocational enlightenment education has been paid more and more attention in recent years. Starting from the goal of vocational enlightenment education, some scholars define vocational enlightenment education as the academic education transformation to help adolescents and adolescents implement vocational cognition and acquire vocational skills. To sum up, most of the previous definitions of vocational enlightenment education were oriented towards the result of goals or values, and there needed to be more attention to the role of vocational enlightenment education in the growth and development of adolescents. This article defines vocational enlightenment education as a type of education for adolescents different from foreign vocational and technical education (CTE). By learning, engaging in, and experiencing basic vocational knowledge, basic vocational skills, and basic vocational ethics, self-cognition, and vocational cognition should be continuously formed, and personal development should be closely combined with organizational development, environmental changes, and social needs, to help students find a meaningful and valuable career direction and cultivate talents with a "craftsman spirit".

After the implementation of the “double reduction” policy in 2021, 511,043 parents participated in the survey "Parents' attitude towards the double-reduction policy in compulsory education stage" conducted by the Publicity Department of the CPC Central Committee and the Social Investigation Center of China Youth Daily. The data showed that 87% of the surveyed parents were anxious about their adolescents’ education. Whether in China’s traditional society where status change is achieved through the imperial examination system or in the modern society where the "meritocratic" performance-based principle of education level and personal ability is implemented, education has always been the most direct, fair and realistic way for Chinese people to achieve social advancement through individual efforts. Therefore, Chinese parents have high requirements for their adolescents’ studies and prefer their adolescents to go to good universities rather than vocational schools.

On the one hand, there is a gap between vocational colleges and undergraduate colleges in educational facilities, teaching resources, teaching quality, and teaching staff. Second, vocational colleges admit students with generally low college entrance examination scores, which leads to better quality students in vocational colleges and a better learning atmosphere. Third, from the perspective of employment, high-level and well-paid jobs are mainly for graduates with undergraduate or even postgraduate degrees, and adolescents who graduate from vocational colleges generally have a low income level and social status. This stems from the solidification of family class and thinking, which limits the diversity and possibilities of adolescents’ experiences and development. Most parents see higher academic education as the only way for their adolescents to acquire high social capital and social status as adults. Their vague and wrong understanding of VEE leads them to regard enlightenment education as simple vocational training or vocational training, which further leads to psychological resistance to the development of VEE and hinders the in-depth cooperation of families in VEE.

In October 2021, the General Office of the CPC Central Committee and The General Office of the State Council issued Opinions on Promoting the High-quality Development of Modern Vocational Education, aimed at strengthening the integration of general education and vocational education in all academic sections, implementing Vocational Enlightenment education (VEE) in ordinary primary and secondary schools, and cultivating the awareness of mastering skills, hobbies, and career planning. Less than two years after the document was issued, vocational enlightenment education in various places is in the ascendant and has not yet formed a perfect system and mechanism. As the demand for online vacation education is surging, it is essential to investigate parents' perceptions of their adolescents' intention to participate in these programs.

Objectives

1: To determine the influence of parents' perceived content quality on adolescents' interactive online learning perceived by parents.

2: To determine the social influence on adolescents' intention to use VEEOP perceived by parents.

3: To determine the influence of adolescents' intention to use VEEOP perceived by parents on parents' perceived adolescents' interactive online learning.

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4: To determine the influence of parents' perceived usefulness on adolescents' intention to use VEEOP perceived by parents.

5: To determine the influence of parents' perceptions about the home environment on adolescents' interactive online learning perceived by parents.

6: To determine the mediating effect of adolescents' intention to use VEEOP perceived by parents on social influence and adolescents' interactive online learning.

7: To determine the mediating effect of adolescents' intention perceived by parents to use VEEOP on parents' perceived VEEOP usefulness and adolescents' interactive online learning.

8: To determine the social influence on adolescents' interactive online learning perceived by parents.

9: To determine the influence of parents' perceived usefulness on adolescents' interactive online learning perceived by parents.

Literature review

In the literature review, researchers present a comprehensive review of the literature in key research areas.

Information of Topic: VEEOP

The vocational enlightenment education online program (VEEOP) aims to help students acquire career knowledge, skills, and attitudes (Watts, 2006), enable students to experience career learning in junior high school, prepare for career search (Bily, 2014), and help them connect career activities with career choice and learning by encouraging systematic reflection.

In this regard, we built a digital online platform, and use after-school time or parent meeting days to jointly carry out VEEOP for parents and students so that parents can jump out of the impact of the social environment, genuinely understand various industries in society, and truly change their awareness to "Of 365 industries, each industry can produce the best".

