





Investigating and implementing a student vocational education model for educational innovation

Van-Thong Ho¹ 
Huy-Hoang Tran² 
Van-De Nguyen³ 
Van-Trang Nguyen⁴ 


^{1,2}Dong Thap University, 783 Pham Huu Lau Str, Cao Lanh City, Dong Thap province, Vietnam.
¹Email: lvthong68@dtu.edu.vn
³Email: nvde@dtu.edu.vn
²Vietnam National Institute of Educational Sciences, 101 Tran Hung Dao Str, Hanoi, Vietnam.
³Email: hoangth@vnies.edu.vn
⁴Saigon University, 273 An Duong Vuong Str, Ward 3, District 5, Ho Chi Minh City, Vietnam.
⁴Email: nvtrang@sgu.edu.vn



Abstract

The development of each student's awareness serves as the governing principle for high school vocational education programs. This awareness then becomes the driving force behind the progression of the educational process. Career education activities for students are the relationships between the objectives, contents, methods and forms of organization of educational activities that are directly and constantly influenced by the educational environment. Student career education activities are the relationships between these aspects of educational activities as determined by research into the programs, textbooks, systematization and theoretical analysis of these activities. This investigation focuses on the following areas: (1) Developing preschool and high school teachers in the province of Dong Thap to meet the criteria of the new educational program (2) Developing models of applying local educational material for students in the province of Dong Thap. Both of these initiatives are part of the Dong Thap Educational Development Project. Findings: Assess the current state of activities for students in the province of Dong Thap that are related to vocational education between 2018- 2021. Develop a model for carrying out activities for students participating in vocational education in the province of Dong Thap to fulfill educational innovation requirements.

Keywords: Consulting activities, High school, Student, Vocational education, Vocational guidance.

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Contribution of this paper to the literature

This study helps us comprehend and implement a paradigm for student educational innovation. This study indicated that educators and administrators agreed that a model for vocational education students in Dong Thap, Vietnam should be developed to meet educational innovation needs.

1. Introduction

Vocational education for students is considered a positive solution that helps to adjust the motivation for choosing a career and the career interests of students. It aids in choosing the appropriate professional positions, maximizing their abilities and fortitude at work, raising their career interest and developing their creativity. The project "Vocational education and student stream orientation in general education for the period 2018-2025," promulgated under the Prime Minister's Decision No. 522/QĐ-TTg (Decision by the Prime Minister) dated May 14, 2018, set the target that by 2025, at least 40% of students graduating from lower secondary schools would continue to study at vocational and training institutions at the primary and intermediate levels; for localities with challenging socio-economic conditions, the target was 30%. At the same time, the 2018 general education program stipulates that vocational education activities for students will be associated with practical experience activities, local production, business and service activities. This is a compulsory educational activity like other subjects in school (Ministry of Education and Training, 2018).

Vocational education has been described in a variety of ways: from a labor-economic perspective, vocational education policymakers should consider the dynamics of the market economy (Dang, 2014); in the context of the socialist-oriented market economy and globalization, international integration is deepening in Vietnam posing significant risks to the economy if the proportion of technical workers is low (Dang, 2014; Nguyen & Phan, 2016). Career orientation and student flow is the distribution of the proportion of students graduating from middle and high school who are streamed to university, vocational training and the labor market according to their ability, strengths, aspirations, actual labor market conditions and human needs (Nguyen, Nguyen, & Phan, 2020; Nguyen, Nguyen, & Tran, 2021). In addition, a significant number of graduates are now unemployed or confronting a critical qualification gap. Professional qualifications and employment criteria have a negative impact on training efficiency producing brain drain and wasting the time, money and health of students, their families and the government (Nguyen & Phan, 2016).

Students and their parents understand the benefits of attending vocational training schools if vocational education activities are to be innovative. However, many challenges and difficulties are being faced that require all levels of management to take measures to provide vocational education, career orientation and streamlining in accordance with students' capacities, strengths and qualifications as well as meet the requirements of the labor market. Studies have shown that: (1) Vocational technical and vocational education for high school students is a common trend that many countries around the world are interested in. (2) Some countries have researched ways to put vocational education programs in parallel with general education to contribute to the stream of students, set requirements for labor education for students and combine vocational training right in the high school program after classifying students and orienting them to choose a career in order to prepare most high school students after graduation to easily integrate into society. Vocational education and streamlining activities for students after graduating from middle and high schools in Vietnam need to explore methods and forms so that students and parents can understand the benefits of studying at a university. Vocational training schools should be recognized as the shared responsibility of educational management agencies, social organizations and the whole community. Recently, vocational education activities for students in our country have had initial results. However, the implementation of these activities nationwide and in Dong Thap province still has many difficulties and challenges. Within the framework of this article, we will discuss: (i) the actual situation of vocational education activities for students in the period 2018-2022; (ii) propose a model for implementing vocational education activities for students in Dong Thap province to meet the requirements of educational innovation.

