Article

Study on the National Identity Education Intentions of Pre-Service Teachers: Evidence from PLS-SEM and fsQCA

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Abstract: National identity education is a form of education that fosters a stable sense of national identity among citizens and plays a crucial role in the sustainable development of the country. However, with the deepening of economic globalisation and cultural pluralism, pre-service teachers, in their dual roles as school students and prospective teachers, have encountered challenges in practicing their intention to implement national identity education. This study constructed a model of influencing pre-service teachers' intention to implement national identity education based on the theory of planned behaviour (TPB) and the cognitive evaluation theory (CET) with the aim of explaining and analysing the development path of pre-service teachers' educational intentions. The model was validated using PLS-SEM and fsQCA on data from 280 pre-service teachers in teacher training colleges in northern China. The PLS-SEM results indicated that subjective norms, relatedness need, and study resources directly and positively influenced pre-service teachers' educational intentions, and study resources could also indirectly influence educational intentions through subjective norms and a need for relatedness. The fsQCA results indicated that a single variable was unable to predict and explain educational intentions. A total of five ways of influencing educational intentions emerged from the group analysis. Based on the pre-service teachers' propensity to demand learning resources and their competence, pre-service teachers were categorised into four types—basic development pathway, internally driven pathway, competence-driven pathway and resource-supported pathway—and recommendations were made according to the degree of reliance on resources of different types of pre-service teachers as a way of providing theoretical and data support for the sustainable development of the country.

Keywords: national identity education; educational intentions; pre-service teachers; theory of planned behaviour; cognitive evaluation theory; partial least squares structural equation modelling; fuzzy set qualitative comparative analysis

1. Introduction

Since the 21st century, more and more scholars have been involved in research on patriotism and citizenship education [1–3], while governments around the world take educational measures to foster the national identity of their citizens. Singapore, for instance, cultivates social cohesion and cultural sustainability through moral and citizenship education [4]. Nonetheless, owing to the further acceleration of globalisation and cultural diversification, people's awareness of national belongingness and loyalty has changed to some extent, and national identity education, as a crucial part of citizenship education, is facing enormous challenges.

National identity education is of great significance to the sustainable development of the country. Firstly, national identity education helps to cultivate citizens' national

consciousness and identity and to strengthen national cohesion and social stability [5]. Secondly, national identity education can promote citizens' moral quality and sense of social responsibility [6]. Finally, national identity education also nurtures citizens' innovative ability and competitiveness. National identity education is a practical activity in which educators cultivate the identity of the educated with the citizenship, history and culture of the country to which they belong [7,8], and as teachers are the key leaders of the teaching activities, the willingness of teaching is a significant factor which makes difference to the effectiveness of national identity education [9]. Current research on national identity education is spread across basic education, higher education and primary and secondary school teachers. At the theoretical level, it focuses on the basic questions of "what to teach" and "how to teach", with the aim of consolidating a consensus on the concept of nationhood and enhancing the academic and theoretical exploration of national identity education. At the practical level, the study focuses on the current situation, especially on the dilemmas and factors influencing national identity education in higher education.

As part of higher education, pre-service teacher education is a necessary stage of preparation for becoming a full-fledged teacher, as well as an indispensable phase of improving one's own sense of professional identity. The transition from student to para-professional status is also a positive transformation of national identity education from a low-level, stereotypical student perspective to a higher-level, internalised, paraprofessional perspective. Pre-service teachers are key practitioners of national identity education, and an important link, based on the foundations of the times, to the future of education. Currently, the lack of research focusing on pre-service teachers' willingness to explore national identity education not only affects their professional development and the development of their educational beliefs, but also further affects the field of basic education.

This study aims to explore the factors that influence pre-service teachers' willingness to practice national identity education and the pathways and mechanisms that generate such willingness. Some scholars on educational intentions have focused on the relationship between beliefs and behaviours, using the theory of planned behaviour [10] and technology acceptance models [11] to predict or explain individual behavioural intentions, but have paid less attention to the internal motivations for the formation of educational intentions, fracturing the close relationship between intentions and internal motivations.

In an attempt to resolve this issue, this study uses the theory of planned behaviour and cognitive evaluation theory as the basis and considers the exogenous variable of study resources [12] to analyse the factors influencing pre-service teachers' willingness to educate for national identity. By investigating the factors influencing pre-service teachers' willingness to educate for national identity, the study analyses the pathways of pre-service teachers' willingness to educate and constructs a system for the progression of pre-service teachers' willingness to educate, with a view to empowering pre-service teachers' education and citizenship education.

The structure of this study is as follows: The first section introduces the empirical background of the study, focuses on the research gap and indicates the value of the study. Section 2 is the Literature Review. Section 3 introduces the research model and research hypothesis. Section 4 is Research Methodology and Data Collection. Section 5 presents the results of the empirical study based on the above data. Section 6 is the Discussion. Section 7 is the Conclusion.

2. Literature Review

2.1. National Identity Education

Education, which has a natural fit with national identity [13], is never neutral, but ideological and political. Numerous studies have shown that education can contribute to the development of young people's national identity, which is why most countries have introduced citizenship education-related courses [14,15]. Wong et al. developed the Model of Teachers' Perceptions of Moral and National Education (the Model) based on the teachers' acceptance perspective, and the results showed that others' support (e.g., parents,

principals) was the most important aspect influencing teachers' practice of national identity education [16]. In terms of curriculum classification, some countries or regions have introduced compulsory civics courses to help students become good citizens, while others have infiltrated the concept of national identity through the study of other subjects [17]. Sautereau et al. compare the differences in national identity discourses in France and Ireland, using civics courses in the two regions as an example, and the results of the empirical study show that humanities subjects such as English and history play a more influential role than natural subjects [18]. Of course, very few countries have not yet developed systematic national identity education due to force majeure such as war and religion [19]. Due to the influence of cognitive development, it is generally agreed that national identity education should start in primary school [20] and that it should be internalised and resolved during secondary school [21] so that a much more deeply entrenched concept of national identity can be formed at university and beyond [22,23]. A small number of regions agree that national identity education should be introduced at the preschool level, but on the premise of rationality and depoliticisation [24]. Selecting samples of students between the ages of 14 and 20 in a Xinjiang class school in China, Yuan provides an in-depth analysis of the impact of national identity education on adolescents by investigating National Commitment (NC) and National Exploration (NE) [25]. In terms of delivery methods, textbooks are uniquely placed to add national identity education in many countries [26]. However, attention should be paid to the developmental appropriateness of the choice of content for the students. For example, Danijela et al. classified the representation of national identity education in textbooks into 12 aspects, such as family, religion, language and so on, based on integrative developmental-contextual theory and societal–social–cognitive–motivational theory. The textbooks for the lower grades of primary school in Serbia were found to be under-represented in terms of family, religion, language and 12 other aspects of national identity education, and there were problems with the dynamics and continuity of the representations [27]. Research has also shown that study tours are an important way of promoting national identity education, with visits to historical sites and famous landscapes having a direct impact on students' cognition, emotions and behaviour [28]. Wang et al. found that national identity education can positively influence individuals' behavioural intentions by investigating the emotional experience of red tourists [29].

