Study on the Mechanisms Influencing the Intention to Teach of Current Students in Ministry Teachers' Universities

-- An Empirical Study Based on the FIT-Choice Framework

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Abstract: In recent years, China's Ministry of Education and other departments have issued policy documents related to teacher education that put forward systematic and comprehensive requirements for the training of pre-service teachers, whose willingness to teach determines the stability of the teaching force. As ministerial teachers' colleges bear the major task of training pre-service teachers, the study of the deep-rooted mechanism behind the desire to teach plays an important role in teacher education. Aiming at the reality that some students of ministerial teacher training universities have poor willingness to teach, an empirical study was conducted to explore the mechanisms influencing the willingness of students of ministerial teacher training universities to teach. The study found that, firstly, the results of the survey show that the overall willingness to teach of the students of the Ministry of Teacher Training University is higher than that of the students of the Ministry of Teacher Training University. Intrinsic value, personal value and social value affect the willingness to teach of the students of the Ministry of Teacher Training University to different degrees, and the effects of intrinsic value and social value are positive, while the effect of personal value is negative. The marginal effect of social value on the willingness to teach of the students of the Ministry Teachers' University is more significant than that of intrinsic value. Secondly, there were varying degrees of influence of student category, grade level, parental expectations of teaching, policy knowledge, and policy agreement. Thirdly, the marginal effect of the social value motivation on willingness to teach was greatest for students at the disadvantaged level of willingness to teach. For students with a moderately low level of willingness to teach, the marginal effects of the three types of motivation to teach were not significantly different. The effect of social value and intrinsic value motivation to teach on the willingness to teach of the students in the ministry's teacher training universities is greater for those students who have a medium to high level of willingness to teach. The marginal effect of intrinsically valued motivation to teach on willingness to teach was greatest for school students with intermediate to high levels of willingness to teach. In the future, it is recommended that the ministry's teacher training universities should focus their efforts on four areas: strengthening policy publicity and supervision to stimulate teacher trainees' motivation to teach; strengthening teachers' commitment to educating people to deepen the foundation of vocational conviction education; and strengthening the willingness of teacher trainees to teach by linking up with their families and schools to provide all-round support for the cultivation of future teacher trainees. The second classroom is the cornerstone of teacher trainees' willingness to teach.

Keywords: Pedagogical University Affiliated with the Ministry of Education; Student in Attendance; Willingness to Teach; FIT-Choice.

1. Chapter One: Background to the study

In the report of the Twentieth Party Congress, it was proposed that "education is a fundamental and strategic support for the comprehensive construction of a modern socialist country, adhering to the priority development of education, accelerating the construction of a strong educational state, and fostering a high-quality teaching force. "In the new era, the people have a greater desire for fair and quality education, as well as more expectations for the connotative development of education. Therefore, attracting more outstanding talents to join the teaching force and continuously improving the professional quality of the teaching force have become important issues that need to be resolved urgently. With regard to the reserve of talents for teaching, teacher-training students from ministry-affiliated teacher-training universities have always been a high-quality source of replenishment for primary and secondary school teachers, and are an important source of water for building a high-quality teaching force. General Secretary Xi pointed out that, a number of educators and outstanding teachers have emerged from the teaching community, with the ideal belief of serving the country with sincerity, the moral character of acting as a model for the world, the wisdom of educating people by enlightening the mind and teaching according to their aptitude, the attitude of diligently learning and practicing, the attitude of cultivating by seeking knowledge and innovating, the loving heart of teaching and loving the students, and the pursuit of propagating the way of the world and educating the people, which demonstrates the unique "educator's spirit" in China, "Educator's Spirit". The ideal belief of having a big heart and serving the country with sincerity is rooted in the original heart of teaching. In recent years, the State has attached increasing importance to teacher education and has introduced a series of supportive and complementary policies. In 2018, the General Office of the State Council forwarded the Notice on the Implementation Measures for Publicly-Funded Education for Teacher Trainees at Teacher Training Universities
Directly Under the Ministry of Education of the People’s Republic of China and Other Departments, pointing out that the pilot work on free education for teacher trainees had reached the expected goals of system exploration, accumulation of experience, and demonstration of leadership. In 2021, the “Excellent Teacher Programme” was launched, aiming to train a group of excellent teachers for primary and secondary schools in less developed areas in the central and western regions. In September 2022, the General Office of the Ministry of Education issued the Circular on Further Improving the Cultivation of Teacher Candidates under the “Excellent Teacher Programme”, pointing out that strengthening the adaptability of teacher candidates under the “Excellent Teacher Programme” for teaching is conducive to the development and utilisation of local educational resources, and to the flexible creation of It also facilitates the development and utilisation of local educational resources, the flexible creation of a locally adapted nurturing environment, and the organisation of various kinds of educational activities both within and outside schools. The “Special Programme for Excellent Teachers” proposes that teacher trainees should be guided to establish a correct outlook on history, ethnicity, the nation and culture, and in this way gradually develop the professional sentiments, knowledge and skills required for teaching in the less developed regions of central and western China.