2. Methods

2.1. Viewpoints

2.1.1. Approaching the System

Vocational education for students is the relationship between objectives, content, methods, means and organizational forms of educational activities; a change in one factor leads to a change in other factors. At the same time, vocational education activities for students are directly and regularly influenced by the educational environment. In turn, the results of career counseling for students serve the process of developing human resources and their potential in the future (Ho & Nguyen, 2022).

2.1.2. Addressing a Development Perspective

The growth of each student's awareness governs the objectivity of vocational education activities for students and becomes the driving force behind the evolution of the educational process. At the same time, vocational education activities for students require legacy and future projections especially in the context of educational innovation and implementation of the 2018 general education program. It is impossible to ignore the legacy and future projections for the sustainable development process (Nguyen, 2017).

2.1.3. Addressing the Operational Perspective

Vocational education for students is the ability to synthesis information, abilities and attitudes in order to solve a problem and attain the essential goals; the manifestations of the process and the output of the activity are regarded as the basis for evaluating the results of the student stream. Therefore, activities in vocational education for students must be action-based, respectful and foster student movement (Pham, 2000).

2.1.4. Addressing the Practical Perspective

Vocational education for students should be satisfied to meet the needs of learners and the requirements of organizing learning activities to meet the general education program in 2018.

2.2. Procedure and Measurement

We designed a set of questionnaires for administrators (360 people), teachers (1080 people), students’ parents (180 people) and social forces (180 people) on the practical implementation of vocational education activities for students from 2018 to present. The online survey was conducted in the school year (2021 – 2022) at 120 high schools in Dong Thap province, Vietnam. We designed the questionnaire in the form of a 4-point Likert scale (Croasmun & Ostrom, 2011) where: 1 = not implemented not important; 2 = less implemented less important; 3 = often or important and 4 = very often or very important.

2.3. Analysis

Results from 1800 questionnaires were analyzed and processed using SPSS version 20. At the same time, the main research methods are used including systematization and theoretical analysis of vocational education activities for high school students; scientific seminars, collecting expert opinions on program design and development and surveying, evaluating and summarizing practical activities of career-oriented education activities for students from 2018 to present in different regions. High schools in Dong Thap province approved two topics: (1) " building and piloting models of implementing local educational content for students in Dong Thap province," code 08/2021-DTXH (Project of Social Science Research); (2) " development of teachers for preschool and high school in Dong Thap province to meet the requirements of the new educational program," code 09/2021-DTXH; and build professional reports.

Table 1. Evaluation of the performance of vocational education activities for students in Dong Thap province

Variables	Content rated	N = 1800	
		M	SD
V1	Make staff, teachers and students aware of the importance of vocational education activities.	3.00	0.708
V2	Develop a plan for vocational education activities.	2.54	0.696
V3	Organizing vocational education activities.	2.85	0.621
V4	Directing the implementation of vocational education activities.	2.98	0.612
V5	Coordinating between schools and families to participate in career guidance activities.	2.47	0.873
V6	Coordinate between schools, society and businesses to participate in career guidance activities.	2.02	0.546
V7	Information system, database on occupations and labor market.	2.36	0.517
V8	Mobilize financial support to ensure vocational education activities.	2.56	0.634
V9	Check and evaluate vocational education activities.	2.72	0.636

Note: N: Number of participants, M: Mean, SD: standard deviation.

3. Results

According to the results of Table 1, the assessment of the results of "implementation" of the contents of vocational education activities for students in Dong Thap province is low (M = 2.02 to M = 3.00 with a standard deviation at the same level from SD = 0.517 to SD = 0.873) in which the variable with the lowest mean value is V6 (M = 2.02, SD = 0.546); V7 (M = 2.36, SD = 0.517) and the variable with the highest mean is V1 (M = 3.00, SD = 0.708). This shows that the survey results are reliable; the results mainly converge at the level of "less implemented" and " not implemented." Many of the contents of vocational education activities for students are rarely implemented or implemented ineffectively. Therefore, management levels need to have timely solutions to improve the quality and effectiveness of vocational education activities for high school students in Dong Thap, Vietnam today.

