

THE UNIVERSITY OF TAMPERE
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**MASTER PROGRAMME OF PUBLIC POLICY AND FINANCIAL
MANAGEMENT**

**STRATEGIC SOLUTIONS FOR THE SUSTAINABLE DEVELOPMENT OF
VOCATIONAL EDUCATION AND TRAINING IN THE CENTRAL
COLLEGE OF TRANSPORT NO. 2 IN THE PERIOD OF 2016-2020**

Student: Quach Thi Thanh Binh

Supervisors: Dr. Anna Heikkinen

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ABSTRACT

University of Tampere School of Management
Author QUACH THI THANH BINH

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This research analyses strategic solutions for the sustainable development of vocational education and training (VET) in the Central College of Transport No. 2 (CCOT2) in the period of 2016-2020. The topic of sustainable development of VET is a new and current issue in both research and practice. The term of sustainable development is globally known to include three main aspects; economy, society and the environment. This research concentrates on finance and enrollment of vocational institutions as two key aspects of sustainable development for VET (i.e. the economic and social aspects).

This study plays an important role in the current period when VET is one of the major factors of Vietnam's sustainable development and because VET is facing many difficulties in enrollment and finance. Through its identification of some gaps in VET and establishment of the standards of sustainable development of VET, this study can help researchers and practitioners to have an overview of VET in Vietnam as well as its current situation. It also suggest some strategic solutions to solve the current problems facing VET and recommendations for further study in the field.

This research is a case study that analyzes the current status of VET in CCOT2 and identifies standards and strategic solutions for the sustainable development of VET in the CCOT2 in the period of 2016-2020. This research used qualitative research methods to analyze the current status of VET and a quantitative survey to identify the problems facing the college. The survey included three groups of respondents. Questionnaires were sent to 97 graduates, 20 trainers and managers in CCOT2; 20 leaders and managers of other vocational institutions; and, 12 enterprises in Haiphong City. The data was analyzed using MS. Excel to identify the problems. The results are illustrated by tables and interpreted before going to relevant findings.

This research has found that the current problems facing CCOT2 include enrollment, training quality and finance. It has proved that CCOT2 is not sustainable because there was an unbalance between the need and the demand, and the college allegedly does not meet the need of its customers. This thesis makes both practical and theoretical contributions. It has presented the key concepts related to sustainable development and built standards of sustainable development for VET. Besides, the major findings of this study have answered the research question by analyzing the current situation of VET in CCOT2. It proposes solutions for sustainable development of VET in CCOT2 in the period of 2016-2020 in particular and that of VET in Vietnam in general. This thesis will help the government, policy makers and leaders make better policies of VET for sustainable development in the future.

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CHAPTER ONE: INTRODUCTION

1.1 Background of the study

Sustainable development is a concern on a global scale. In the evolution of the world, each region or country has its own urgent problems such as economic growth, scarcity of raw materials, or fuel shortages because of the worsened depletion of nonrenewable energy resources when the natural environment is upset, the ecological balance is pulled down, and natural disasters cause extreme damages (Doh & Pearce, 2004). Despite economic growth, there is no social progress and justice but cultural and moral deterioration, and the gap between the rich and poor is increasingly widened, leading to social instability (Hopwood et al., 2005). Therefore sustainable development needs to ensure a harmonizing regulation between economic growth, social security and environmental protection; so that sustainable development is becoming an urgent requirement worldwide.

In Vietnam, the topic of sustainable development has been getting more and more attention in the circles of researchers and policy makers. Sustainable development has two aspects. First, it is development in relationship to both maintaining the habitual value and preserving the value of environment in the ecosystem, which is one element of the highest value to be gained by the development. Secondly, sustainable development is long-term development for today and future generations; it is also today's development without affecting the future (Debra, 2014).

It can be seen that in the recent years Vietnam has developed and successfully implemented a number of tasks towards sustainable development. The three considered aspects to sustainable growth are economy, society and environment. However, the achievements and progress are not commensurate with the potential of the country. Its economic development remains lower than that of other countries in the world and even some countries in the region. (Thai, 2007).