Although the Government has introduced a series of policies to strengthen the training of pre-service teachers in the area of teacher education and training. However, the fact is that the current situation of school students’ willingness to teach is not favourable. One study found that although most teacher trainees were willing to teach, some of them did not consider teaching as their first career choice. After analysing the willingness of primary education students to teach, a study found that the overall willingness of students in one university to teach was low, with only 55.6 per cent of senior undergraduates and 47.3 per cent of junior undergraduates willing to teach. In addition, it was found that the willingness of teacher educators from local colleges and universities to teach in rural areas was not high. A range of studies on teacher attrition in the United States indicate that between 20% to 50% of educators quit the profession within the initial five years of their service. Moreover, it is estimated that around 10% of the total teaching workforce exits the field annually. Regarding the interest among high school students in teaching as a career, the figures have seen a decline from 25% in 2010 to 12% in 2014.

The above analysis of the current situation shows that the high priority accorded to teacher education by the State contrasts with the less-than-optimistic willingness of school students to engage in teaching. Therefore, how to effectively increase the willingness of school students to teach, so as to better cooperate with the central government and the Ministry of Education in the implementation of various teacher education policies in order to build a high-quality teaching force, has become a core issue in the training of teacher educators.

At the present stage, for a variety of reasons, such as disparities in pay, social status and occupational pressure, the willingness of teacher trainees in various teacher training colleges around China to teach is generally only 40 to 60 per cent. Such a level of willingness to teach is clearly not conducive to the effective promotion of teaching behaviour among teacher trainees, which has become one of the problems that need to be solved urgently in the construction of the teaching force. At present, more than 140 teacher training universities in China are involved in the training of teacher trainees, of which the teacher trainees of the six ministry-affiliated teacher training universities have always been a high-quality source of primary and secondary school teacher supplementation, and are an important source of water for the construction of high-quality teachers, playing a leading role in the teacher training colleges. Therefore, it is of great practical and theoretical significance to study and explore the feasible paths to improve the willingness of teacher trainees in the ministry’s teacher training universities to engage in teaching.

In summary, although the State has committed itself to introducing a series of policies to support and guide students in teaching, the concept of long-term and lifelong teaching for teacher trainees still needs to be strengthened. A number of scholars have already made researches based on the above issues. On the one hand, from the viewpoint of research content, some scholars mainly focus on the factors such as professional identity, personal attributes, family background, policy cognition, vocational environment, and educational practice, etc. that will affect the intention of teacher trainees to engage in teaching. However, all of the above studies only examined some of the factors affecting the willingness to teach and lacked certain theoretical support, so this study intends to adopt the FIT-Choice framework to reconstruct the model in the Chinese context, so as to provide a more comprehensive and deeper interpretation of the mechanism affecting the willingness to teach. On the other hand, in terms of research objects, there have been more studies on teacher trainees, but relevant articles focusing on ministry-affiliated teacher training universities are still lacking. Furthermore, the effectiveness of the policy of publicly-funded teacher trainees, which has been implemented for 15 years, needs to be demonstrated and tested. In summary, this study is based on the FIT-Choice framework model to investigate the influence mechanism of the willingness to teach of the teacher-training students in the ministry’s teacher-training universities through the establishment of Extended Structural Equation Modelling (ESEM), OLS model and other methods.