To sum up, in the existing research on national identity education, scholars mainly focus on the analysis of text materials and the investigation of the current status of students' national identity education, and less on the professional development of teachers, especially pre-service teachers. Although national identity education is mainly presented from the aspects of identity and national pride, the description and understanding of national identity are not static [30], and how to recognize the relationship between national identity, liberalism and human rights is also an important part of civic education, which needs to be guided by teachers [31–34]. Pre-service teachers are the backbone of national identity education and the forerunners of Generation Z education, and they must be paid attention to [35].

2.2. Theory of Planned Behaviour (TPB)

The theory of planned behaviour, derived from the Theory of Reasoned Action, is an important theory that predicts and explains individual intentions and behaviours [36,37]. The theory of planned behavior has a wide range of applications in many fields such as health [38], education [39] and economics [40], and has provided practical solutions for the development of many fields. For example, when Roberta Riverso and others used the theory of planned behavior to investigate customers' willingness to buy electric cars, they found that attitudes were the biggest factor influencing purchase intentions, so changing people's utilitarian beliefs may be the best way to increase their willingness to buy pure electric cars. In the field of teacher education, the theory of planned behavior is often used to predict or explain teachers' willingness to participate in an activity or to further explore the factors that influence teachers' willingness to participate in an activity, as, for example, Zi

Yan and Kuen-fung Sin analysed teachers' intentions and behaviours in inclusive education from the perspective of the theory of planned behavior [10] from Yusop. FD explored the factors that influence pre-service teachers' use of ICT in teaching practice based on the theory of planned behavior [41], and Qin, MF used the theory of planned behavior to construct a measurement model to investigate pre-service music teachers' willingness to continue working in the profession [42].

Behavioural beliefs, normative beliefs and control beliefs are three constructs that are of particular interest to the theory of planned behavior. Ajzen argues that willingness to perform satisfies a certain functional relationship with the three beliefs, and therefore the theory of planned behaviour can be interpreted in three ways [36,37]. Behavioural beliefs refer to individuals' judgements about the outcomes of their behaviour when engaging in a particular activity, with pre-service teachers' attitudes in educational contexts being the main manifestation of behavioural beliefs [43]. Normative beliefs refer to the external pressures that individuals perceive when engaging in an activity, such as peer pressure, family atmosphere, social pressure, etc., and are an important influence on subjective norms; control beliefs are a new element based on the Theory of Reasoned Behaviour, which refers to the individual's subjective judgement of their ability to engage in an activity, and is a potential variable in perceived behavioural control.

2.3. Cognitive Evaluation Theory (CET)

Cognitive evaluation theory (CET) was developed by Professor Deci at the University of Rochester in the 1970s and revised with Ryan in the early 1980s. It is the first sub-theory of self-determination theory [44]. Internal motivation is the primary concern of cognitive appraisal theory, which suggests that internal motivation is influenced by the need for autonomy, competence and relatedness, and that when these three basic psychological needs are satisfied, individuals are able to show a greater intention to act [45,46]. Although cognitive evaluation theory focuses on an individual's internal motivation, it also emphasises that the strengthening or weakening of internal motivation is influenced by the surrounding social environment [47] and is internally consistent with an individual's willingness to behave, and therefore cognitive evaluation theory is a good indicator of an individual's willingness to behave.

Many researchers have measured individual behavioural intentions based on cognitive evaluation theory. For example, Siyuan Miao et al. concluded that internal motivation, external motivation, reward and self-efficacy are the key factors influencing employees' work engagement and intention to leave, and found that when only two variables, internal motivation and external motivation, acted on work engagement, the influence of internal motivation was greater, and when internal motivation, external motivation, reward and self-efficacy acted together on work engagement and intention to leave, the influence of internal motivation decreased [48].

Yan Xu et al. identified concentration, autonomy, competence and game rewards as important factors influencing consumers' purchase intentions, and noted that autonomy could significantly influence consumers' pleasure stimuli [49]. Focusing on the field of pedagogy, Lisa Legault pointed out that the factors that influence high school students' academic motivation are task value, need for competence, task characteristics and need for effort, and the results of the study showed that the need for competence significantly influenced high school students' academic motivation [50]. Presently, there are relatively few studies observing pre-service teachers' behavioural intentions based on cognitive appraisal theory, but through the above analysis, it is possible to identify the need for autonomy, competence and relatedness as important factors in regulating pre-service teachers' behavioural intentions.

3. Research Model and Research Hypothesis

3.1. Research Model

Although the degree of importance attached to national identity education varies slightly from country to country, depending on the underlying national circumstances, historical background and political system, forging a sense of national identity among citizens is an integral part of constructing a modern state [51]. The implementation of civic politicisation acts such as national identity education is closely linked to people's willingness to practice them. It is essential to explore in depth the educational intentions of pre-service teachers, who not only deal with conflicting and fluid values themselves, but also have the task of teaching and educating students to help them confront the role of national identity education [52]. The analysis in Section 2 shows that both the theory of planned behaviour and the cognitive appraisal theory can be used to measure individual behavioural intentions, but they have different emphases in measuring behavioural intentions. The theory of planned behaviour analyses individuals' behavioural intentions through the cognitive process chain of attitudes, subjective norms and perceptual behavioural control, whereas the cognitive appraisal theory influences individuals' behavioural intentions as a result of the subject's judgement of their needs for autonomy, competence and belonging.

Nevertheless, both the theory of planned behaviour and the cognitive evaluation theory are influenced by external resources and the environment [53]; thus, the exogenous element of study resource is one of the factors that influence the cognitive process, cognitive outcome and pre-service teachers' educational intentions in this study. As pre-service teachers' educational intentions are influenced by a combination of factors, and as these factors are internally coupled, their influence on educational intentions cannot be explored in isolation; thus, further exploration of the combined effects of these factors on educational intentions can make the results more representative.

In brief, this study proposes a research model of the factors influencing pre-service teachers' educational intentions based on the theoretical framework of planned behaviour and the theoretical framework of cognitive evaluation combined with the exogenous element of study resources (see Figure 1). The model consists of seven measurement constructs, namely pre-service teachers' attitudes (PA), subjective norms (SN), perceived behavioural control (PBC), autonomy need (AN), competence need (CN), relatedness need (RN) and study resources (SR). The results of the factors were used to explore the internal mechanisms and pathways of pre-service teachers' practice of national identity education, with a view to empowering pre-service teachers to cultivate the ideal beliefs of national identity education.
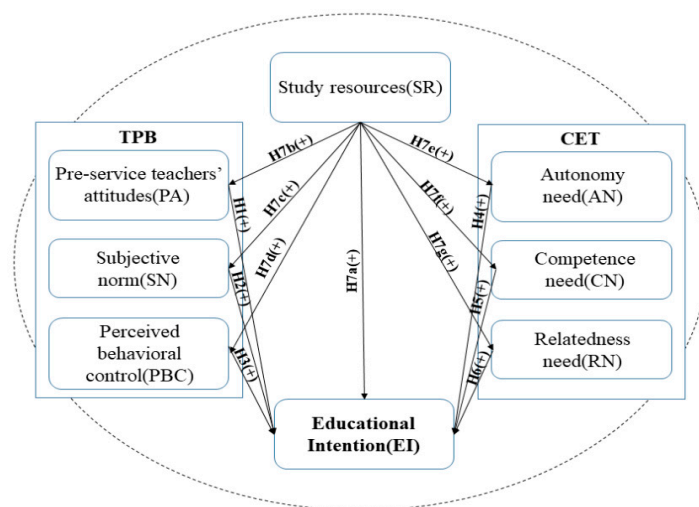

Figure 1. Research model of factors influencing national identity education intention of pre-service teachers.

