

## The Environment Factors Affecting High School Students' Intention to Studying Abroad in Daqing City, Heilongjiang Province

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### ABSTRACT

The objectives of this research were to: 1) To investigate the components of high school students' intention to study abroad in Daqing City, Heilongjiang Province. 2) To develop the model for the factors affecting high school students' intention to study abroad in Daqing City, Heilongjiang Province. 3) To analyze the direct and indirect effects on high school students' intention to study abroad in Daqing City, Heilongjiang Province.

The population for this research consists of high school students in Daqing City, Heilongjiang Province, totaling 6,373 for the academic year 2023. The sample size of 451 students was determined by G\*Power software and, using a stratified random sampling method. The instrument's reliability coefficients for each component ranged from 0.841 to 0.957.

Research found that: 1) The component of high school students' intention to study abroad were 3 components namely; personal interests and career goals, quality and reputation of foreign university, and knowledge of application process, there were at moderate level; 2)The model of the factors affecting high school students' intention to study abroad in Daqing City, Heilongjiang Province fit well with empirical data (CMIN=2058.808 df=935 CMIN/df=2.202 CFI=0.914 TLI=0.909 RMR=0.042 RMSEA=0.052). 3) The Environmental Context had direct effect and indirect effect on the high school students' intention to study abroad via Attitudes and Beliefs, Educational Background and opportunities and Parental Involvement and Support.

**Keywords:** Daqing city, environment factor, students' intention, Factor effecting model

## 1. Introduction

Education plays a fundamental role in the development of human society, with each societal advancement accompanied by educational revolutions. Throughout history, education has evolved from personalized teaching to organized and large-scale systems, aiming to provide more comprehensive learning opportunities for students. The existing research on the motivation behind high school students' intention to study abroad in Daqing City, Heilongjiang Province, reveals certain gaps that need to be addressed. Firstly, previous studies have primarily approached this topic from a sociological perspective, attributing the motivation for studying abroad to macroeconomic and social factors such as economic policies, political climate, cultural differences, and variations in education quality. To address these research gaps, this study aims to investigate the motivations behind high school students' intention to study abroad in Daqing City, Heilongjiang Province, from the perspective of education consumption and consumer psychology. By exploring the impact of students' attitudes, motivations, and group consumer psychology, this research seeks to shed light on the extent to which motivations affect their choice of studying abroad and to examine whether students and their families make informed decisions or merely follow trends.

So this study will utilize a combination of theoretical analysis and empirical research to provide valuable insights into the motivations of high school students' study abroad behavior, ultimately contributing to the development of strategies and guidance for students, educators, and policymakers.

## 2. Research Questions

1. What is the component of high school students' intention studying abroad in Daqing City, Heilongjiang Province?
2. What is the model factors affecting high school students' intention to study aboard in Daqing City, Heilongjiang Province?
3. What are the direct and indirect factors that effect on high school students' intention to study abroad in Daqing City, Heilongjiang Province?

## 3. Research Objectives

1. To investigate the components of high school students' intention studying abroad in Daqing City, Heilongjiang Province.

2. To develop the model factors affecting high school students' intention to study abroad in Daqing City, Heilongjiang Province.

3. To analyze the direct and indirect effect on high school students' intention to study abroad in Daqing City, Heilongjiang Province.

#### 4. Research Hypothesis

H1: The Environmental context had a positive direct effect on high school students' intention to study abroad in Daqing City.

H2: Attitudes and beliefs had a positive direct effect on high school students' intention to study abroad in Daqing City.

H3: Parental involvement and support had a positive direct effect on high school students' intention to study abroad in Daqing City.

H4: Educational background and opportunities had a positive direct effect on high school students' intention to study abroad in Daqing City.

H5: Environmental context had a positive direct effect on attitudes and beliefs on high school students in Daqing City.

H6: Educational background and opportunities and Study had a positive direct effect on Parental involvement and support on high school students in Daqing City.

H7: Attitudes and beliefs had a positive direct effect on educational background and opportunities on high school students in Daqing City.