2. Chapter Two: Review of Literature

Established studies have focused on the influence of factors such as professional identity, personal traits, family background, policy perceptions, occupational environment, and institutional environment.

Occupational identity refers to an individual's positive evaluation of the occupation in which he or she is engaged, and it is a person's internal belief that the occupation he or she is engaged in is valuable, meaningful, and that he or she is able to find enjoyment in it. Teacher professional identity refers to the subjective psychological feelings of teachers who can accept the teaching profession from the bottom of their hearts and can make positive perceptions and positive evaluations of all aspects of the teaching profession, so that they are willing to engage in teaching for a long period of time. Some scholars believe that the identity of the teaching profession is the result of the continuous interaction between the individual teacher (self) and the environment (the teaching profession). The degree of an individual's identification with the teaching profession is the fundamental factor influencing his or her willingness to teach.

In terms of personal traits and family background, ethnic
minorities, males, and non-only children are more willing to go to the countryside to teach for a long period of time; teacher trainees who have a rural household registration, a low annual family income, a father with a low level of education, and a supportive family are more willing to go to the countryside to teach. Some scholars have also studied the factors of policy awareness, vocational environment and institutional environment. Policy cognition refers to the degree of students' knowledge of relevant policies and their contents. The policy factor has a significant effect on the rural teaching intention of teacher trainees in western institutions. One study found that policy knowledge has a significant positive effect on teacher trainees' willingness to teach in the countryside. The professional environment refers to the teaching, research, interpersonal and school management environments in which teachers work. Career choices are influenced by the environment; for example, the higher the salary, the stronger the willingness of U.S. college graduates to teach, and salary incentives are effective in promoting teacher retention. Institutional environment refers to an internal organisational environment consisting of factors such as the organisational structure, organisational culture, internal management system, and organisational goals and leadership styles of the institution Teaching skills training and pedagogically oriented practice activities have a significant and positive effect on teacher trainees' willingness to teach.

Different scholars have relied on different frameworks to sort out different factors affecting willingness to teach. Some scholars understand the influencing factors of free teacher trainees' willingness to teach at four levels: self-individual, significant others, professional environment and policy perception. Self-individual refers to the degree to which the individual identifies with the teaching profession, family economic factors, degree of professional knowledge and skills, and individual personality traits. Significant others are family and school teachers' advice, lovers' aspects. Career environment refers to rural teachers' income and treatment, rural teachers' social status, rural living and teaching conditions, and worries and conflicts about future career development. Policy awareness mainly refers to the understanding and knowledge of the policy when applying for the examination, disagreement with the terms of the policy, lack of acceptance, and fear that the employment policy will not be guaranteed. On the one hand, it is because of the teacher trainees' own reasons: they want to improve their qualifications and change their employment intentions. On the other hand, it is because of the phenomenon of the teaching profession itself: low wages and hard work, the need to understand the development of each student, learning conditions, classroom management and other student situations, the management of cumbersome things are more.

Some scholars have also analysed the factors affecting teacher trainees' willingness to teach in the countryside from the perspective of rural teachers from the three levels of the predisposing state, structural state and constructive state. Firstly, family material support and family psychological support in the predispositional state. Secondly, rural social conditions, related policy support, and teachers' social status in the structural state. Thirdly, in the constructive state, educational practice, individual teacher trainees' professionalism, rural integration level, emotions and beliefs on the willingness to teach in the countryside. The study examined the factors influencing the willingness of teacher trainees from western colleges and universities to teach in rural areas and to do so on a long-term basis, including individual characteristics (e.g., gender, ethnicity, and whether or not they are only children), Family factors (e.g. household registration, parents' level of education, whether any of the parents are teachers, annual family income, whether the family is supportive), school factors (e.g. type of specialisation, influence of the school, school's promotion of the Rural Teacher's Grant policy), Rural aversion (e.g. poor school conditions, low level of economic development, multidisciplinary teaching load, problems with children's education, lack of transport), salary and policy factors (e.g. bottom line of monthly income expectations, student loans, policy factors), and identification with the teaching profession (e.g. intended teaching career after graduation, status of teachers in society). A survey demonstrated the impact of career commitment on willingness to enter the teaching profession among 395 government-funded Teachers College students majoring in arts education, and assessed the mediating role of learning satisfaction in this relationship. The results showed a significant positive correlation between professional commitment and willingness to teach. Those students who entered the teaching profession were not the most academically motivated or accomplished students. In addition, salary and working conditions have been identified as factors that prevent individuals from becoming teachers. Many of those who choose to teach are able to overlook negative factors such as low salaries and difficult working conditions because they view teaching as a profession, motivated by altruism or social utility.