3.2. Hypotheses

3.2.1. Pre-Service Teachers' Attitudes

Pre-service teachers' attitudes refer to pre-service teachers' subjective perceptions of teaching activity or their a priori disposition towards the outcome of it [36]. When teachers evaluate the outcome of a behaviour positively, they will have a positive attitude towards the behaviour and will reinforce their willingness to participate in it. Research has shown that educational attitude is a key factor influencing teachers' intentions, such as pre-service music teachers' willingness to practice [54] and teachers' willingness to use educational technology [55]. Understanding pre-service teachers' attitudes to education is, therefore, an important tool for understanding pre-service teachers' behaviour and predicting pre-service teachers' decisions. Teacher attitudes are generally reflected in teachers' perceptions and assessments of the value of matters. This study will construct indicators from two observed variables—perceptions of value and judgments of expected educational outcomes—and will argue that both have a significant impact on pre-service teachers' willingness to practice national identity education [56].

Hypothesis 1 (H1). *Pre-service teachers' attitudes have a positive impact on pre-service teachers' intentions for national identity.*

3.2.2. Subjective Norms

Subjective norms, as an effective variable in influencing individuals' willingness to behave, is the normative pressure that individuals feel before or during a behaviour due to external evaluations [36]. When engaging in teaching activities, subjective norms are influenced by the attitudes, expectations and level of support of seniors, family members and other members of the social group within the social circle. Generally, when teachers follow mainstream norms of behaviour, they are more likely to be accepted by group members and have a greater willingness to practice national identity education. Considering the social scope of pre-service teachers, this study will analyse the influence of subjective norms on pre-service teachers' willingness to practice national identity education at three levels: school, teacher and peer. Additionally, the frequency of participation in national identity education in the three social contexts will be used as the main indicator of this study's measurement.

Hypothesis 2 (H2). *SN have a positive impact on pre-service teachers' intentions for national identity.*

3.2.3. Perceived Behavioural Control

Perceived behavioural control refers to the perceived ease of engaging in a behaviour, and is the result of a combination of an individual's historical experience and expectations of the difficulty of engaging in the behaviour [37]. Individuals are more likely to engage in a behaviour when they have a strong belief in the ideal, a higher level of confidence and more manageable resources to do so. Pre-service teachers' perceived behavioural control is influenced by perceived intensity, i.e., whether pre-service teachers are concerned, involved, able to teach and have previous teaching experience, are important variables in observing pre-service teachers' perceived behavioural control [57].

Hypothesis 3 (H3). *PBC has a positive impact on pre-service teachers' intention for national identity.*

3.2.4. Autonomy Need

Autonomy need is the need for individuals to have the right to make their own choices when carrying out an activity and is considered to be an intrinsic motivation that influences individual behaviour [58,59]. This need is influenced by the external environment and guides people to follow their inner will, contributing to the development

of the individual's social and emotional competence. According to Kohlberg's stage theory of moral development [60], pre-service teachers should be at the post-customary level, i.e., morally oriented with a social contract and universal principles. This study will therefore observe how the need for autonomy influences pre-service teachers' intention to practice national identity education in terms of individual codes of conduct, the development of social and emotional competence and self-fulfillment evaluation [61].

Hypothesis 4 (H4). *AN has a positive impact on pre-service teachers' intentions for national identity.*

3.2.5. Competence Need

Competence need refers to the need for individuals to feel competent to perform an activity. It differs from perceptual behavioural control in the theory of planned behaviour in its emphasis on thinking in terms of 'competence ontology' [62]. In a pedagogical context, the individual's need for competence includes not only the need to be competent, but also the need to 'monitor' competence, i.e., metacognitive competence, the ability to think critically and to solve problems creatively [44].

Hypothesis 5 (H5). *CN has a positive impact on pre-service teachers' intentions for national identity.*

3.2.6. Relatedness Need

Relatedness need refers to an individual's need to be helped and identified with others in social activities, and thus to relate to the group [44,63]. Relatedness is an important emotional characteristic of the individual's integration into the group, a spiritual pillar given to the individual by the group, and an important purpose of national identity education. As the 'reserve force' of the new generation of teachers, pre-service teachers' relatedness need is met through three dimensions: identification with peer perceptions, identification with social care and identification with educational values [64].

Hypothesis 6 (H6). *RN has a positive impact on pre-service teachers' intentions for national identity.*

3.2.7. Study Resources

The concept of study resources means the external conditions available to pre-service teachers in order to learn, prepare lessons or perform an act that facilitates learning [65], including software resources, hardware resources and services. Software resources mainly include virtual instruments such as video and audio provided in applications that facilitate teaching and learning; hardware resources mainly include physical equipment such as textbooks, teaching aids and educational technology equipment; and services refer to activities that supply individuals with content-generating materials based on hardware and software resources. In measuring secondary school students' willingness to learn AI, it was shown that external learning resources had a positive effect on the need for autonomy and willingness to educate [65]. Referring to Lin et al.'s study, this study argues that learning resources can sustain motivation to continue learning by satisfying the needs of the actor and stimulating his or her interest in learning. Cognitive processes, cognitive evaluation and behavioural intentions are all influenced by external study resources. The richer the study resources accessible to pre-service teachers, the better they are at satisfying learning and teaching needs [53]. Hence, pre-service teachers' perceived and actual value of learning resources is an important indicator of this dimension, and educational intentions are reflected by pre-service teachers' commitment to and intention to continue practicing national identity education.

Hypothesis 7a (H7a). *SR have a positive impact on pre-service teachers' intentions for national identity.*

Hypothesis 7b (H7b). *SR have a positive impact on pre-service teachers' attitudes.*

Hypothesis 7c (H7c). *SR have a positive impact on pre-service teachers' subjective norms.*

Hypothesis 7d (H7d). *SR have a positive impact on pre-service teachers' perceived behavioural control.*

Hypothesis 7e (H7e). *SR have a positive impact on pre-service teachers' autonomy need.*

Hypothesis 7f (H7f). *SR have a positive impact on pre-service teachers' competence need.*

Hypothesis 7g (H7g). *SR have a positive impact on pre-service teachers' relatedness need.*

4. Data Collection and Methodology

4.1. Data Collection

Pre-service teachers are the fundamental guarantee for basic education to be better and stronger, and to build a foundation for quality. In this study, the research variables were first initially determined according to the theory of planned behaviour and cognitive evaluation theory, and then the contents of the scale were revised by two postgraduate students in education, a doctoral student in education and a professor of education. A questionnaire was used to obtain the research data, and the content of the questionnaire was divided into three main parts. The first part contains a brief description of national identity education and the purpose of the survey; the second part investigates the demographic characteristics of pre-service teachers, mainly in terms of gender, grade level, subject category, political affiliation, parents' political affiliation and place of origin; and the third part contains testable questions on the conditional and outcome variables (see Appendix A). To make the findings more standardised and scientific, this study used a five-point Likert scale to measure pre-service teachers' tendency to practice national identity education, with options ranging from 1 (totally disagree) to 5 (totally agree). This study used teacher trainees from teacher training colleges in mainland China as the main study population. The questionnaire was distributed over a period of one month (from 20 March 2023 to 20 April 2023), and a total of 280 questionnaires were returned, with 274 valid questionnaires and a valid return rate of 97.86%. In order to avoid the risk of common method bias (CMB) with a single source of questionnaire data, Harman's one-factor identification method was used to detect CMB in this study, and the results showed that all the factors were less than 50% and the correlation coefficients of each variable were less than 0.9, which indicated that CMB did not have a substantial effect on this study [66,67]. In addition, the variance inflation factors (VIF) were all less than 5, which also indicates that multicollinearity does not affect the results of the study [68].