H8: Environmental context had indirect effect on high school students' intention to study abroad via attitudes and beliefs.

H9: Environmental context had indirect effect on high school students' intention to study abroad via attitudes and beliefs, and educational background and opportunities.

H10: Environmental context had indirect effect on high school students' intention to study abroad via attitudes and beliefs, educational background and opportunities, and parental involvement and support.

## 5. Conceptual Framework

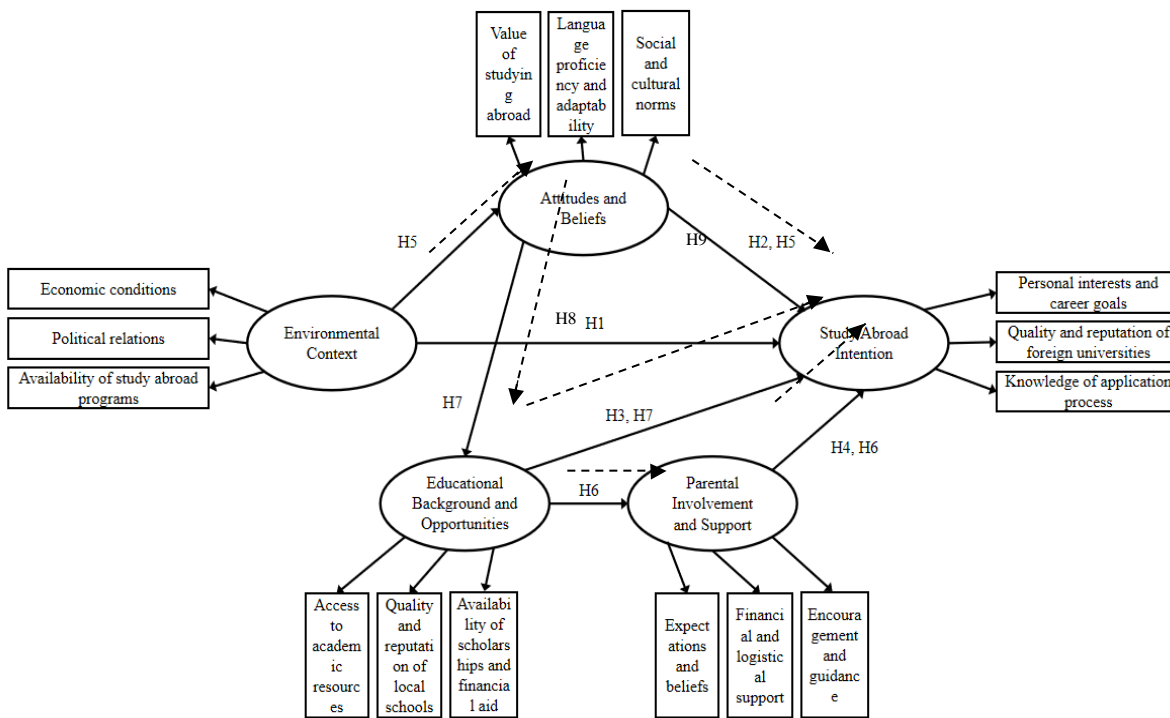


Figure 1 Conceptual framework of this research

## 6. Methodology

### Research Design

This research divided into three main part follow up the research objectives, Firstly, study on literature review for find out the components of high school students' intention to study abroad, and some factors that influencing high school students' intention to study abroad. namely; Environmental context, attitudes and beliefs, educational background and opportunities, and parental involvement and support. The second, Development the model factors affecting high school students' intention to study aboard in Daqing City, Heilongjiang Province. The data collected by the questionnaires from the samples. and third were data analyzed by confirmation factors analysis and structural equation model methods.

### Population and Sample

This population was a high school students of Daqing city which 18 schools, on three distinct institutions, representing varied backgrounds and academic standings, Selected for their rankings, international ties, and government support, they encapsulate both public and private educational. totaling 6,373. The sample determined by G\*power and using stratified random sampling was 451 students.