In summary, the concept of willingness to teach is diverse but largely the same; there are many dimensions that define willingness to teach; and factors such as professional identity, personal attributes, family background, policy perceptions, professional environment, institutional environment, educational practices, significant others, and self-efficacy have an impact on the willingness of teacher educators to teach. And based on previous studies, this study found that policy identity would have an impact on teacher trainees' willingness to teach, which was mainly measured in two dimensions: policy cognition and policy emotion. Furthermore, on the basis of FIT-Choice Scale, a well-established international scale of willingness to teach, and based on the characteristics of teacher education students in the Ministry of Education, this study will revise and improve the related questions, use the FIT-Choice framework to conduct a study on the influencing factors of willingness to teach and focus on the variable of policy identity, attention and research.

3. Chapter Three: Data and Variables

In this study, 40 students of Beihang Normal University were randomly selected for the pre-survey, and the test questions were revised based on the educational measurement indicators and the actual research needs to finally form the official Research Questionnaire on the Influence Mechanism of the Willingness to Teach of the Students of Ministerial Teachers' Universities. From March to May 2023, 982 questionnaires were distributed scientifically and effectively through online among undergraduate and master's degree students of six ministry-affiliated teacher-training universities and 912 questionnaires were recovered, with a return rate of 92.87 percent; among them, 868 questionnaires were valid, with a validity rate of 95.18 percent.

In this paper, school students' willingness to teach is taken
as the dependent variable; motivation to teach is taken as the core independent variable, which mainly consists of three parts, including intrinsic value, personal value and social value; and the control variables include four dimensions, such as personal traits, family background, policy cognition and the second classroom.

In this paper, descriptive statistics are used to analyse the willingness of teacher training students to teach; OLS regression method is used to empirically analyse the influence of the second classroom on the willingness of students to teach in teacher training colleges and universities; and then OLS regression analyses are done for teacher training majors and non-teacher training majors respectively.

4. Chapter Four: Results of the study

1. Survey and analysis of the current situation of students' willingness to teach at the Ministry Teachers' University

The highest mean value is 4.32 for "willingness to take the teacher's qualification examination or the teaching competence test organised by the university (for master's degree in education and publicly-funded teacher-training students)" among the students of ministry-affiliated teacher-training universities. "Willingness to teach in the future" was the next highest, with a mean value of 3.87; "Willingness to teach for a long time" and "Willingness to choose teaching as a first career" had mean values of 3.72 and 3.77 respectively. Among them, 88.94% of the students had the intention to take the teaching certificate examination or the teaching competence test organized by the school (Master of Education and publicly-funded teacher-training students). 76.49% of the students are interested in pursuing a career in teaching in the future. 69.13% of the students are willing to consider teaching as their first career choice, while 15.21% of the enrolled students indicated that they are not willing to do so. 65.62% of the students were willing to teach for a long time, while 11.46% said they were not. Generally speaking, the students of the Ministry of Education's teacher training universities have a strong willingness to teach.

2. An Empirical Analysis of the Mechanisms Influencing the Intention to Teach of Students in Ministry Teachers' Universities

Based on existing research, this study conducted an empirical study with willingness to teach as the dependent variable, motivation to teach as the core independent variable, and personal traits, family background, policy factors, and "second classroom" as the control variables.

4.1. Composite Score on Willingness to Teach

Firstly, the four dimensions of willingness to teach were processed by composite scores and compared by a variety of methods, and this study took a factor analysis treatment. As the dependent variable of the composite score of willingness to teach (TI), the KMO value is 0.732, which meets the requirements of factor analysis, and one factor was extracted with a cumulative contribution of 0.6487, with which all four variables are correlated; after normalization, the mean is 0.674 and the standard deviation is 0.218.

4.2. An Empirical Analysis of the Effect of Motivation to Teach on the Intention to Teach of Students in Ministry Teachers' Universities

Teaching motivation in this study was measured on the dimensions of intrinsic value, personal value and social value.