Table 2. Streaming results of secondary school graduates in Dong Thap province.

Year	Number of students graduate high school basis	Number of students enrolled in high school		Number of students entering the school’s vocational education system		Number of students participating in unskilled labor	
		n	%	N	%	n	%
2018	20.168	16.025	79.5	890	4.41	3.253	16.9
2019	22.152	16.890	76.2	816	3.68	4.446	20.12
2020	20.789	15.536	74.7	690	3.31	4.563	21.09
2021	21.881	15.570	71.16	790	3.61	3.308	15.1%

Note: N: Number of students; %: Percentage.
Source: Dong Thap department of education and training.

Table 3. Results of streamlining students after graduating from high school in Dong Thap province.

Year	Number of students graduate high school	Number of students entering universities and studying abroad		Number of students entering vocational schools		Number of students working abroad and unskilled workers	
		n	%	n	%	n	%
2018	13.783	5.726	41.5	1.950	14.1	6.107	44.4
2019	12.207	5.431	44.4	2.100	17.2	4.976	38.4
2020	12.765	5.146	40.3	2.300	18.0	5.319	41.7
2021	14.250	5.900	41.4	1.800	12.6	6.550	46.0

Note: N: Number of students; %: Percentage.
Source: Dong Thap department of education and training.

The data recorded in [Tables 2](#) and [3](#) show that by 2021 after four years of implementing the government's project "Vocational education and streamlining high school students in the period 2018-2025" ([Ministry of Education and Training, 2018](#)) the results of student distribution after graduating from junior high and high schools in Dong Thap province are almost unchanged; especially in 2021. According to [table 3](#), the number of high school graduates entering vocational schools is only 12.6%. Therefore, the percentage of postsecondary students enrolled in upper secondary school was 71.16 percent while the number of students enrolled in vocational education was only 3.61 percent ([Table 2](#)). After graduating from high school, the percentage of students enrolled in vocational schools was very low ranging from 12.6 to 18 percent ([Table 3](#)). According to experts, the difficulty is that the education sector and local governments must identify the quality of education in each location in order to have a strategy to enroll high school graduates. Offices and high schools must comprehend the needs of students for further study in each locale in order to implement appropriate career advice policies. On the other hand, career advice is inadequate, a percentage of high school graduates choose careers that are not in line with their strengths and abilities or with the requirements and trends of the labor market. In addition, it must be noted that the quality and efficacy of vocational education in the province of Dong Thap's vocational training institutes are still low and that a substantial number of students graduating from vocational education institutions have not yet met the need. Businesses fail resulting in unemployment, inability to find work or not working in accordance with profession and level of training. The occupational capacity, foreign language and computer skills, capacity for cooperation and competitiveness of laborers are still inadequate. Vocational education institutions are less appealing and more difficult to entice children to enroll in streamlining students beyond junior high and high school. In addition, [Table 3](#) indicates that there is still a sizeable proportion of high school graduates who enter the workforce without training, affecting the quality of the students and the structure of the workforce's training.

Table 4. Factors affecting the results of student distribution after graduating from junior high and high school in Dong Thap province.

Variables	Influential content	N	M	SD
V1	The context of education integration and innovation	1800	3.68	0.576
V2	Policy on vocational education activities in high schools	1800	3.76	0.472
V3	Responsibilities of managers in vocational education activities	1800	3.41	0.689
V4	The support and cooperation of students' parents and the social community	1800	3.58	0.495
V5	Environment and conditions for conducting vocational education activities	1800	3.59	0.493
V6	Competition mode: – Reward	1800	3.22	0.469

Note: N: number of participants; M: mean; SD: standard deviation.

[Table 4](#) shows that the average values of the influence on the results of the classification of students after graduating from junior high and high school in Dong Thap province are assessed ranging from (M=3.22) to (M=3.76), none of which are below (3.00) and of which four have the mean (M=3.58) or higher while the standard deviation of the six items only ranges from (SD=0.472) to (SD=0.689) showing low dispersion. It can be concluded that the contents that we have surveyed have a significant impact on the quality and efficiency of the distribution of students after they graduate from middle and high schools in the province of Dong Thap. Therefore, school leaders need to have solutions to manage and overcome the factors affecting the distribution of students after they graduate from middle and high schools at the lowest level in order to improve the quality of students and the effectiveness of vocational education activities for students.