Parents' Perceived Adolescents' Interactive Online Learning (PPIL)

Interactive online learning requires the interaction between teachers and students. It provides an environment platform for students to show their abilities by encouraging participation, changing monotonous and boring conventional teaching, and enabling students to maintain their attention. Teachers and students respond to the lecture's content, which shapes their behaviors together (Coplan et al., 2007). Teachers, students, and parents play an essential role in online courses (Wagner et al., 2008). The interaction in this study is the adolescent's response to the teacher's behavior. Students' attitudes and perceptions of online projects are critical, and students with higher levels of self-directed learning are more likely to succeed in online environments (Lin & Hsieh, 2001). Therefore, the research measured variables through teacher-student interaction.

Parents' Perceived Content Quality (PPCQ)

VEEOP content quality is multidimensional and involves high standards of content (Nazneen et al., 2020), including but not limited to the selection of project topics and focus and the depth and difficulty of project expansion. Based on the literature, this study focuses on testing. Researchers measured variables by whether the course content was focused, easy to understand and accept, whether the handouts were interactive, whether people felt good, and whether exam questions and assignments were clearly explained. Parent-perceived quality of content, which measures parents' perceived quality of the content provided by VEEP for students, refers to the parents' subjective judgment of the student's experience. The researcher measured the content quality of VEEOP from the aspects of training objectives, content setting, and diversification.

Social Influence (SI)

Social influence can be the support or opposition of family, friends, colleagues, and acquaintances, thus affecting the final decision (Ramadiansyah et al., 2022). Thus, social influence may affect parents' values and their assessment of the importance and expectations of the program. The social influence in this

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study was the strategy of influencing parents to continue using VEEOP through the information of a group or a specific person. These variables measure parents' perceived social influence on vocational education and online enlightenment programs.

Parents' Perceived Usefulness (PPU)

Perceived usefulness is the degree to which an individual believes using the item will improve the implemented performance (Baber, 2021). Content quality is critical to learners' satisfaction with online learning systems. Parents believe that after completing vocational training or general education, their adolescents should be capable of a variety of self-improvement tasks, including developing practical social skills, finding and keeping a good job, understanding how to carry out day-to-day tasks that contribute to the overall well-being of the family and learn how to run a business (Kapur, 2018). Perceived usefulness in this study refers to the extent to which parents believe using the program will improve their adolescents' abilities. These variables measure parents' perceived usefulness of skills and knowledge gained through vocational education and online enlightenment programs. The researcher measured the project's usefulness regarding whether VEEP improved adolescents' hands-on ability, career awareness, career choice, and participation initiative.

Parents' Perceived Home Environment (PPHE)

The home environment usually includes electronic devices in the home, parental response, parental attitude, parental speech, and parental participation. Noise, movement, and lighting can affect the learning of online learners in home settings. According to Banbury and Berry (2005), noise impairs an individual's performance and concentration on complex work. The researchers measured parents' perceived home environment through the physical environment of parental companionship, parental attitudes, and home hardware. These variables measure parents' perception of the influence of the home environment on adolescents' interactive VEEOP learning perceived by parents.

Parents' Perceived Adolescents' Intention to Use VEEOP (PPTU)

Intention to use is a good predictor of actual program use and can be translated into the user's intention to use the item. The intention to use mentioned in this study is the actual use, that is, behavioral intention. The Unified Theory of Acceptance and Use of Technology (UTAUT) has explained the factors that influence behavioral intention (Interest in using the item) and user behavior (using the item itself), such as social impact, outcome expectations, effort expectations, and accommodations. According to Ajzen (2011), parents' perceptions, motivation, and attitudes significantly influence their adolescents' choices or attendance to an educational school that makes their parents happy, although that is not what they want.

Conceptual Framework

The conceptual framework of the research was originally based on the Family resource management theory, Planned behavior theory, and social learning theory. Therefore, the conceptual framework is shown in Figure 1.1.