<table>
<thead>
<tr>
<th>Variables</th>
<th>Model 1</th>
<th>Model 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intrinsic value</td>
<td>0.346***</td>
<td>0.137</td>
</tr>
<tr>
<td>Personal value</td>
<td>-0.021</td>
<td>-0.220**</td>
</tr>
<tr>
<td>Social value</td>
<td>0.298***</td>
<td>0.385***</td>
</tr>
<tr>
<td>Civic and Political Science</td>
<td>-0.199**</td>
<td></td>
</tr>
<tr>
<td>Teachers' Literacy</td>
<td>0.250***</td>
<td></td>
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<tr>
<td>Teaching practice</td>
<td>-0.201**</td>
<td></td>
</tr>
<tr>
<td>Career planning</td>
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<td></td>
</tr>
<tr>
<td>Students</td>
<td>0.078**</td>
<td></td>
</tr>
<tr>
<td>Grade</td>
<td>-0.047*</td>
<td></td>
</tr>
<tr>
<td>Household registration</td>
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<tr>
<td>Monthly household income</td>
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</tr>
<tr>
<td>Parenting Expectations</td>
<td>0.057***</td>
<td></td>
</tr>
<tr>
<td>Policy awareness</td>
<td>0.331***</td>
<td></td>
</tr>
<tr>
<td>Policy recognition</td>
<td>0.153**</td>
<td></td>
</tr>
<tr>
<td>Constant term</td>
<td>0.271***</td>
<td>-0.002</td>
</tr>
<tr>
<td>N</td>
<td>868</td>
<td>868</td>
</tr>
<tr>
<td>Adjustment R2</td>
<td>0.1519</td>
<td>0.372</td>
</tr>
</tbody>
</table>

Normalized for intrinsic value, the mean is 0.5606 with a standard deviation of 0.139. Normalized for personal value,
the mean is 0.6331 with a standard deviation of 0.193. Normalized for intrinsic value, the mean is 0.7436 with a standard deviation of 0.186.

Factor analysis was conducted separately for intrinsic value, personal value, and social value motivations for teaching, and factor scores were calculated and added to Model 1, other control variables were added to obtain Model 2, and regression on quartiles was performed to obtain Model 3.

As can be seen from Table 1, in Model 1, from the three dimensions of teaching motivation, intrinsic value is significant at the 1% level with a coefficient of 0.346, and for every 1% increase in intrinsic value teaching motivation, the willingness of students enrolled in the ministry's teacher training universities to teach increases by 0.346%; social value is significant at the 1% level with a coefficient of 0.298, and for every 1% increase in intrinsic value teaching motivation, the willingness of students enrolled in the ministry's teacher training universities to teach increases by 0.298%; the other dimensions have insignificant coefficients. students' willingness to teach increases by 0.298%; the coefficients of the other dimensions are not significant. Model 1 adjusted R2 in is 0.152.

Based on Model 1, control variables such as personal traits, family background, policy perceptions and second classroom were added to obtain Model 2. From the results, personal value is significant at the 5% level, with a coefficient of -0.220; social value is significant at the 1% level, with a coefficient of 0.385, and for every 1% increase in social value motivation to teach, the willingness of students enrolled in the Ministry of Teachers' Universities to teach increases by 0.385%; the coefficients of the other dimensions are insignificant; and the adjusted R2 of model 2 is 0.372. From the point of view of control variables, the coefficients of student category and grade level are significant in terms of personal traits. Student category is significant at the 5% level with a coefficient of 0.078 and teacher education students have a higher intention to teach than non-teacher education students. The grade in which is significant at 10% level with a coefficient of -0.047, undergraduate students have higher intention to teach than graduate students. In terms of family background, mother's education, parents' expectation of teaching and family socio-economic status have a significant effect on the willingness to teach of the students enrolled in the ministry's teacher training universities, while monthly family income is not significant. Mothers' educational attainment is positively significant at the 10% level, and for each additional year of mothers' educational attainment, the composite score of students enrolled in the Ministry's teacher training colleges increases by 0.022 points. Parents' expectation of teaching is positive and significant at the 1% level, and for each additional level of parents' expectation of teaching, the composite score of students' willingness to teach in the ministry's teacher training colleges increases by 0.057 points. Family socio-economic status is negatively significant at the 1% level, and the composite score of students' willingness to teach at the ministry's teacher training universities decreases by 0.221 points for each additional stratum of family socio-economic status. In terms of policy perception, the coefficients of both dimensions are significant. Policy understanding is positive and significant at 1% level, for every 0.1 point increase in policy understanding in one stratum, the composite score of willingness to teach of the students enrolled in the ministry's teacher training universities increases by 0.0331 points. Policy identity is positive and significant at the 5% level. For every 0.1 point increase in policy identity, the composite score of willingness to teach of the students in the ministry's teacher training universities increases by 0.0153 points.