## Instruments

In the study focusing on high school students' study abroad intentions in Daqing City. Research instruments was a 5-point Likert scale questionnaire. There was 6 parts namely; demographics, high school students' study abroad intentions, Environmental context, attitudes and beliefs, educational background and opportunities, and parental involvement and support. There were experts verification ensures content validity by Index of Item-Objective Congruence (IOC), with each item has 0.60 - 1.00 and the questionnaire's reliability, by a Cronbach's alpha coefficient each component between 0.841-0.957.

## Data Collection and Data Analysis

To collected data will be meticulously processed. Initial steps involve data cleaning, coding, and a preliminary descriptive analysis. The data analysis by SPSS for descriptive statistical. And inferential statistical by confirmation factor analysis (CFA) and the Structural Equation Model (SEM)

## 7. Results

### 1) Demographic statistics

**Table 1:** The basic information of respondents

Name	Level	Frequency	Percentage(%)	Cumulative Percent(%)
Gender	Male	235	52.11	52.11
	Female	216	47.89	100
Grade	First year	145	32.15	32.15
	Second year	148	32.82	64.97
	Third year	158	35.03	100
	Total	451	100	100

From Table 1, it was summarized, there were 235 male students, accounting for 52.11% of the sample size. There are 216 female students, accounting for 47.89% of the total. There were 145 second year students, accounting for 32.15% of the sample. 148 third year students, accounting for 32.82% and 158 fourth year students, accounting for 35.03%

### 2) Descriptive data analyzed

**Table 2:** Descriptive data for observed variables of factor

Name	$\bar{X}$	SD	%CV	Skwness	Kurtosis	level
EC1	3.25	1.10	34.10%	-0.03	-0.85	moderate

Name	$\bar{X}$	SD	%CV	Skwness	Kurtosis	level
EC2	3.27	1.06	32.70%	-0.12	-0.71	moderate
EC3	3.29	1.10	33.60%	-0.21	-0.74	moderate
PIS1	3.14	1.04	33.24%	0.07	-0.72	moderate
PIS2	3.28	1.06	32.36%	-0.11	-0.63	moderate
PIS3	3.28	1.07	32.46%	-0.11	-0.73	moderate
SAI1	3.04	0.98	32.19%	0.07	-0.43	moderate
SAI2	3.10	1.01	32.64%	0.01	-0.53	moderate
SAI3	3.22	1.04	32.47%	-0.16	-0.58	moderate
EBO1	3.34	0.94	28.29%	-0.29	-0.38	moderate
EBO2	3.17	1.04	32.85%	-0.10	-0.53	moderate
EBO3	3.17	1.02	32.22%	-0.12	-0.48	moderate
AB1	3.12	1.04	33.40%	0.14	-0.75	moderate
AB2	3.21	1.00	31.10%	0.01	-0.65	moderate
AB3	3.20	1.07	33.40%	-0.16	-0.57	moderate

Various factors (EC1, EC2, EC3, PIS1, PIS2, PIS3, SAI1, SAI2, SAI3, EBO1, EBO2, EBO3, AB1, AB2, AB3) have been assessed, There were mean between 3.04 to 3.44 at moderate level, the S.D between 0.94 to 1.10. standard deviations (SD) and moderate to high coefficient of variation (%CV) between 28.29 to 34.10 more over. Skewness were between -0.29 to 0.14 and kurtosis values were between -0.85 to -0.38, suggest that the data distribution was a normal distribution and analysis to the each factor at table 3.