In addition, the quality of growth, productivity, efficiency and competitiveness of the economy is low; the quality of education and training has not meet the development needs - training of highly qualified human resources are indeed still limited and has not been made the training trend to meet the needs of the society. Training curricula and contents, and teaching and learning methods are backward with slow innovations; the training structure is unreasonable for sectors and industries.

On the other hand, the wage policy and monthly income have not been encouraging workers to work conscientiously.

Nowadays, along with rapid development of human resources, training of high-quality human resources and scientific and technological application provides a breakthrough source, and it is the most important condition to increase the strength of the country, creating synergy and having a decisive impact on economic development, social stability and environmental protection while effectively supporting sustainable development strategies. The highlight of this new breakthrough is setting to develop human resources, especially high-quality resources in association with scientific and technological development, to guarantee that intellectual potential of human resources will be transformed into results and that innovative application of science and technology will function as key dynamics for rapid development and sustainability.

Currently, many major challenges of the global nature are threatening sustainable development in Vietnam; for example, climate change, financial crisis, food and energy security issues, etc. Vietnam must continue implementing its objectives of sustainable development and international commitments through the following overall solution: (i) Continuing to improve the institutional system of sustainable development; improve sustainable development of the country with the quality of governance; (ii) Enhancing financial resources for the implementation of sustainable development; (iii) propagating, educating and raising people's awareness of sustainable development; (iv) developing sustainably by strengthening the capacity in the management and implementation; (v) Enhancing the business's role, responsibilities and the participation of the business in social community; and the role of political organizations, social organizations, professional community, non-governmental organizations in the performance process of sustainable development; (vi) implementing sustainable development with development of human resources; (vii) promoting technological innovation and strengthening the scientific role and its impacts on the implementation of sustainable development; (viii) expanding international cooperation (the National Report at the United Nations High-level Conference and Sustainable Development (RIO+20), Hanoi, May 2012; and the Prime Minister's Decision No. 432/QĐ-TTg approving Vietnam's Sustainable Development Strategy for the period 2011-2020). The Government of Vietnam has affirmed the need of high quality human resources. It is one of the three essential factors in economic growth and sustainable development of Vietnam. Besides, it is also one of the three breakthrough steps to implement the strategy for social and economic development in the

period of 2011-2020. Consequently, developing and improving the quality of vocational education and training (VET) is a demand of the country to improve the quality of human resources for more competitiveness of the economy in general. Ten years ago, Vietnam started paying attention to VET, financial investments and other resources. The country has finally obtained positive developments gradually meeting the demand of trained human resources for its economic sectors, particularly in the key economic regions (the Strategy for Social and Economic Development in the Period of 2011-2020).

Vietnam has been conducting its renovation process and gradually integrating into the regional and the world economy. VET plays a key role in the process of industrialization, modernization and sustainable development of the country. This proves that the development of vocational training has contributed to the sustainable development in Vietnam, and it has enhanced the scientific role and technological impact. In addition, it has promoted technological innovations in the deployment of sustainable development. These are also the goals of further sustainable development in Vietnam at the moment. Vietnam has had considerable interest in VET by providing institutions and policies, especially the Law on Vocational Training.

Hai Phong is a harbor city in the north of Vietnam, which is famous for its economical, industrial and tourism areas. Nowadays, it has a multitude of big industrial centers like Dinh Vu, Nomura, etc., and many big factories such as Pha Rung, Nam Trieu, Song Cam, and Hong Ha are located there. Paralleling Vietnam's economic development, Hai Phong is facing both opportunities and challenges in its lack of human resources for the field of building mechanics.