Concerning the proportion of gender, 51.09% of the respondents were male and 48.91% were female, with an approximately equal ratio of male to female. In terms of grade level, 20.44% (the most) were in their senior year and 8.93% (the least) were in their third year of study, which is a more balanced group of respondents, and the largest number of students (52.55%) major in science and technology, which is similar to the current proportion of pre-service teachers in China. In terms of location of origin, there were slightly more rural than urban household registration. The demographic characteristics of the survey respondents are shown in Table 1.

Table 1. Basic information of questionnaire participants.

Items	Categories	Frequency (N = 274)	Percentage (%)
Gender	Male	140	51.09%
	Female	134	48.91%
Grade	Freshman year	44	16.06%
	Sophomore year	49	17.88%
	Junior year	32	11.68%

Table 1. *Cont.*

Items	Categories	Frequency (N = 274)	Percentage (%)
	Senior Year	56	20.44%
	Grade 1 master	42	15.33%
	Grade 2 master	28	10.22%
	Grade 3 master	23	8.93%
Subjects	Literature and History	102	37.23%
	Science and Engineering	144	52.55%
	Art and Sports	28	10.22%
Place of student origin	Urban	119	43.43%
	Rural	155	56.57%

4.2. Methodology

With the interpenetration of social and natural sciences, evidence-based research has become the main paradigm driving the development of pedagogy. In the field of pedagogy, qualitative and quantitative research methods are the basic empirical research methods for explaining educational phenomena and exploring the laws of education. Given that the nature of education is complex and the phenomenon is multi-faceted, it is difficult to gain a deeper understanding and grasp of the multiple and concurrent educational research using a single research method. This study, therefore, uses a combination of partial least squares structural equation modelling (PLS-SEM) and fuzzy set qualitative comparative analysis (fsQCA) to validate these theoretical models. The most widely used structural equation models include covariance-based structural equation modelling (CB-SEM) and partial least squares-based structural equation modelling (PLS-SEM) [69], with CB-SEM being popular among educational researchers, but PLS-SEM being less commonly used. Developed by Herman Wold in 1975, PLS-SEM is a modelling technique that is increasingly being embraced because of its low sample size requirements, the fact that the data are not restricted by multivariate normal distributions, and its compatibility with both reflective and formative measurement models [68,70,71]. Some studies have already applied PLS-SEM in the field of pedagogy, such as assessing the digital competencies of primary and secondary school teachers [72] and investigating the use of catechisms by higher education students in Saudi Arabia [73]. This study used Smart-PLS 4 software to analyse the collected questionnaire data, test the model's fit and explore the impact of different factors on pre-service teachers' educational intentions.

While qualitative methods can provide an in-depth understanding of educational phenomena, the conclusions obtained are often not generalizable; quantitative research, while having a degree of objectivity, lacks the flexibility to explore the activities of teachers and students, the subject of pedagogical research. This is why the American sociologist Charles C. Ragin introduced the ideas of Boolean Algebra and set theory into the social sciences [74], studying the relationship between conditional and outcome variables from the perspective of set operations rather than correlations. Qualitative comparative analysis (QCA) is not bound by autocorrelation and multiple covariates, but is based on the heterogeneity of cases and focuses on the grouping of results for multiple causes. The common types of sets currently used in QCA are Boolean sets, multi-valued sets and fuzzy sets, which correspond to clear set qualitative comparative analysis (csQCA), multi-valued set qualitative comparative analysis (mvQCA) and fuzzy set qualitative comparative analysis (fsQCA) [75], respectively. Due to the nature of the research topic, this study intends to investigate the effect of changes in the degree or level of the condition variable on the outcome variable, i.e., allowing for partial affiliation of the multi-subvariate variables; therefore, the use of fuzzy set qualitative comparative analysis (fsQCA) is more in line with the research characteristics. On the basis of the above analysis, the combination of the

two methods provides a more realistic picture of pre-service teachers' intentions toward national identity education.

5. Empirical Findings

5.1. PLS-SEM Analysis

5.1.1. Reliability and Validity Assessment

Cronbach's alpha and composite reliability (CR) are important indicators of the reliability of a study, and the Smart-PLS 4 software can calculate the constructs' Cronbach's alpha, the composite reliability (CR) values of the constructs as well as the factor loading values of the question items. The factor loading values are used to determine the correlation between each question item and the latent variable, and, generally, a value greater than 0.6 indicates a good fit between the question item and the latent variable [76]. As shown in Table 2, the factor loadings in this study were all greater than 0.6, indicating that the question items could express the significance of the latent variables well. In this study, Cronbach's alpha values ranged from 0.708 to 0.878, indicating that the study had some reliability [77]. Similarly, a composite reliability (CR) greater than 0.8 indicates good credibility of the data [68].

Table 2. Reliability and convergence validity indices.

Constructs	Items	Loadings	Cronbach's α	CR	AVE	VIF
Pre-service teacher Attitude (PA)	PA1	0.942	0.868	0.938	0.883	2.420
	PA2	0.937				2.420
Subjective Norm (SN)	SN1	0.865	0.823	0.894	0.738	1.769
	SN2	0.879				2.080
	SN3	0.833				1.814
Perceived Behavioral Control (PBC)	PBC1	0.828	0.819	0.88	0.648	1.868
	PBC2	0.805				1.636
	PBC3	0.795				1.724
	PBC4	0.791				1.630
Autonomy Need (AN)	AN1	0.881	0.853	0.911	0.773	2.142
	AN2	0.859				1.938
	AN3	0.898				2.358
Competence Need (CN)	CN1	0.894	0.878	0.925	0.804	2.378
	CN2	0.901				2.522
	CN3	0.894				2.326
Relatedness Need (RN)	RN1	0.876	0.865	0.917	0.787	2.108
	RN2	0.901				2.396
	RN3	0.884				2.233
Study Resources (SR)	SR1	0.861	0.708	0.872	0.773	1.429
	SR2	0.897				1.429
Educational Intention (EI)	EI1	0.837	0.828	0.898	0.745	1.843
	EI2	0.904				2.396
	EI3	0.847				1.815

Convergent validity is an important indicator of validity testing. In this study, average variance extracted (AVE) was used to indicate convergent validity, and the Fornell–Larcker criterion and cross-loading were used to evaluate the discriminant validity of the constructs. As shown in Table 3, the average variance extracted (AVE) for all the constructs was greater than 0.5 [78], the square root of the AVE on the diagonal of each construct was greater than the absolute value of the Pearson correlation coefficient between the construct and its also

potential constructs, and the cross-loading of each construct was higher than that of the remaining constructs [79], indicating that all the constructs had good discriminant validity.