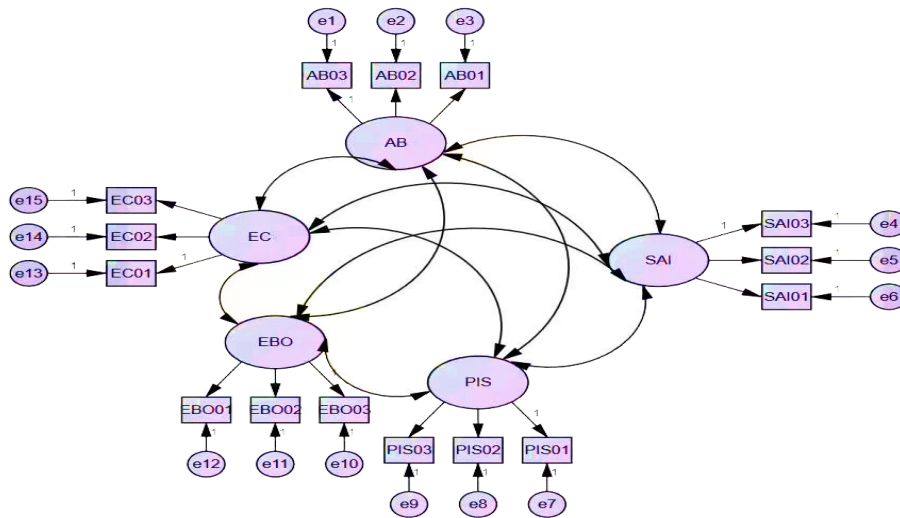
**Table 3:** Intercorrelation of latent variables

Latent variables	EC	AB	PIS	SAI	EBO
EC	1				
AB	0.277**	1			
PIS	0.286**	0.332**	1		
SAI	0.250**	0.399**	0.409**	1	
EBO	0.384**	0.467**	0.522**	0.504**	1

From Table 3, it was summarized that the correlation values of EC AB PIS SAI and EBO were 0.277, 0.286, 0.250 and 0.384, ( $P < 0.01$ ). As a result, there was a significant relationship between EC, AB, PIS, SAI and EBO.

### 3) measurement model

The model factors affecting high school students' intention to study abroad in Daqing City, Heilongjiang Province. The research have 5 factors namely; 1)Attitudes and Beliefs, 2)Educational Background and Opportunities, 3)Parental Involvement and Support, and 4)Study Abroad Intention,and 5)Environmental Context



CMIN=2058.808,df=935,CMIN/df=2.202,CFI=0.914,  
TLI=0.909,RMR=0.042,RMSEA=0.052

Figure 2 The Measurement Model in Standardized estimates.

The figure 2 the indicators show that the model fit well with empirical data. There were criterion indicator at Chi-square test, degrees of freedom, relative chi-square, Comparative Fit Index (CFI). As table 4.

**Table 4:** Measurement model fit valuation after modifying.

Measure	Estimate	Threshold	Interpretation
CMIN	2058.808		
df	935		
CMIN/df	2.202	1-3 Excellent, 3-5 Acceptable	Excellent
CFI	0.914	>0.95 Excellent,>0.9 Acceptable	Acceptable
TLI	0.909	>0.95 Excellent,>0.9 Acceptable	Acceptable
RMR	0.042	<0.05 Excellent, <0.08 Acceptable	Excellent
RMSEA	0.052	<0.05 Excellent, <0.08 Acceptable	Acceptable

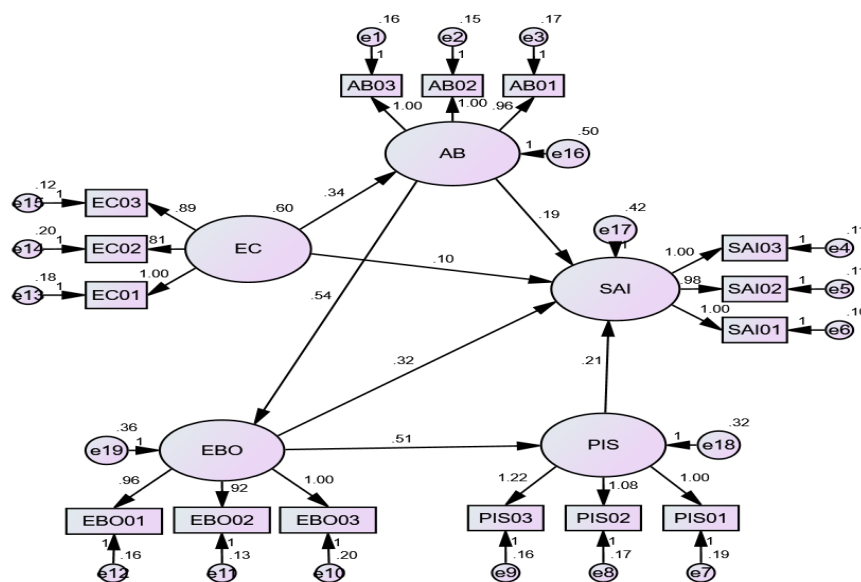
On the measurement model the research was testing for the quality of the model by composite reliability (CR), average variance extracted (AVE), and this discriminant power of measurement model as the table 5.