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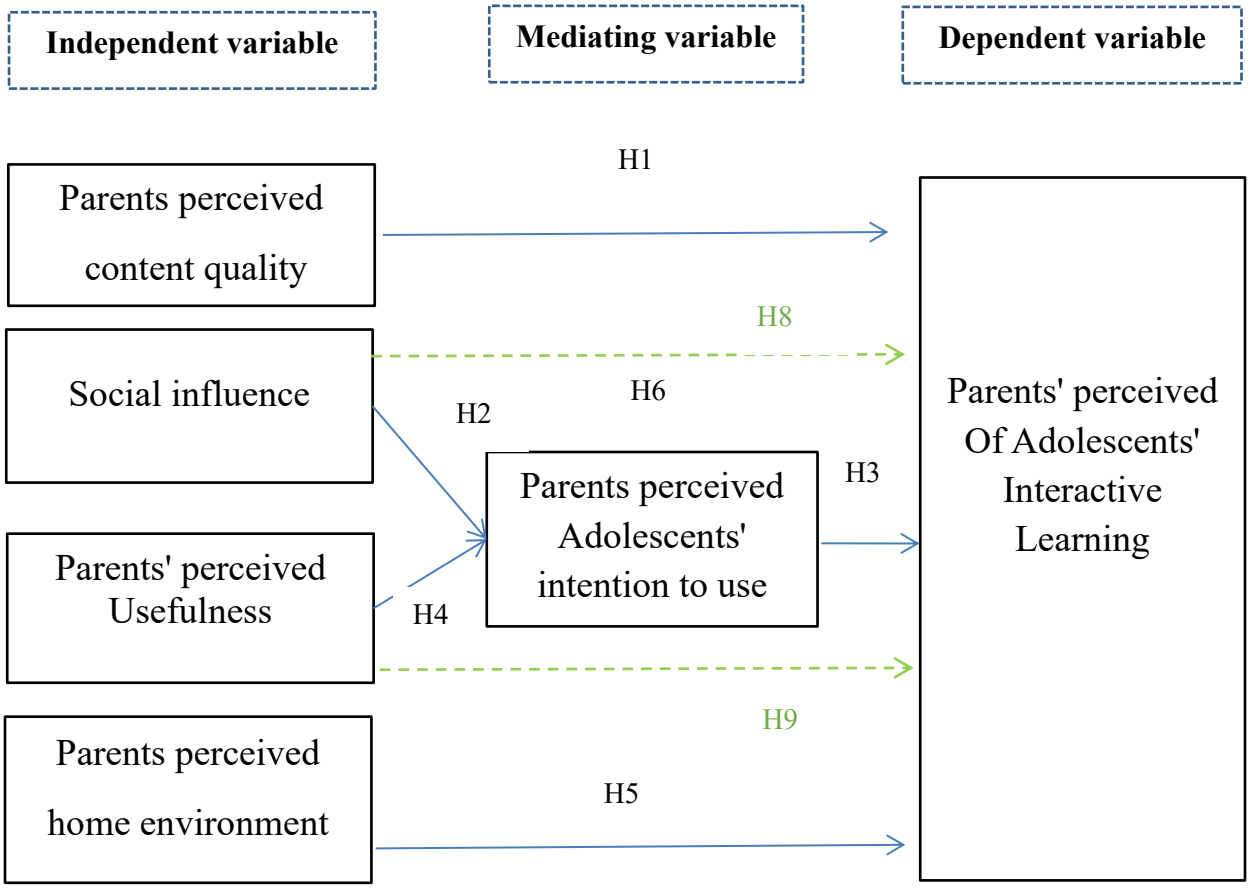

Figure 1 Conceptual Framework

Hypotheses

Based on the literature review, and the conceptual framework, the hypotheses have been developed as follows.

H_a1: Parents' perceived VEEOP content quality affects parents' perceived adolescents' interactive learning on VEEOP.

H_a2: Social influence affects parents' perceived adolescents' intention to use VEEOP.

H_a3: Parents' perceived adolescents' intention to use VEEOP affects parents' perceived adolescents' interactive learning on VEEOP.

H_a4: Parents perceived usefulness affects parents' perceived adolescents' intention to use VEEOP.

H_a5: Parents' perceived home environment affects parents' perceived adolescents' interactive online learning.

H_a6: Parents' perceived adolescents' intention to use VEEOP has a mediating effect on social influence on parents' perceived adolescents' interactive online learning.

H_a7: Parents' perceived adolescents' intention to use VEEOP has a mediating effect on parents' perceived VEEOP usefulness to parents' perceived adolescents' interactive online learning.

H_a8: Social influence affects parents' perceived adolescents' interactive online learning.

H_a9: Parents perceived usefulness affects parents' perception of adolescents' interactive online learning.

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Methodology

The study was designed as a Quantitative Study Design. Firstly, through literature reading, the background of the study was clarified. Then, through research, the current situation of parents' perceived usefulness, quality, home environment, participation, and interaction of VEEOP was understood. The social evaluation of VEEOP and parents' interest points were preliminarily grasped, thus forming the framework of the questionnaire. In terms of quantitative methods, this researcher took the PPIL Scale in the form of a 5 Level Likert scale (with 1 standing for strongly disagree and 5 for strongly agree) to collect data about the five dimensions of parents' Perceived content quality (PPCQ), social influence (SI), parents' perceived usefulness (PPU), intention to use (PITU), and parents' perceived home environment (PPHE). Second, VEEOP was designed as a new teaching method, each lesson lasting 40 minutes, a total of 20 lessons. The course content covers a variety of career initiation online courses. At least one parent accompanied their adolescents in the class. The intervention lasted a whole winter vacation (January - February 2023). Last, after the VEEOP process, this researcher collected and analyzed data for findings and conclusions and tested the research hypotheses.