Table 3. Fornell–Larcker criterion for discriminant validity results.

Constructs	PA	SN	PBC	AN	CN	RN	SR	EI
PA	0.940							
SN	0.517	0.859						
PBC	0.531	0.752	0.805					
AN	0.685	0.631	0.699	0.879				
CN	0.625	0.635	0.696	0.805	0.896			
RN	0.704	0.608	0.698	0.814	0.836	0.887		
SR	0.576	0.587	0.642	0.695	0.743	0.751	0.879	
EI	0.671	0.709	0.727	0.772	0.797	0.825	0.777	0.863

This study also reported the variance inflation factor (VIF), which is a measure of the effect of multicollinearity between factors on the study. Hair proposed a threshold of 5 for this indicator [68], and the range of VIF in this study was 1.429 to 2.522, indicating that the VIF in this study ranged from 1.429 to 2.522, denoting that multicollinearity between factors did not adversely affect this study.

5.1.2. Hypothesis Testing

The overall assessed effect of PLS-SEM can be calculated using Smart-PLS 4.0 software, focusing on the values of coefficient of determination (R^2) and effect size f^2. Where R^2 is the size of the variance explained by the exogenous variables on the endogenous variables and f^2 indicates the effect of the exogenous latent variables on the dependent variable. It is generally considered that R^2 greater than 0.2 indicates that the model has good explanatory power [80]. The value of f^2 ranges from 0.02 to 0.15, 0.15 to 0.35 and greater than 0.35 indicate that the effect of exogenous latent variables on the dependent variable is high, medium or low, respectively [81]. As shown in Figure 2, R^2 ranged from 0.332 to 0.795 (adjusted: 0.330 to 0.790), indicating a strong explanatory power of the model, and can be used to analyse the willingness of pre-service teachers' conception of the state. While f^2 ranged from 0.004 to 1.296, with the value of f^2 for AN being 0.004, indicating a low effect on EI, which should be of concern. Additionally, this study also used the model fit metric to assess the structural model, which is generally considered to have better validity when the SRMR is less than 0.1 and the NFI is close to 1 [82]. In this study, SRMR = 0.057, NFI = 0.800, d_ULS = 0.904 and d_G = 0.602, indicating no problems with the structural model.
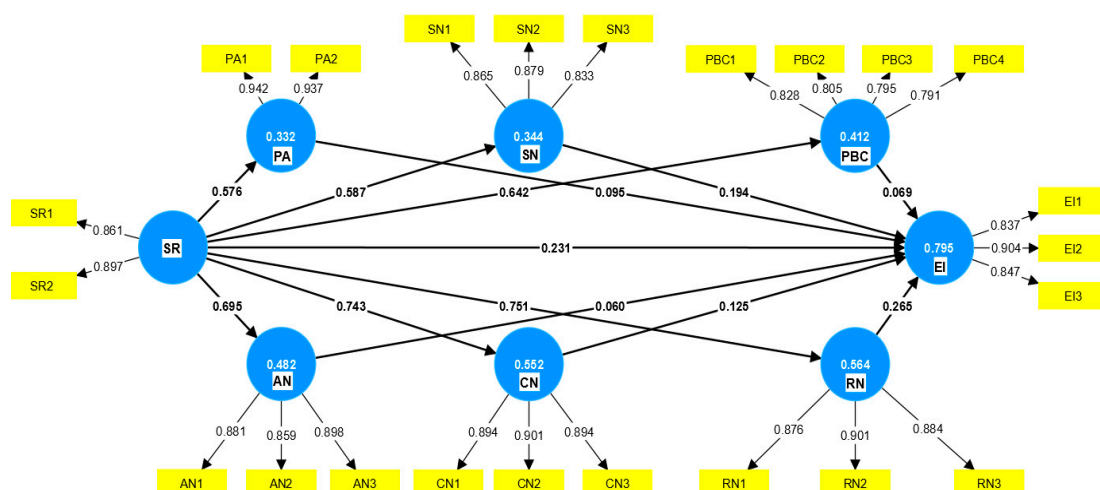

Figure 2. Results of hypothesis testing on national identity education.

The significance of the approach was calculated in Smart-PLS 4.0 software by Bootstrapping commands at the 0.05 level 5000 times [80]. Table 4 illustrates that the direct effects of the variables PA, PBC, AN and CN on EI were not notable. The rest of the paths are remarkable, especially the coefficient of the path of SR on CN and RN exceeds 0.7, demonstrating a strong correlation and explanatory power. The path results for the special mediating effect are displayed in Table 5, which shows that SR can indirectly influence pre-service teachers' intentions regarding national identity education through RN and SN when RN and SN are mediating variables, but PBC, PA, CN and AN do not have a conspicuous effect on EI when they are mediating variables. It can be seen that both the behaviour and cognition of individuals in our model will have a certain impact on pre-service teachers' practice of national identity education, and in order to explore the influence mechanism of each of its factors, we carried out fsQCA analysis. And the specific influence needs to be further analysed.

Table 4. Hypothesis testing results.

Hypotheses	Relationship	Path Coefficients	T-Statistics	*p*-Values	Result
H1	PA → EI	0.067	1.829	0.067	Not Supported
H2	SN → EI	0.001 ***	3.347	0.001	Supported
H3	PBC → EI	0.321	0.993	0.321	Not Supported
H4	AN → EI	0.314	1.007	0.314	Not Supported
H5	CN → EI	0.058	1.895	0.058	Not Supported
H6	RN → EI	0.001 ***	3.480	0.001	Supported
H7a	SR → EI	0.000 ***	3.891	0.000	Supported
H7b	SR → PA	0.000 ***	8.496	0.000	Supported
H7c	SR → SN	0.000 ***	9.950	0.000	Supported
H7d	SR → PBC	0.000 ***	12.546	0.000	Supported
H7e	SR→ AN	0.000 ***	14.060	0.000	Supported
H7f	SR → CN	0.000 ***	19.361	0.000	Supported
H7g	SR → RN	0.000 ***	19.490	0.000	Supported

Notes: "***" = *p* < 0.001; "A → B" = A affects B.

Table 5. Specific indirect effect.

Relationship	Original Sample	T-Statistics	*p*-Values	Mediation Effect
SR → RN → EI	0.199	3.381	0.001	Partial Mediation
SR → SN → EI	0.114	3.258	0.001	Partial Mediation
SR → PBC → EI	0.044	0.978	0.328	No Mediation
SR → PA → EI	0.055	1.691	0.091	No Mediation
SR → CN → EI	0.093	1.879	0.06	No Mediation
SR → AN → EI	0.042	1.003	0.316	No Mediation

Notes: "A → B→ C" = A affects C through B.

5.2. Analysis of fsQCA

The results of the survey show that the mean value of 274 pre-service teachers' willingness to educate is 12.04 out of 15, which can indicate that the current willingness of pre-service teachers to practice national identity education is high. In terms of the condition variables, only subjective norms (SN) and perceived behavioural control (PBC) scored less than 80%, while all other variables had relatively good results. Specifically, the subjective norms of pre-service teachers are more influenced by the human environment, and the

low scores for perceptual behavioural control are mainly due to the fact that the current curriculum of national identity education is not systematic and pre-service teachers have a low knowledge base, which in turn affects their willingness to educate. The standard deviation of the data was concentrated around 1.00, i.e., one question item up or down, with little dispersion, and the overall data was relatively stable.