**Table 5:** Composite reliability (CR), average variance extracted (AVE), and factor discriminant.

Latent variables	CR	AVE	EC	AB	PIS	SAI	EBO
EC	0.91	0.54	0.74				
AB	0.91	0.54	0.28**	0.73			
PIS	0.92	0.54	0.29**	0.33**	0.74		
SAI	0.94	0.63	0.25**	0.40**	0.41**	0.79	
EBO	0.93	0.58	0.38**	0.47**	0.52**	0.50**	0.76

In the provided data, the relationships between latent variables are presented, including the composite reliability (CR) and average variance extracted (AVE) values. The focus is on the relationships among the latent variables Environmental Context (EC), Attitudes and Beliefs (AB), Parental Involvement and Support (PIS), Study Abroad Intention (SAI), and Educational Background and Opportunities (EBO). There was a good measurement model.

4) structural equation mode



CMIN=2058.808,df=935,CMIN/df=2.202,CFI=0.914,

TLI=0.909,RMR=0.042,RMSEA=0.052

Figure 3. Structural equation models and their path coefficients in the evaluation of standardized models.

As can be seen from Figures 3, the structural equation model of factors affecting high school students' intention to study abroad in Daqing City, Heilongjiang Province. The environmental Context (EC), Educational Background and Opportunities (EBO), Attitudes and Beliefs (AB) and Parental Involvement and Support (PIS) had the direct affect of Study Abroad Intention (SAI), as the table 6



**Table 6:** The hypotheses testing of direct effect

Relationship	Standardized	Unstandardized	S.E.	C.R.	P	Label
SAI<---EC	0.10	0.11	0.05	2.20	*	H1
SAI<---AB	0.19	0.17	0.05	3.46	***	H2
SAI<---PIS	0.18	0.14	0.04	3.36	***	H3
SAI<---EBO	0.31	0.32	0.07	4.94	***	H4
AB<---EC	0.28	0.29	0.06	4.36	***	H5
PIS<--- EBO	0.21	0.14	0.03	2.85	*	H6
EBO<--- AB	0.19	0.31	0.05	2.11	*	H7

From the table 6, Environmental Context (EC), Educational Background and Opportunities(EBO), Attitudes and Beliefs (AB) and Parental Involvement and Support (PIS) had the direct affect of Study Abroad Intention (SAI) with statistical significant ( $p < .05$ ).

The Attitudes and Beliefs (AB) was mediates on the relationship between Environmental Context (EC) and Study Abroad Intention (SAI), Attitudes and Beliefs (AB) and Educational Background and Opportunities (EBO) act as mediating on the relationship between Environmental Context (EC) and Study Abroad Intention (SAI). and Attitudes and Beliefs (AB) , Educational Background and Opportunities(EBO) and Parental Involvement and Support (PIS) act as mediating on the relationship between Environmental Context (EC) and Study Abroad Intention (SAI) act as mediating on the relationship between Environmental Context (EC) and Study Abroad Intention (SAI).As table 7

**Table 7:** The effect of indirect effects

Relationship	Estimate	Lower	Upper	p	Hypothesis
SAI<---AB<---EC	0.069	0.029	0.118	0.001	H8
SAI<---EBO<---AB<---EC	0.140	0.084	0.209	0.001	H9
SAI<---PIS<---EBO<---AB<---EC	0.103	0.037	0.177	0.002	H10

From Table 7, EC was summarized that the indirect effect on EC to SAI via AB was 0.069, and had direct effect on SAI via AB, EBO was 0.140, and had direct effect on SAI via AB,EBO and PIS was 0.103.The total indirect effect was 0.312.