In this study, the researcher selected Ying Kou Experimental School, China as the study population. The school has 1,333 students, including 424 ninth graders, 453 eighth graders, and 456 seventh graders. Used Stratified Sampling and Purposive Sampling, the study selected a sample size184 of 1333 parents. The researcher asked parents of students in three grades to volunteer for the program, In Grade 9, 79 parents signed up, In Grade 8, 88 parents signed up, In Grade 7, 88 parents signed up. Therefore, the researcher took all the applicants, and the sample size of the potential respondents was 255. The index of Item-Objective Congruence (IOC) has been used to assess the questionnaire's content validity. The questionnaires were checked by three experts who have more than eight years of teaching experience in education and information technology. In addition, this research used Cronbach's coefficient alpha to check the reliability of the variables. According to Kadir et al. (2019), if Cronbach's alpha value is between 0.60 to 0.70 or above, it is confirmed the questionnaires are reliable for this research.

Once the reliability of the questionnaire was tested, the researcher sent the questionnaire to 255 parents after the VEEOP， 202 valid questionnaires were collected. The data analysis process was rigorous, with parents giving informed consent and then using PPILS to collect data. The survey was conducted voluntarily to protect privacy and anonymity. Confirmatory factor analysis (CFA) and structural equation modeling (SEM) were used to test all hypotheses in the study. All analyses were performed using SPSS26 software and AMOS software to calculate statistics for hypothesis testing.

Results

The results of the research provide informative that includes demographic information, a summary of the key variables using descriptive statistics, and comprehensive hypothesis testing. This framework offers a detailed description of the research participants, the key features of the data, and the statistical confirmation of proposed theories.

Demographic Information

The grade distribution of the respondents in this survey is relatively uniform, and the number of students in grade 7, grade 8, and grade 9 is close to 70, 70, and 62, accounting for about 30% each, which has a certain representativeness. Through the analysis of the basic information of the respondents, we can find that the number of females is greater than that of males, accounting for 63.7% of females and 36.3% of males. In terms of academic qualifications, the highest proportion of respondents is in high school or below, reaching 64.6%, followed by junior college and three undergraduate degrees, reaching 21.8 and 13.9%.

Mean and Standard Deviation of the Variables

Table 1 shows parents' perceived content quality with an overall mean of 3.745, which represents "agreement" when compared to any level. PPCQ1 (average score of 3.767), PPCQ2 (average score of 3.688), PPCQ3 (average score of 3.842), and PPCQ4 (average score of 3.683). Social influence, with an overall mean of 3.495, represents "consent" compared to an arbitrary level. SI1 (average score 3.555), SI2 (average score 3.421), SI3 (average score 3.510). Parents' perceived adolescents' intention to use VEEOP, with an overall mean of 3.710, representing "agreement" when compared to an arbitrary level. PITU1 (mean score of 3.658), PITU2 (mean score of 3.723), and PITU3 (mean score of 3.748). Parents' perceived home

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environment, with a total mean of 3.786, which represents "agreement" when compared to any level. PPHE1 (average score of 3.787), PPHE 2 (average score of 3.777), and PPHE 3 (average score of 3.792). Parents perceived adolescents' interactive online learning, with a total mean of 3.657, which represents "agreement" when compared to any level. PPIL1 (average score of 3.678), PPIL2 (average score of 3.624), PPIL3 (average score of 3.708), PPIL4 (average score of 3.584), PPIL5 (average score of 3.678), PPIL6 (average score of 3.668).

Table 1 *The Mean and Standard Deviation of the Questionnaire*

PPCQ1	3.767	0.858	Agree
PPCQ2	3.688	1.068	Agree
PPCQ3	3.842	0.990	Agree
PPCQ4	3.683	0.997	Agree
Average	3.745		Agree
SI1	3.555	0.997	Agree
SI2	3.421	0.907	Agree
SI3	3.510	1.009	Agree
Average	3.495		Agree
PITU1	3.658	0.907	Agree
PITU2	3.723	0.888	Agree
PITU3	3.748	0.898	Agree
Average	3.710		Agree
PPHE1	3.787	0.834	Agree
PPHE2	3.777	0.911	Agree
PPHE3	3.792	0.896	Agree
Average	3.786		Agree
PPIL1	3.678	0.993	Agree
PPIL2	3.624	0.939	Agree
PPIL3	3.708	0.997	Agree
PPIL4	3.584	0.949	Agree
PPIL5	3.678	0.962	Agree
PPIL6	3.668	0.900	Agree
Average	3.657		Agree

Hypotheses Testing

Confirmatory factor analysis (CFA) and structural equation modeling (SEM) were used to test all hypotheses in the study. All analyses were performed using SPSS24.00 software and AMOS software to calculate statistics for hypothesis testing.