5.2.1. Data Calibration

Data calibration of fuzzy sets refers to the process of setting the corresponding anchor points to replace the dichotomous truth table based on set theory for the set affiliation of variables in a fuzzy set. In this study, 95%, 50% and 5% are set as anchor points for full affiliation, qualitative intersection and full non-affiliation, respectively, with the values in the table [83]. The original measurements were calibrated using the functions under the variables tab in the fsQCA 3.0 software, and the calibration results were distributed between 0 and 1, in line with the requirements of the study, as shown in Table 6.

Table 6. Data calibration standard and results of descriptive statistics.

Variable	Fuzzy Set Calibration			Descriptive Statistics	
	Full Subordination	Intersection	Full Non-Subordination	Average (Full Marks)	Standard Deviation
Pre-service teacher Attitude	10	8	4	8.30 (10)	1.78
Subjective Norm	15	12	6	11.53 (15)	2.58
Perceived Behavioral Control	20	16	9	15.54 (20)	3.10
Autonomy Need	15	13	6	12.34 (15)	2.52
Competence Need	15	12	6.65	12.02 (15)	2.48
Relatedness Need	15	13	6	12.30 (15)	2.39
Study Resources	10	8	4	7.94 (10)	1.53
Educational Intention	15	12	6	12.05 (15)	2.41

5.2.2. Single Variable Analysis of Necessity (SVA)

The fsQCA method requires a single variable analysis of necessity to be conducted first to ensure the logical and scientific nature of the study, and the univariate analysis is mainly measured by two indicators, the consistency coefficient and the degree of coverage, both of which range. The consistency coefficient is the degree of consistency between the condition variable and the outcome variable, generally with 0.9 as the threshold value [84], and when the consistency coefficient is greater than 0.9 for the condition variable, it can be considered necessary for the outcome variable. The degree of coverage is used to describe the extent to which a particular outcome variable requires a certain condition variable to explain it, with a larger degree of coverage indicating a stronger explanatory power of the condition variable on the outcome variable. Table 7 shows that although the coverage of individual condition variables is greater, the consistency coefficient of each individual variable is less than 0.9. On balance, a single condition variable is not sufficient to constitute

a necessary condition for the outcome variable, and therefore the configuration analysis of the outcome variable is more convincing.

Table 7. Results of single variable analysis of necessity.

| | Necessary Conditions for the Outcomes | | | |
| | High-Level EI | | Low-Level EI | |
Variable	Consistency	Coverage	Consistency	Coverage
PA	0.8798	0.8062	0.7698	0.5024
~PA	0.4570	0.7359	0.7031	0.8064
SN	0.7840	0.8760	0.6241	0.4968
~SN	0.5496	0.6724	0.8442	0.7357
PBC	0.7913	0.8852	0.6435	0.5128
~PBC	0.5644	0.6897	0.8559	0.7450
AN	0.7981	0.8661	0.6630	0.5124
~AN	0.5507	0.6964	0.8268	0.7447
CN	0.8629	0.8834	0.6921	0.5047
~CN	0.5162	0.7018	0.8401	0.8136
RN	0.7992	0.9027	0.6604	0.5313
~RN	0.5851	0.7075	0.8791	0.7572
SR	0.8419	0.8925	0.6934	0.5236
~SR	0.5506	0.7160	0.8576	0.7944

Notes:"~" = condition is missing.

5.2.3. Configuration Analysis (CA)

Configuration analysis refers to the process of performing different combinations of multiple condition variables and analysing the effect of the path by comparing the results of different combinations. It is a common dialogue between the theoretical basis, research cases and research results, and aims to seek the key combination of factors that affect the research results. With reference to existing research, the Quine–Mccluskey method is used to simplify the Boolean function, setting the PRI value to 0.8 [74] and the frequency to 5 [85], and conducting standard analysis, three types of solutions can be obtained: Complex Solution, Parsimonious Solution and Intermediate Solution (where "solution" refers to a combination of configurations supported by a large number of cases) [75]. Analysis of the results of more explanatory configurations usually uses the Intermediate Solution to determine the number of configurations and conditions, and then uses the results of the Parsimonious Solution to enhance the Intermediate Solution path. Conditions (or combinations of conditions) that appear in both the parsimonious and intermediate solutions are core conditions for a given grouping, i.e., they indicate a strong causal relationship between the combination of conditions and the outcome variable under that path; if they appear only in the intermediate solution, they are called marginal conditions, indicating a weaker causal relationship.

On the basis of the above steps, a total of five condition groupings were derived that influenced pre-service teachers' intention to practice national identity education. As shown in Table 8, overall the five conditional groupings were all positive groupings, but there were differences in educational intentions. The consistency of each conditional grouping ranged from 0.9653 to 0.9901, and the consistency of the overall solution was 0.9606 (greater than the threshold of 0.9), which can be considered necessary for each grouping path to be an outcome variable. The original coverage ranged from 0.2978 to 0.6427, and the overall solution coverage was 0.7207 (greater than 0.5), indicating that the five configuration paths were considerably persuasive for the outcome variable and that the study indicators were relatively good. After obtaining the conditional histories, the researcher continued to discuss and communicate with experts and a number of pre-service teachers to further classify the conditional histories affecting educational intentions into a basic developmental path, internally driven path, competency-driven path and resource-supported pathways.

a. Basic Developmental Path

Table 8. Results of configuration analysis.

Variables	Basic Developmental Path	Internally Driven Path	Competency-Driven Path		Resource Supported Pathways
	1A	2A	3A	3B	4A
PA	•	•	•	•	•
SN	●		●		⊗
PBC	●		●	●	⊗
AN	●	●			⊗
CN	•	●	●	●	●
RN	●	●		●	⊗
SR		●	●	●	●
Consistency	0.9901	0.9653	0.9894	0.9878	0.9749
Raw coverage	0.5694	0.6427	0.6068	0.6131	0.2979
Unique coverage	0.0130	0.0399	0.0210	0.0039	0.0092
Solution coverage			0.7207		
Solution consistency			0.9606		

Notes: "●" = core conditions present; "•" = edge conditions present; "⊗" = edge conditions absent; "Blank spaces" = condition may be either present or absent.