4. Discussion

4.1. Scientific Arguments for Organizing Vocational Education Activities for Students

4.1.1. Requirements on Vocational Education Activities for Students in the 2018 General Education Program

On December 26, 2018, the [Ministry of Education and Training \(2018\)](#) issued Circular No. 32/2018/TT-BGDT (Ministry of Education and Training) on the general education program in which vocational guidance is a compulsory educational activity. Accordingly, vocational education activities must be associated with reforming general education and the four pillars of education in the 21st century (learning to know, learning to work, learning to be and learning to live together) in which vocational education can be considered the main activity, directly and indirectly helping students to realize the goal of "learning to do". Vocational education activities must be directed towards achieving the goals of "improving people's intelligence" and "training human resources", they must meet the requirements of "improving the quality of comprehensive education; renovating the organizational structure, management mechanism, teaching and learning content and methods; implementing "standardization, modernization and socialization" and gradually transitioning towards an open education model - a model of education in which students can learn from anyone, anywhere flexible, meet the needs of regular knowledge, create many different possibilities and opportunities for learners and ensure social justice in education. Therefore, it is necessary to clearly define the content of this concept in order to properly understand the requirements for career guidance activities for students: (i) the role and position of career guidance activities for students in high schools are the following: compulsory educational activities like another subject in the school. (ii) The way for students to form qualities and competencies are based on the general mobilization of knowledge and skills from many different educational fields at the same time while implementing vocational education activities. Students must experience what they have learned in school.

4.1.2. The Actual Situation of Vocational Education Activities for Students in Dong Thap Province in the Period of 2018-2021

The study also showed that vocational education activities in the past years in high schools in Dong Thap province had not received attention. The perception of educational administrators, teachers, parents and students about vocational education is still distorted and sometimes overlooked. The prevalent problem is the management team is not fully aware of the importance of vocational education activities for students and has not clearly defined

the objectives of vocational education suitable for the target audience. Career education activities for students are still spontaneous; there is no consistent direction from top to bottom.

The implementation of the principals of high schools has gradually been put into order but it has not really been scientific and regular forms of vocational education for students have not been given attention to in accordance with the functions and tasks of the high school. The organization and implementation of vocational education activities are not comprehensive and are slow to innovate in terms of methods and contents of vocational guidance education, programs and teachers serving vocational guidance are not appropriate and have not been updated in time with the development of science and technology.

The management staff of the upper secondary schools is basically sufficient in terms of number and qualification but they have not yet been trained in skills for organizing and managing vocational education activities. In particular, artists and scientists have not been involved in these activities. Financial resources for vocational education activities are limited and mechanisms and policies for learners and teachers are inadequate. Therefore, we are not encouraging a large number of good and highly skilled teachers to participate in teaching.

Propaganda to mobilize resources for vocational education activities is still limited. The coordination between the three educational environments is not close and the participation of businesses and production establishments in vocational education activities is still limited. Many high schools have not these organizations.

4.1.3. Factors Affecting Vocational Education Activities for Students in Dong Thap Province

Choosing the right career and understanding and being fully aware of the profession are the fundamental factors in promoting each person's capacity and forte in study, labor and work. If students understand career values correctly in high schools, it will directly affect their learning process from the school chair to practice and cultivate on the path to become a professional. In recent years, university enrollment policies have had a significant impact on the flow of students from junior high and high school into the vocational education system. As a result, since the Ministry of Education and Training simultaneously implements the policies of university entrance exams with low common ground and college and university admissions based on high school transcripts, the opportunity for high school graduates to enroll in colleges and universities have diminished. Consequently, there is a low flow of students from lower secondary and high schools into the vocational education system making enrollment and enticing students to study more difficult for vocational education institutions ([Education & Times Newspaper, 2021](#)). As a result, most of the vocational education institutions in Dong Thap province in recent years have never met the assigned enrollment target. In 2021, in Dong Thap province, there are 3.308 students (accounting for 15.1%) graduating from lower secondary school who cannot go to higher secondary school. However, these students have not yet chosen an apprenticeship or other path. This situation means that the classification of students after junior high and high school in Dong Thap province has not achieved the set target.