Normality of Data

To test the distribution of data, the skewness and kurtosis statistics are applied to measure the normality of data on the items used. According to Hair et.al. (2010), The skewness ranges between -2 and +2 and the Kurtosis range from -7 to +7

Table 2 shows the skewness of kurtosis of all items measuring variables in the study. The ranges for all items are within the acceptable ranges on the skewness and kurtosis. As a result, the data is considered normally distributed.

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Table 2 Skewness and Kurtosis values of all items

Items	N	Mean	SD	Skewness	Kurtosis
PPCQ1	202	3.767	0.858	-0.390	-0.168
PPCQ2	202	3.688	1.068	-0.562	-0.481
PPCQ3	202	3.842	0.990	-0.703	0.043
PPCQ4	202	3.683	0.997	-0.334	-0.666
SI1	202	3.555	0.997	-0.228	-0.880
SI2	202	3.421	0.907	-0.085	-0.463
SI3	202	3.510	1.009	-0.189	-0.831
PPU1	202	3.713	0.986	-0.467	-0.376
PPU2	202	3.767	0.978	-0.357	-0.720
PPU3	202	3.817	0.998	-0.625	-0.360
PITU1	202	3.658	0.907	-0.238	-0.336
PITU2	202	3.723	0.888	-0.416	0.117
PITU3	202	3.748	0.898	-0.603	0.456
PPHE1	202	3.787	0.834	-0.206	-0.564
PPHE2	202	3.777	0.911	-0.499	0.073
PPHE3	202	3.792	0.896	-0.501	-0.017
PPIL1	202	3.678	0.993	-0.365	-0.373
PPIL2	202	3.624	0.939	-0.127	-0.863
PPIL3	202	3.708	0.997	-0.451	-0.443
PPIL4	202	3.584	0.949	-0.244	-0.538
PPIL5	202	3.678	0.962	-0.263	-0.718
PPIL6	202	3.668	0.900	-0.411	-0.357

Discriminant Validity

The discriminant validity of each construct is also tested before the structural equation model analysis. According to Fornell and Larcker (1981), the discriminant validity can be based on the comparison of the correlation coefficient of each construct to the square root of the Average Variance Extracted (AVE). The results of the square root of AVE need to be larger than the correlation coefficient of the construct to ensure that the discriminant validity is obtained.

Table 3 Discriminant Validity

	PPCQ	SI	PPU	PPHE	PITU	PPIL
PPCQ	0.758					
SI	0.231	0.807				
PPU	0.478	0.317	0.774			
PPHE	0.260	0.218	0.491	0.719		
PITU	0.368	0.467	0.467	0.369	0.785	
PPIL	0.481	0.526	0.493	0.517	0.739	0.728

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Confirmatory Factor Analysis

Before applying the structural equation model (SEM) to test the hypotheses, the confirmatory factor analysis was undertaken to evaluate the correlation among latent variables to evaluate the model fit, which is presented in Table 4 Utilizing the CFA could assist the researcher analyze the fit of the data of the items that might be measured on the specific construct, as well as providing possible weakness of items in the construct (Hancock & Mueller, 2001). The convergent validity was conducted to test the construct validity. The researcher employed Hair et al. (2006) indices which were the Factor Loading greater than 0.5 and the Average Variance Extracted (AVE) greater than 0.50. Reviewing the Confirmatory Factor Analysis (CFA) results, all variables in the model, the Composite Reliability (CR), and the Average Variance Extracted (AVE) were satisfactory results.