## 8. Conclusion

1) The components of high school students' intention to study abroad were 5 components and there were at high level. 2)The model of to develop the model for the

factors affecting high school students' intention to study abroad in Daqing City, Heilongjiang Province fit well with empirical data (CMIN=2058.808 df=935 CMIN/df=2.202 CFI=0.914 TLI=0.909 RMR=0.042 RMSEA=0.052); and 3) Environmental Context, Educational Background and Opportunities, Attitudes and Beliefs, and Parental Involvement and Support had the direct effect of high school students' intention to study abroad with statistical significant ( $p < .05$ ), For analyzed indirect effect on relationship between Environment Context factor and high school students' intention to study abroad when Attitudes and Beliefs, Educational Background and Opportunities, and Parental Involvement and Support were mediators, the result was found the Environment Context factor had indirect effect to high school students' intention to study abroad via Attitudes and Beliefs, Educational Background and Opportunities, and Parental Involvement and Support with statistical significant ( $p < .01$ ). that show all the hypothesis were accepted. As follows;

For the direct effect:

H1: The Environmental Context had a positive direct effect on high school students' intention to study abroad in Daqing City, was accepted.

H2: Attitudes and Beliefs had a positive direct effect on high school students' intention to study abroad in Daqing City, was accepted .

H3: Parental Involvement and Support had a positive direct effect on high school students' intention to study abroad in Daqing City, was accepted

H4: Educational Background and Opportunities had a positive direct effect on high school students' intention to study abroad in Daqing City, was accepted.

H5: Environmental Context had a positive direct effect on Attitudes and Beliefs of high school students in Daqing City, was accepted.

H6: Educational Background and Opportunities and Study had a positive direct effect on Parental Involvement and Support of high school students in Daqing City, was accepted.

H7: Attitudes and beliefs had a positive direct effect on Educational Background and Opportunities of high school students in Daqing City, was accepted.

For indirect effect:

H8: Environmental Context had a positive indirect effect on high school students' intention to study abroad via Attitudes and beliefs, was accepted.

H9: Environmental Context had a positive indirect effect on high school students' intention to study abroad via Attitudes and beliefs and Educational Background and Opportunities was accepted.

H10: Environmental Context had a positive indirect effect on high school students' intention to study abroad via Attitudes and beliefs, Educational Background and Opportunities, Parental Involvement and Support was accepted.

## 9. Discussion

1) The component of high school students' intention to study abroad were 5 components and there were at high level. This is an encouraging discovery, indicating that high school students have a high interest in studying abroad. However, further research is needed to understand what these five components are and how they affect willingness to study abroad. Understanding the nature and impact of these components can help schools and governments develop more effective policies to encourage and support high school students' desire to study abroad. Zhang Weiguo; Feng Songke; Yi Xuemei; You Fang; &He Xiying. (2018) discovered that Chinese students' positive attitudes towards overseas studies were primarily fueled by the potential benefits of international education, mirroring the sentiments expressed by the high school students in Daqing City. Yingwen, S. (2016) also found that students with better educational backgrounds and more opportunities were more inclined to pursue overseas education. Such students are usually aware of the advantages that international education can offer and are, therefore, more eager to study abroad.

2) The model of to develop the model for the factors affecting high school students' intention to study abroad in Daqing City, Heilongjiang Province fit well with empirical data (CMIN=2058.808 df=935 CMIN/df=2.202 CFI=0.914 TLI=0.909 RMR=0.042 RMSEA=0.052); Fitting indicators such as CMIN/df, CFI, TLI, RMR, and RMSEA show a good fit between the model and empirical data. This indicates that the developed model is an effective tool for studying the factors that effect the willingness of high school students in Daqing to study abroad. This is crucial for formulating policies and taking action to support and encourage high school students' willingness to study abroad. Xinning, Pei., Xinyang, Liu., J. (2013) also emphasized the role of attitudes and beliefs as mediating factors between various external affects and the study abroad intention of students