5. Chapter Five: Conclusions and policy recommendations

1. Conclusion and discussion

The results of the survey show that the overall willingness to teach of the students in the ministry's teacher-training universities is high Intrinsic value, personal value and social value affect the willingness to teach of the students in the ministry's teacher-training universities to different degrees, and the effects of intrinsic value and social value are positive, while the effect of personal value is negative. The marginal effect of social value on the willingness to teach of students enrolled in the Ministry of Teacher Education is more significant compared to intrinsic value. In addition, student category, grade level, parental expectation of teaching, policy understanding and policy recognition have different degrees of influence. The marginal effect of social value motivation to teach on willingness to teach was the most significant for current students who were disadvantaged in their willingness to teach.

It is not difficult to find out through data analysis that, first of all, the motivation to teach can have an impact on the willingness of students in teacher training colleges to teach. In the context of solidly building a strong education country and emphasizing pre-service teacher training, motivation to teach should be taken as an important tool to promote the willingness of school students to teach. In addition, although teaching motivation can influence the willingness of school students to teach, not all types positively influence the willingness of teacher trainees to teach, while social value and intrinsic value teaching motivation have a greater effect on the willingness of school students to teach than the Ministry of Teacher Training University. Finally, the existence of the influence of student category, parental expectations of teaching, policy knowledge, policy recognition, and second class on the willingness of school students to teach further corroborates and complements the findings of the existing studies.

2. Policy recommendations

Education is a major national project, and teachers are the foundation of education and the source of its development. Although the overall willingness of teacher trainees at the North Teacher Training College to teach is currently high, there is still some room for improvement. According to the different characteristics of the students enrolled in the ministry's teacher training universities, different perspectives can be used to explore their respective room for improvement. Based on the results of the empirical analysis, relevant policy recommendations are put forward here mainly from the perspective of teacher trainee development and the perspective of external factors.

5.1. Strengthening Policy Awareness and Supervision

The study emphasizes that increasing teacher trainees' awareness of education policies is key to enhancing their willingness to teach. Teachers' colleges need to incorporate policy education into the second classroom and enhance students' perception of and attention to policies through
special lectures and multi-party discussions. At the same time, through an in-depth interpretation of the content of the policy, experts and representatives are invited to participate in order to help students fully understand the spirit and value of the policy, strengthen the supervision of the implementation of the policy, ensure that the policy is put into practice, safeguard the interests of the students, and guide the students to take an active part in teaching.

5.2. Deepening Education on Professional Beliefs and the Beginnings of Parenting

Teacher training students' positive understanding of the teaching profession is crucial to their willingness to teach. Teachers' colleges should strengthen education on teachers' professional identity and professional beliefs through second-class activities, and utilize lectures by famous teachers and role models to inspire students to think deeply about the role of teachers and comprehend the value of the profession. Emphasis is placed on developing personal qualities, teaching skills and competencies, and providing practical opportunities for students to experience the honor and happiness of the teaching profession and to strengthen their belief in education.

5.3. Home-school Linkage to Enhance Willingness to Teach

Family factors have a significant impact on teacher trainees' willingness to teach. Teachers' colleges should establish a home-school linkage mechanism to serve as a bridge for parents to understand education policies and the teaching profession. Through field observations and home-school exchanges, it helps parents to fully understand the significance of education and encourages them to support their children's education. At the same time, it provides policy publicity and assistance to students from poor families to ensure that they feel the practical benefits of the education policy and increase their determination to pursue education.

References