Table 4 Confirmatory factor analysis result, Composite Reliability (CR), and Average Variance Extracted (AVE)

Factor	Indicator	Estimate	SE	Z	p	Stand. Estimate	AVE (> .5)	CR (> .7)	AVESQ
PPCQ	PPCQ1	0.807	0.081	9.977	***	0.719	0.574	0.843	0.758
	PPCQ2	1.103	0.108	10.19	***	0.79			
	PPCQ3	1				0.773			
	PPCQ4	0.974	0.097	10.04	***	0.747			
SI	SI1	1.023	0.088	11.586	***	0.835	0.651	0.848	0.807
	SI2	0.867	0.079	10.951	***	0.778			
	SI3	1				0.807			
PPU	PPU1	0.95	0.09	10.565	***	0.764	0.599	0.818	0.774
	PPU2	0.943	0.097	9.715	***	0.764			
	PPU3	1				0.794			
PPHE	PPHE1	0.89	0.11	8.055	***	0.715	0.52	0.762	0.719
	PPHE2	0.943	0.115	8.182	***	0.693			
	PPHE3	1				0.748			
PITU	PITU1	1				0.679	0.53	0.771	0.728
	PITU2	1.015	0.124	8.17	***	0.704			
	PITU3	1.158	0.135	8.59	***	0.795			

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Factor	Indicator	Estimate	SE	Z	p	Stand. Estimate	AVE (> .5)	CR (> .7)	AVESQ
PPIL	PPIL1	1				0.813	0.616	0.906	0.785
	PPIL2	0.893	0.075	11.982	***	0.767			
	PPIL3	1.032	0.075	13.8	***	0.835			
	PPIL4	0.89	0.075	11.856	***	0.756			
	PPIL5	0.924	0.076	12.212	***	0.775			
	PPIL6	0.847	0.071	12.002	***	0.759			

Remark: CR = Composite Reliability, AVE = Average Variance Extracted

The results of the CFA showed that all of the variables obtained a CR greater than .7 and AVE values greater than .5. Thus, the values were at an acceptable level.

Structural Equation Model

To test the hypotheses of causal relationship among the variables proposed. The Structural Equation Model (SEM) was applied to the model.

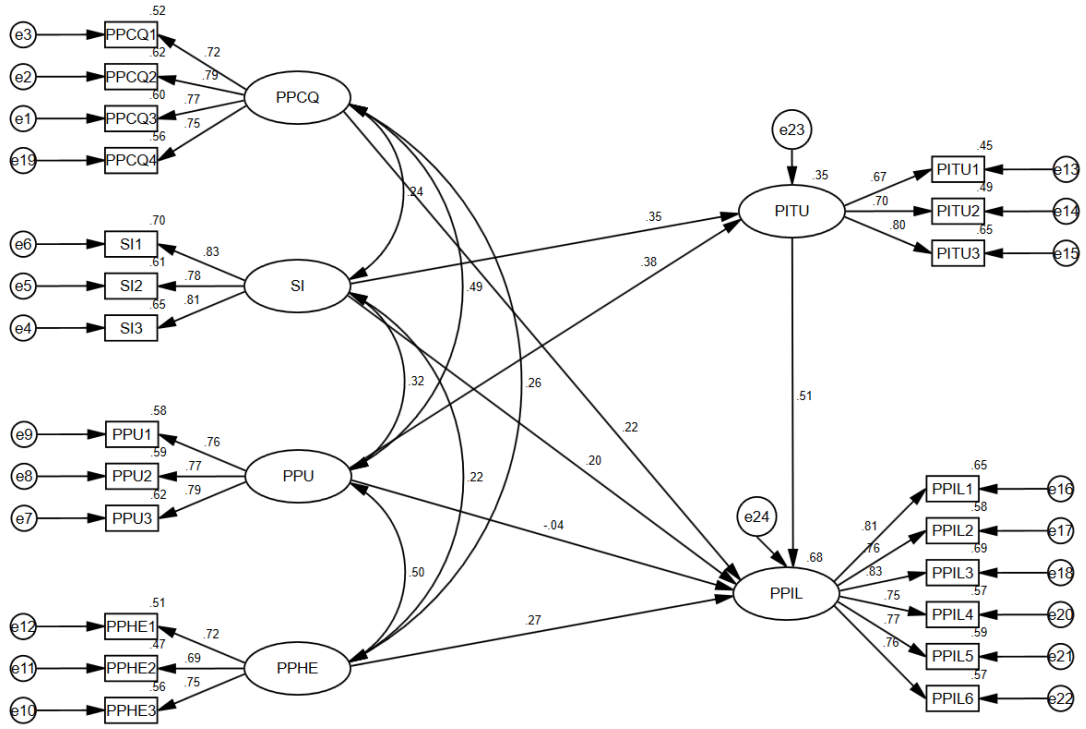

Figure 2 Structural Equation Model

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Table 5 Parameter Estimates

				95% Confidence Intervals				
Dep	**Pred**	**Estimate**	**SE**	**Lower**	**Upper**	**β**	**z**	**p**
PITU	SI	0.263	0.067	0.203	0.482	0.35	3.953	PITU
PITU	PPU	0.293	0.072	0.237	0.509	0.376	4.087	PITU
PPIL	PPCQ	0.227	0.072	0.101	0.342	0.218	3.151	PPIL
PPIL	SI	0.194	0.067	0.085	0.304	0.199	2.89	PPIL
PPIL	PPU	-0.042	0.089	-0.217	0.117	-0.041	-0.472	PPIL
PPIL	PPHE	0.323	0.092	0.152	0.407	0.273	3.5	PPIL
PPIL	PITU	0.659	0.119	0.368	0.648	0.506	5.536	PPIL