3) Environmental Context, Educational Background and Opportunities, Attitudes and Beliefs and Parental Involvement and Support had the direct effect on high school students' intention to study abroad with statistical significant ( $p < .05$ ), when Attitudes and Beliefs (AB) was mediates on the relationship between Environmental Context (EC) and Study Abroad Intention (SAI), Attitudes and Beliefs (AB) and Educational Background and Opportunities(EBO) act as mediating on the relationship between Environmental Context (EC) and Study Abroad

Intention (SAI). and Attitudes and Beliefs (AB) , Educational Background and Opportunities(EBO) and Parental Involvement and Support (PIS) act as mediating on the relationship between Environmental Context (EC) and Study Abroad Intention (SAI) act as mediating on the relationship between Environmental Context (EC) and Study Abroad Intention (SAI).This finding indicates that these factors directly affect the willingness of high school students to study abroad, including their environment, educational background and opportunities, attitudes and beliefs, and parental participation and support. The direct impact of these factors is worth noting as they can be used to guide policy formulation and intervention measures to increase the willingness of high school students to study abroad. Triffin, & Bernie (2011) emphasized the vital role of parents in shaping students' study abroad aspirations. Drawing parallels with Prasanth and Daniel Solomon. (2013) research, the critical role that parental support and involvement play in influencing students' aspirations for international education is reinforced. The synthesis of attitudes and beliefs with educational background and opportunities in influencing study abroad intention is a complex interplay, as highlighted by Morpurgo & Azevedo. (2021). In addition, the study also found that attitudes and beliefs play a mediating role between environmental background and willingness to study abroad, while educational background and opportunities also play a mediating role between environmental background and willingness to study abroad. This means improving the attitudes and beliefs of high school students, as well as providing more educational backgrounds and opportunities, which may further increase their willingness to study abroad. Therefore, educational institutions and governments can take measures to promote a positive attitude and provide more educational opportunities to support high school students' willingness to study abroad.

## 10. Recommendation

### (1) Recommendation for Policy Formulation:

Policymakers should take steps to diversify curricula and democratize access to resources. Moreover, integrating cross-cultural insights into educational systems and emphasizing the role of parents as collaborators will foster an environment conducive for students to pursue international education.

### (2) Recommendation for Practical Application:

Educational institutions should emphasize the importance of robust support systems and career counseling. For educators, it's vital to incorporate a global perspective in teaching and bridge the theoretical with real-world experiences. Parents should be engaged through

open dialogues about international education's benefits and equipped with necessary tools to support their children's ambitions.

(3) Recommendation for Further Research:

Future research could delve into how factors identified operate in various Chinese regions or even internationally. There's potential in longitudinal studies that monitor students' intentions over extended periods. The influence of digital platforms, like online learning, on study abroad intentions should be explored. Embracing qualitative methods could offer deeper insights, and assessing real-world policy impacts can help refine strategies further.

### Bibliography

- Morpurgo, M. T., & Azevedo, A. (2021). **Investigating the Role of Professional Accounting Education in Enhancing Meta-Competency Development: Aligning with Industry Perceptions.** In Integration and application of business graduate and business leader competency-models, (p. 1-26).
- Prasanth. M. and Daniel Solomon. (2013). **Leadership Competency.** IOSR. Journal of Humanities and Social Science.
- Triffin, & Bernie (2011). **21st Century Skills: Learning for the times of our survival.** Tianjin Academy of Social Sciences Press.
- Xinning, Pei., Xinyang, Liu., J. (2013,12). **Establishment of the EU "core literacy" framework for rebuilding education in the 21st century.**Global Education Outlook.
- Yingwen, S. (2016, May). **Research on the related Factors of Incentive System on Students' Learning Enthusiasm.** Intelligence, p. 71.
- Zhang Weiguo; Feng Songke; Yi Xuemei; You Fang; &He Xiyang. (2018, Aug 1). **Analysis of the Factors Influencing the Learning Motivation of College tudents.** Education and Teaching Forum, pp. 52-54.