The basic developmental path shows that the core factors that influence pre-service teachers' practice of national identity education are PA, SN, PBC, AN, CN and RN. Although there are many factors that influence pre-service teachers' practice of national identity education under this pathway, the analysis of the data shows that the influence of subjective norms (SN), perceptual behavioural control (PBC), autonomy need (AN) and relatedness need (RN) is more obvious, but the influence of learning resources is not significant. Therefore, when dealing with pre-service teachers' practice of national identity education under this pathway, we should actively create an atmosphere for national identity education [12], pay attention to pre-service teachers' internal needs and give them more positive evaluations [45], but do not care about the influence of the diversity of learning resources on pre-service teachers.

b.   Internally driven Path

Internally driven path means focusing on the individual's needs for autonomy, competence, relatedness and study resources, as well as the preferred developmental path for "self-improving" teachers. From the theory of planned behaviour and cognitive evaluation theory, it is concluded that internal motivation influences pre-service teachers' practice of national identity education, while external motivation does not have a significant impact. The analysis of the data shows that under the influence of quality study resources, internally motivated pre-service teachers focus on the accumulation of national identity knowledge from the perspective of "self-actualised human beings" and strengthen the "introspective" role [13] inherent in identity education in order to realise the "ego" and, thus, the willingness to educate. According to Maslow's Hierarchy of Needs theory, all social beings have the instinct to avoid harm and when individuals have satisfied their basic needs, they will actively pursue a sense of achievement in their work. This is also in line with the behaviour of pre-service teachers to meet individual needs before enhancing the willingness to educate for national identity [86].

c.   Competency-driven path

The competency-driven pathway is a developmental pathway that focuses on the perceived behavioural control, competency needs and study resources of pre-service teachers. On the one hand, pre-service teachers are concerned with the perceptions of a small group of people outside of themselves, such as peers and teachers, about their own compe-

tence. On the other hand, pre-service teachers focus on the needs of national and ethnic development and emphasise the sense of belonging to the country that results from their individual performance [31]. Therefore, some pre-service teachers believe that the purpose of national identity education is to change the group's perception of the individual, while others say that the meaning of national identity education is to focus on the individual's and the nation's need for national identity. Certainly, taking advantage of resources to enrich the knowledge base for a better experience through environmental immersion is also of particular concern to competency-driven teachers [87].

d.   Resource-supported Path

When an individual reaches a certain level of cognition, they will fall into a period of confusion, and if this is not resolved, they will become self-doubting about the cognition that they have built up before the job. It is therefore necessary to deepen the understanding of the concept or idea on top of the individual's original cognitive base [88]. The resource-supported pathway is a developmental pathway that uses study resources as an influencing factor to build a fulcrum of learning resources and the need for competence as a lever to support the intensity of educational intentions. According to resource dependency theory [89], the individual and the external environment are in a state of interdependence, and the individual can improve his or her own competence by regulating the degree of dependency on the environment. Resource-supportive pre-service teachers can determine the degree of dependence between competencies and learning resources and seek to find more efficient alternative resources until the individual's competencies match the learning resources. Specifically, pre-service teachers are more willing to educate when they determine that the learning resource will maximize the effectiveness of their teaching in relation to their own abilities.

6. Discussion

6.1. Clarifying the Internal Relationship of Path Elements and Establishing a System for the Development of Teachers' Intention

Based on the findings of the PLS-SEM and fsQCA methods mentioned above, this study proposes a conditional grouping of the willingness to promote national identity education among pre-service teachers, and the promotion paths include the foundation-constructed path, the internally driven path, the competence-driven path and the resource-deepening path. The results of this study can be grouped into four categories of pre-service teachers, as shown in Figure 3.

The analysis of theory and data shows that there are different levels of teacher intentions for the four types of pre-service teachers, and that there is a progression of perceptions between the different levels. Firstly, there is the conceptually constructed pre-service teacher, whose knowledge of certain types of educational intentions is only at the level of knowing. Pre-service teachers at this level are mainly influenced by both internal and external aspects, and should therefore focus on these two aspects when conceptually constructing them, considering pre-service teachers' attitudes (PA), subjective norms (SN), perceived behavioural control (PBC), autonomy need (AT), competence need (CP) and relatedness need (RL) on teachers' intentions, rather than focusing on enriching learning resources, as research has found that while learning resources have an impact on pre-service teachers' intentions, their impact is not specific to all pre-service teachers' cognitive developmental stages, and the impact of learning resources varies across developmental stages, which is also worth noting [90].
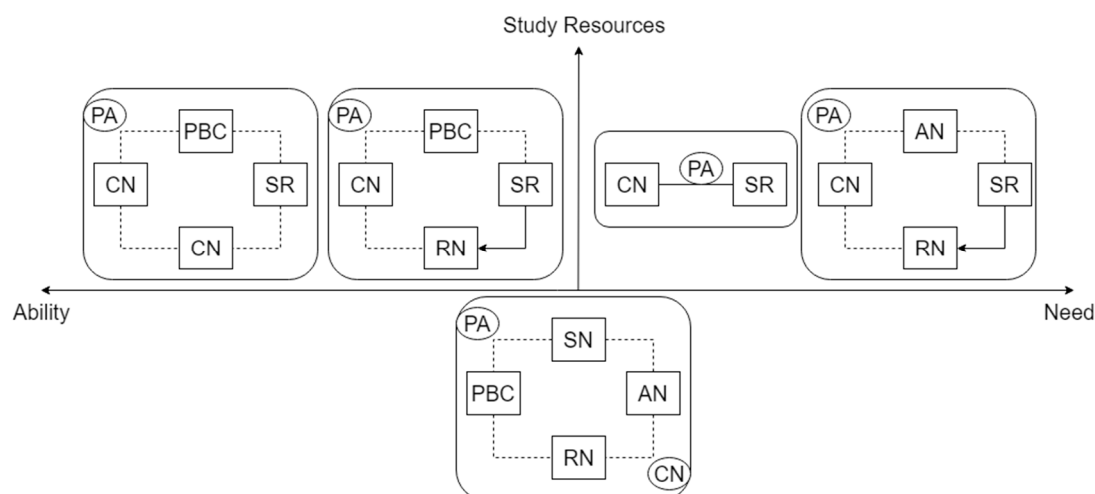
Figure 3. Pre-service teachers' national identity education intention development system.

The second is the cognition-internalised pre-service teacher, who has already constructed their own educational intentions and is no longer influenced by external factors, but rather needs to go through a process of self-understanding, analysis and internalisation [45].

Thirdly, there is the cognitive perfection of pre-service teachers, which is based on construction and internalisation, so pre-service teachers already have more mature educational intentions, but, in some aspects, there are still cognitive blind spots, and they need to gradually refine and integrate the existing cognitive system of educational intentions. The factors that influence this type of teacher are more diffuse than those in the previous two stages and vary slightly according to individual differences, but they are the same for the three factors PBC, CN and SN.

Finally, the resource-deepening pre-service teachers have a very mature and well-developed system of teacher intentions and are no longer influenced by internal or external factors, but the analysis of the data shows that learning resources still influence this type of pre-service teachers' intentions within the original cognitive system.

The above analysis suggests that: on the one hand, the research adopts a quantitative research method, taking into account the behavioural and cognitive psychological factors of pre-service teachers, and explores the existence of different levels of pre-service teachers' willingness, and there is a progressive relationship between the different levels, so it is necessary to adopt different strategies for pre-service teachers at different stages, which is also compatible with the theory of pre-service teachers' education as a means of influencing teachers' willingness to practice, and this also provides a new idea for the future training of pre-service teachers in colleges and universities. This also provides new ideas for the training of pre-service teachers in colleges and universities in the future. In educational practice, different teaching strategies should be formulated according to different levels, and a set lesson plan should not be adopted, so as to take pre-service teachers as the main body, promote the professional development of pre-service teachers and then continuously optimise the existing educational policies, and take a developmental and hierarchical view of the professional growth of pre-service teachers, but the system of educational willingness is what is being explored by the present study. The framework is a dynamic process, it takes time to advance from one level to another, and it should be gradual and not blindly jump, so as not to cause cognitive barriers to the pre-service teachers' willingness to teach, so we believe that both civic education and the theory of patriotism education need to be regarded as a dynamic process of change, and we need to understand what level pre-service teachers are at, so as to be able to teach according to the needs of the students. This will make it possible to tailor education to the needs of the individual. This also puts higher demands

on education policy, which is also a dynamic process that requires the revision of content according to the stage of development of the individual.