The results of the structural equation model show that the variables that have a significant influence on PPIL include PPCQ (p <.01), SI (p <.01), PPHE (p <.001), and PITU (p <.001). The variables that have a significant influence on PITU are SI (p <.001) and PPU (p <.001), while PPU has no significant influence on PPIL (p >.05).

Research Hypothesis Testing

The following are the results of the hypotheses testing of the model.

Table 6 *Hypothesis Testing Result of the Structural Model*

Hypothesis	**p**	**z-value**	**Result**
H_a1: Parents perceived content quality affects parents' perceived adolescents' interactive online learning.	***	3.953	Supported
H_a2: Social influence affects parents' perceived adolescents' intention to use VEEOP.	***	4.087	Supported
H_a3: Parents' perceived adolescents' intention to use VEEOP affects parents' perceived adolescents' interactive online learning.	0.002	3.151	Supported
H_a4: Parents' perceived usefulness affects parents' perceived adolescents' intention to use VEEOP.	0.004	2.89	Supported
H_a5: Parents' perceived home environment affects parents' perceived adolescents' interactive online learning.	0.637	-0.472	Not Supported
H_a8: Social influence affects parents' perceived adolescents' interactive online learning.	***	3.5	Supported
H_a9: Parents' perceived usefulness affects parents' perceived adolescents' interactive online learning.	***	5.536	Supported

*** = P<.001, * = P<.05

Indirect Effects

The proposed conceptual framework includes the testing of the indirect effects of Satisfaction as the mediating variable of Trust toward Behavior Intention. The following table shows the analysis of the mediating effect of Satisfaction on Behavior Intention.

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Table 7 Indirect Effect Parameters

				95% Confidence Intervals			
Label	**Description**	**Estimate**	**SE**	**Lower**	**Upper**	**β**	**p**
H6	SI ⇒PITU ⇒PPIL	0.174	0.057	0.092	0.279	0.177	< .001
H7	PPU ⇒PITU ⇒PPIL	0.193	0.052	0.111	0.283	0.191	< .001

As shown in Table 7 above, the upper and lower 95% confidence interval of PITU in SI, PPU, and PPIL intermediary paths ranges from 0.092 to 0.283 (excluding 0), and the P value of each path is less than 0.05, so H8 and H9 are valid. PITU is the intermediate variable between SI PPU and PPIL ($p < 0.01$).

Discussion

This study investigated how parents perceived the Vocational Enlightenment Education Online Program (VEEOP) among adolescents in Ying Kou City, China. The study employed a questionnaire survey to explore parents' attitudes toward this new educational model and its effectiveness. The findings reveal that parents hold distinct expectations regarding the quality of educational content, social influence, home environment, and interactive online learning. These expectations significantly influence their attitude towards their adolescents' use of these platforms and their level of support.

According to the findings, in conclusion, this study highlights the importance of parental perception in influencing adolescents' online learning choices. VEEOP offers social, personal, educational, and conceptual value while effectively addressing the geographical constraints of offline courses. To optimize the use of VEEOP, educators must consider these diverse factors to ensure that parents feel comfortable and supportive of their adolescents' use of the platform. By improving the quality of online educational content, increasing parental engagement, and considering the diversity of home environments and social influence, we can create a more engaging and effective online learning environment for young people. This will promote students' academic growth and establish a solid foundation for their future careers.

Recommendation for Future Research

Based on the findings, Future research in the Vocational Enlightenment Education Online Program (VEEOP) field should focus on exploring a broader and deeper relationship between parents' perceptions and VEEOP. This can be achieved by delving into critical areas that require attention.

Firstly, research on parents' perceptions of cross-cultural backgrounds is particularly crucial. The influence of different cultural and economic backgrounds on parents' educational attitudes, expectations, and concerns cannot be overemphasized. Therefore, examining how these contexts affect parents' perception and acceptance of VEEOP is imperative. Insights from such an examination can provide valuable information for developing and implementing educational strategies. For instance, exploring how factors such as the prevalence of online learning, access to technology, and cultural acceptance in different regions shape parents' educational choices can be beneficial.