Research has shown that the following factors influence vocational education activities for students in Dong Thap province: (i) Objective factors: from family, relatives and friends, from content, programs and teaching methods in high schools, from the coordination between pedagogical forces, from the cultural and pedagogical environment, from the economic, political and social situation in Dong Thap province. (ii) Subjective factors: from knowledge capital, professional knowledge, to professional inclinations, ideals and beliefs, from an attitude of love and attachment to the profession and from the willpower to overcome difficulties and challenges in the learning and training of students.

4.2. Proposing a Model of Vocational Education Activities for Students in Dong Thap Province to Meet the Requirements of Educational Innovation

4.2.1. Objectives of Vocational Education Activities for Students

Attitude: proactively and actively participate in activities inside and outside the school to increase self-awareness and professional awareness, confidently implement their own career plan after graduating from high school.

Knowledge: understand the meaning and importance of choosing a future career know how to find out about yourself, find out about careers, labor market information and build a career plan for yourself, know some basic information about the socio-economic development orientation of the locality, the country and the region.

In terms of skills: self-assessment of their own interests, abilities, personality and career values and family conditions in career orientation, finding job information, labor and market information and necessary training institutions, choosing and building a career plan for yourself.

4.2.2. Content of Vocational Education for Students in Dong Thap Province

Learn first about the profession (meaning, the characteristics and requirements of the profession; the requirements for occupational safety and health; understanding the labor market). Second, training activities for characteristics and competences aligned with career orientation (career orientation self-assessment; training for qualities and competencies aligned with career orientation). Third, the activity of choosing a career path and developing a career-oriented study plan (learn about the system of secondary schools, colleges, universities and other vocational education institutions in the locality and the country; consult with teachers, family members and experts on career orientation; select future training institutions and develop study plans suited to career orientation).

4.2.3. Form of Organizing Vocational Education Activities for Students in Dong Thap Province

Firstly, vocational education is provided through the teaching of cultural subjects and providing career counseling (vocational activities, career counseling days; seminars and debates by topic; exchanges with students) successful people in the profession; visits to vocational training institutions and production facilities).

Second, vocational education through experiential and career-oriented activities help students understand careers and career-related qualities and is able to help them choose a career in accordance with the teacher's advice.

Third, vocational education through local educational content (basic or topical issues of local culture, history, geography, economy, society, environment, traditional professions and occupations) as well as the need for local human resources).

4.2.4. *Methods of Implementing Vocational Education Activities for Students in Dong Thap Province*

In 2018, high schools first implement the arrangement of differentiated instruction for elective subjects based on the student's abilities, needs and interests per the requirements of the general education program. Student vocational education activities in the province of Dong Thap enhance cooperation between high schools and educational management agencies, vocational education institutions, businesses and traditional craft villages. As a result, we propose that junior high schools and high schools in the province of Dong Thap establish school counseling activities for students in accordance with the method depicted in Figure 1.

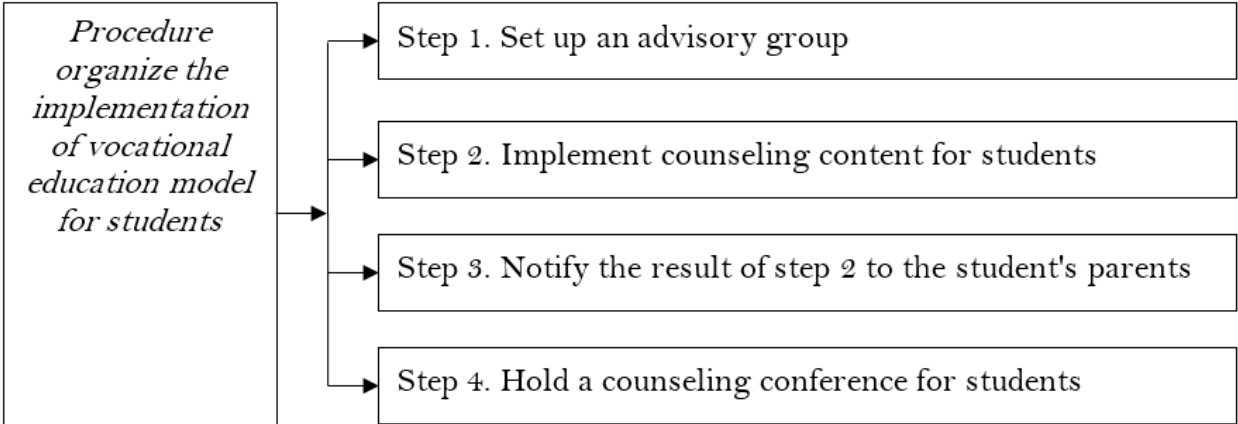


Figure 1. Four steps to the implementation of a vocational education model for students.