6.2. Practical Suggestions: Appropriate Use of Learning Resources for the Development of Teachers' Intentions

As an exogenous factor, study resources play an important role in the development of pre-service teachers' intention to develop national identity education [90], but in the case of strong willingness, study resources are not a necessary element, which means that the development of pre-service teachers' willingness to develop national identity education is a process of decreasing resource dependence. The holistic pre-service teacher is able to balance competency development with self-needs, has a positive perception of national identity education, is a leader in national identity education development and is the backbone of national identity education development, but has a low need for emerging learning resources. Internally driven pre-service teachers focus on the development of their own needs. These pre-service teachers are concerned with the future trends and academic values of national identity education and are willing to learn and internalise them actively. Competency-driven teachers focus on whether their own competencies meet the needs of their teaching and are willing to put them into practice. Competency progression is promoted either through the perceptions of those around them (3A) or through a sense of belonging to the country (3B). Resource-supported pre-service teachers emphasise the intrinsic effect of learning resources and the need for competence, specifically that growth in competence is dependent on the abundance of learning resources and that the choice of learning resources is governed by individual levels. This type of pre-service teacher tends to see the practice of national identity education as a teaching task only, and that they play an instrumental role.

In this age of the Internet, study resources are available in a wide variety of formats, which, while providing convenience, also reflect the blindness of learners in their choice. The analysis of the survey on pre-service teachers' willingness to learn national identity education shows that study resources do influence pre-service teachers' willingness to learn and practice national identity education, but this influence is also premised on the fact that the influence of learning resources differs for teachers in different learning paths. The learning paths to which pre-service teachers belong should be fully considered and learning resources should be set in a targeted manner, and for groups whose external environment affects learners. For groups where the external environment does not affect the learners much, the learning resources should be set up with written materials as the main focus, driving individuals to link up with each other with internal elements and, thus, promoting the establishment of concepts; while for groups of learners where the internal drive does not affect them much, they should be presented in more vivid and intuitive forms such as videos and study trips, promoting the formation of learners' concepts through the external environment. For learners with both internal and external needs, learning resources should be integrated accordingly, through an internal and then external development approach, in the form of text and video combinations, etc., to facilitate the development of pre-service teachers' willingness. Therefore, while building national identity education, different learning resources should be used rationally, different learning tasks should be set and national identity education should be presented in a diverse way, so as to strengthen the educational will of pre-service teachers and lay a solid foundation for citizenship education [9].

7. Conclusions

In the era of globalisation, how governments correctly understand national identity education and how willing pre-service teachers are to practice national identity education have become important issues for sustainable national development. This study clarifies the factors affecting pre-service teachers' willingness to practice national identity education through the theory of planned behavior (TPB) and the cognitive evaluation theory (CET)

and constructs a research model of pre-service teachers' willingness to practice national identity education. Then, PLS-SEM combined with fsQCA was used to explore the mechanism of each factor's effect on educational willingness, and from the results of PLS-SEM, it can be seen that pre-service teacher attitudes, perceived behavioural control, autonomy need and competence need are not statistically significant when viewed individually, so they should be analysed as a group. The results of the fs QCA show that there are four paths of pre-service teachers' willingness to practice national identity education, which are the foundation-constructing path, the internally driven path, the competence-driven path, and the resource-deepening path.

This investigation is therefore noteworthy because our study largely expands and refines the differences in pre-service teachers' learning styles in understanding national identity. Our study not only highlights the theoretical aspect of the integration of relevant theories to measure willingness to act through the theory of planned behavior (TPB) or the cognitive evaluation theory (CET) as a way of concluding that different behaviours and perceptions have a significant impact on pre-service teachers' understanding of national identity. In addition, we emphasise the practical implications that our study can also help pre-service teachers in different pathways to rationalize the use of learning resources in order to improve their understanding of national identity. According to the results of our study, each of the four learning paths of pre-service teachers has its own characteristics, so when training pre-service teachers, we need to analyse which learning paths they are in according to their behavioural and cognitive characteristics and choose suitable teaching strategies and corresponding learning resources according to the paths they are in. It is worth noting that the learning paths of pre-service teachers are not constant, but should be a constantly changing process, and this also needs to be taken into account when implementing the training and adjusting teaching strategies in a timely manner. These results can help to improve the effectiveness of sustainable teaching strategies in higher education, and thus promote the implementation of comprehensive education, which also facilitates the organic integration of pre-service teachers and the higher education system, on the one hand, promoting the professional development of pre-service teachers, and on the other hand, reinforcing the continuous optimisation of the higher education system in order to cultivate the learning needs of different students.

Appendix A Survey Items

Pre-service Teacher Attitudes

PA1: As a pre-service teacher, I think it is important to learn about national identity.

PA2: As a pre-service teacher, learning about national identity education contributes to the development of moral education.

Subjective Norms

SN1: How often did you hear school leaders mention or teach about national identity?

SN2: How often did you hear lecturers or tutors mention or teach about national identity?

SN3: As a pre-service teacher, I can have many conversations with my classmates or colleagues about recent governmental education policies or reforms.

Perceived Behavioural Control

PBC1: Frequency of watching content on national identity through radio, television, internet, etc.

PBC2: Frequency of participation in activities on enhancing national identity (e.g., great youth learning, party history learning, speech or essay writing activities, etc.).

PBC3: As a pre-service teacher, I feel that I have sufficient knowledge to teach courses related to national identity.

PBC4: As a pre-service teacher, I have had the experience of conveying national identity to students or others.

Autonomy Need

AN1: As a pre-service teacher, I believe that learning about national identity promotes the identification, internalisation and observance of students' personal codes of conduct.

AN2: As a pre-service teacher, I believe that learning about national identity can contribute to the development of students' social and emotional competencies.

AN3: As a pre-service teacher, I believe that learning about national identity can contribute to students' self-actualisation.

Competence Need

CN1: As a pre-service teacher, I believe that teaching the National Identity Course is an important demonstration of individual competence.

CN2: As a pre-service teacher, I believe that learning about national identity can contribute to the development of students' metacognitive ability.

CN3: As a pre-service teacher, I believe that learning about national identity can help students to think critically and solve problems creatively.

Relatedness Need

RN1: As a pre-service teacher, I think learning about national identity resonates more with peer interaction.

RN2: As a pre-service teacher, I believe that teaching about national identity is a contribution to national education.

RN3: As a pre-service teacher, I can feel the care and attention given to this group by the Party and government, schools and society.

Study Resources

SR1: Are you satisfied with the external resources you are currently exposed to when learning about national identity?

SR2: Do you consider quality external resources to be a fundamental guarantee to help you fulfil national identity?

Educational Intention

EI1: Your intention to actively teach or share knowledge about national identity with others as a pre-service teacher.

EI2: As a pre-service teacher, I am willing to spend time and effort studying and preparing for the National Identity Course.

EI3: As a pre-service teacher, I would like to keep abreast of national events and convey to my students the latest views on national development.

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