Secondly, it is also vital to examine the impact of VEEOP on adolescents' long-term learning outcomes and career development. While existing studies focus on short-term educational outcomes, future studies should prioritize long-term outcomes. This includes determining whether VEEOP can sustain students' interest in learning in the long term, improve their vocational skills, and help them better adapt to the needs of the future workplace.

Finally, integrating technology and education is another critical area for future research. With the emergence of new technologies such as AI and VR, exploring how these technologies can be integrated into VEEOP can enhance educational experiences and outcomes. This development can improve learning efficiency, stimulate students' learning interest, and increase interaction and interest in education.

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Conclusion

The conclusion drawn from the analysis of the use of VEEOP with adolescents and parents reveals a landscape. VEEOP demonstrates both strengths and areas for improvement within the specific context. On the positive side, the high level of acceptance and trust among students indicates that VEEOP has become an integral part of their academic experience. The functionality of the platform is appreciated for helping to enhance adolescents' career awareness through e-learning activities. Moreover, the positive impact on intention to use suggests that parents already feel the importance of VEEOP. However, challenges such as perceived usefulness and social influence hurdle the intention to use. The findings highlight the importance of getting support from those around you and improving the usefulness of the project to use intent. Additionally, the analysis of the factors influencing PPIL, including parents' perceived content quality, family environment, and intention to use, provides valuable insights into the perception of teenagers' online interaction. Furthermore, in conclusion, VEEOP has established itself as a pivotal e-learning platform, enjoying widespread acceptance and trust among adolescents. The comprehensive understanding gained from this analysis lays the groundwork for future enhancements, providing a dynamic and effective learning environment for vocational enlightenment education.

Another conclusion is that the analysis of variables influencing parents' opinions reveals significant findings. The study, focused on behavioral intention and perception of adolescents' interactive learning, highlights two key factors that exhibited statistically significant influences: perceived usefulness and social influence on behavioral intention and intention to use on perceived of adolescents' interactive learning. The model-based analysis finds that parents' perceived content quality has a direct impact on parents' perceived of adolescents' interactive online learning, with a p-value of less than 0.001, underscores high-quality content is essential for effective learning by adolescents. In exploring how parents perceived the home environment and its impact on parents' perceived adolescents' interactive online learning, the study revealed a key finding that the home environment harmed parents' perceived adolescents' interactive online learning, the impact was significant. This finding highlights the importance of the home environment, including family atmosphere, parental presence, and a good learning environment in adolescents' use of VEEOP. When the home environment is good, children learn well together. Both the positive adolescent development View and the developmental self-systems theory point out that the influence of context on developmental outcomes may be generated through individual self-systems and individual behaviors. Therefore, the online learning of primary and secondary school students cannot be separated from the role of the home education environment, especially the participation of parents. The online learning of this project is carried out on the background of parents' involvement in home education. In the presence of parents, the online learning of middle school students performs well.

The core purpose of this study is to explore the mediating role of intention to use between social influence and perceived usefulness on parents' perceived of adolescents' interactive online learning. Before examining the mediating effect, the researcher first examined the two possible direct paths of social influence and perceived usefulness to parents perceived of adolescents' interactive online learning. The results show that social influence can directly affect PPIL. Therefore, when adolescents' friends are involved in a project, the adolescents' motivation is increased, the participation in the project is more interactive, and parents are more willing to support their adolescents. In this study, PITU plays a bridging role between SI and PPU on PPIL. It emphasizes that the influence of social and cultural factors on parents' attitudes cannot be ignored in the process of designing and promoting VEEOP. On the other hand, this finding suggests that parents' attitudes and intentions are malleable and can be shaped and changed through appropriate social marketing strategies and educational interventions. Specifically, parents' intention to use as a mediating variable illustrates how social influence could change parents' perceptions of their adolescents' interactive online learning by influencing their internal beliefs and attitudes. This finding has important implications for understanding how parents balance social influence and personal beliefs and thus influence their attitudes toward their adolescents' online education. In addition, we observed that parents' perceived usefulness of VEEOP didn't affect their perceived their adolescents' interactive online learning. However, parents' perceived usefulness of VEEOP directly affected their perceived their adolescents' intention to use. In addition, parents' perceived intention to use VEEOP also significantly impacted their perceived their adolescents' interactive online learning. In the context of this study, parents' perceived intention to use can be regarded as a cognitive factor, which plays a mediating role in forming parents' attitudes towards Adolescents' use of VEEOP. The discovery of this mediating role reflects a more

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dynamic and complex decision-making process in which parents' practical sexual knowledge influences their perceived adolescents' interactive online learning by influencing their intention to use. This finding provides new insight into how parents form perceptions of the usefulness of VEEOP through perceived intention to use and provides a theoretical basis for designing and implementing more effective online education tools.

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