- Step 1. Establishing a consulting group: encourage lower secondary schools to have career counseling activities for students, upper secondary schools must set up an advisory group led by the principal to organize the implementation of career counseling activities.
- Step 2. Implement the content of counseling for students: implementing the content of career guidance requires the counseling team and teachers to understand seven disciplines and 23 fields in the 2018 general education program to advise student counseling; This is not an easy thing for teachers who have to hold multiple roles and have not been trained in career counseling skills on a regular basis. To do so, the counseling team and teachers need to accompany students to be ready to answer questions and advise students to choose groups of subjects and topics that are suitable for their interests and abilities among the groups. Suitable for construction schools. Accordingly, the consulting team surveyed 9th graders about the need to choose a combination of subjects in grade 10 corresponding to the trend of career selection by field. We believe that a survey through a clear questionnaire in addition to exploration and general judgment can grasp the student's choice trend. At the same time, based on the needs of students and the actual conditions of the school (teachers, facilities), schools will build subject complexes to maximize the capacity of students' schools and meet the needs of learners as much as possible.
- Step 3. Notify the results of step 2 to the parents of the students. The counseling team will develop the parents' understanding of the government's guidelines and policies and the rights of students. This is an important activity for each family to be responsible with their children in choosing the right career path.
- Step 4. Organize a counseling conference for students: accordingly, students who share the same aspirations will be consulted by the counseling group and parents at the conference to help students understand and determine the selection and registration of suitable professions.

Secondly, improve the quality of vocational training in vocational colleges and centers of vocational and continuing education to meet the human resource needs of Dong Thap province. Accordingly, in Dong Thap province, there are Dong Thap Community College, Dong Thap Medical College, the Provincial Center for Vocational and Continuing Education and 11 Centers for Vocational Education. Continuing education at the district level; Therefore, these training institutions need to identify training needs according to existing industries and occupations and perfect the training program according to the new training model's objectives and the training program's design connection in the direction of professional, application and practice. At Dong Thap Community College, two international training programs have been approved by the General Department of Vocational Education - Ministry of Labour, Invalids and Social Affairs (metal cutting and automotive technology) and 3 ASEAN (Association of South East Asian Nations) sectors (food technology, plant protection, aquaculture). Therefore, it is necessary to consider Dong Thap Community College as a center connecting with vocational and continuing education centers at the district level to perform vocational training tasks for Dong Thap province.

Thirdly, in Dong Thap province, there is Dong Thap University and in the Mekong Delta, there are many training institutions with diverse professions that provide very favorable conditions for children of the province to study. Therefore, the vocational training institutions of the province need to strengthen their cooperation and association with universities, colleges and vocational schools in the region in order to create a network of teams participating in training activities. At the same time, the training institutions of the province also need to connect with production units, organizations and enterprises in the area to gradually improve the compatibility between training and employing workers.

Fourthly, the Department of Education and Training and the Department of Home Affairs coordinate with departments and agencies in Dong Thap province to make forecasts about human resource demand for each period. It is necessary to study and evaluate the current situation of human resource structure (in terms of qualifications and structure of occupations), clarify what types of human resources are redundant or lacking and especially the causes of excess or shortage, orientation in the recruitment of college and university training in order to overcome

the situation that university graduates cannot find jobs or have jobs that are not suitable for their fields and training levels; thereby contributing to increasing enrollment in vocational education institutions and gradually overcoming the situation of enrollment in vocational education schools that have not met assigned targets for many years.

5. Conclusion

To successfully and effectively carry out vocational education activities for students in the province of Dong Thap, it is necessary to change the perception of the community, society, the students themselves and their parents regarding vocational education through the combination of policy solutions, intervention solutions and regulation solutions from the state the natural environment and the natural regulation of the labor market. Activities pertaining to students' vocational education necessitate the participation of the education and training sector, the labor sector, the invalids and society and all levels and branches of the province. Moreover, it is crucial that the vocational education institutions in Dong Thap province increase their appeal to students and their parents in order to encourage students to graduate from middle and high school.

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