At present, Vietnam has up to 300 vocational colleges, 190 vocational schools and 900 VET centers in 2015. In contrast, the number of students going to those vocational schools is decreasing, and some training sections even do not have enough enrolment (the Report of the General Statistics Office, the Ministry of Labor, Invalids and Social Affairs (MOLISA), 2015). While 10,338 enterprises registered to recruit a total number of 65,222 employees in 2015, only 1,425 jobs were filled, and the demand for recruiting high school graduates was the highest (31.19%). Although the rate of labor joining the labor market in the second quarter of 2015 was 76.2%, the number of labor trained and given a degree or certificate in the same period was merely 20.06%. Despite these training opportunities, vocational schools have been facing with many difficulties in enrollment. CCOT2 is no exception although the college is well-known for its vocational training quality,

especially in training of shipbuilding and welding. Besides, the fact that its annual number of graduates cannot satisfy big demands of recruitment by various enterprises shows that social need for skilled workers is very high and there is currently an over-demand. Consequently, VET is not stable.

This study focuses on the current situation of VET in CCOT2 by using some of qualitative and quantitative methods such as document analysis, survey, and SWOT analysis. The Central College of Transport No. 2 (CCOT2) is located in Hong Thai commune, An Duong district, Hai Phong city. It was established over 52 years ago, and I have worked for it for 16 years. Being invested to be one of the 45 high-quality vocational colleges in Vietnam, the college is currently staffed by 147 teachers and 70 other members with 14 vocational training areas, including five key training areas at the international level, ASEAN level and national level. It is a public vocational college of the Ministry of Transport. Although enterprises prefer to recruit our students to work in their company, we are facing difficulties in enrollment and finance. These things suggest that VET has many gaps. Sustainable development has been deployed by Vietnam for nearly 20 years, and VET plays a key role in the economic development. Obviously, many researchers have mentioned VET in their researches and books for example Hien (2010), Hang (2012), Hung (2002), Trang (2008), Nga (2008), or the Scientific Research Institute of VET (2011) but none has shown the sustainability of VET or wondered if it is sustainable or not. Therefore, for this MA thesis, I have chosen the topic *“Strategic solutions for the sustainable development of VET in the Central College of Transport No. 2 in the period of 2016-2020”*.

1.2 Research aims, objectives and research questions

The concept of sustainable development is very popular in Vietnam. However, no research shows the current status of VET or the mutual relationship between VET and sustainable development in the country. In addition, VET has been facing many difficulties in its annual enrollment and finance. It is therefore apparent that VET has some gaps. This study aims to analyze the status of CCOT2 and to provide some strategic solutions for sustainable development of VET in CCOT2, and some recommendations for policy makers and future research.

To obtain these objectives, the thesis will conduct a case study of vocational training activities by CCOT2 to find the answers for the following questions:

The main research question:

What are strategic solutions for sustainable development of VET and how can the Central College of Transport No.2 in Vietnam improve its sustainability?

To answer the main question, the following sub-questions are asked:

1. What does strategic management for sustainable development include?
2. What is the status of VET in CCOT2?
3. What are the standards and strategic solutions for the sustainable development of VET in the CCOT2 in the period of 2016-2020?

In order to find the answer for the research questions, this research must identify the following concepts.

1.3 Key concepts of the study

1.3.1 The concept of vocational education and training (VET)

According to Kotsikis (2007), the term *vocational education* comprises every form of education that aims to get qualifications connected to certain professions, to an art or employment. In other words, this supplies the essential training, the appropriate skills and technical knowledge in order to enable students and apprentices to do a career, an art or an activity, regardless of their age and training levels, and its training curriculum also contains elements of general education. “Vocational training is a part in vocational education system. It supports skills and the specialized professional knowledge, which attribute professional adequacy to the trainee and the focus of all vocational training curriculum. Vocational training is considered as one activity or a set of activities that is designed to transmit theoretical knowledge and also professional skills required for a certain type of job.” (Mortaki, 2012, p.51-58). This shows that VET gives apprentices of specific jobs essential theory and professional skills they need. On the one hand, VET is mentioned as an educational policy. It shows the initial vocational training, whose aims are connected with the given requirement and demand of specialties, because they are established by the structural characteristics in each country’s economy (Efstratoglou & Nikolopoulou, 2011). It could be argued that VET provides apprentices with necessary knowledge and professional skills for a job and that it only comes into being when there is the relationship between need and demand. Along with social

development, it promotes economic development and social welfare. VET is born to satisfy human needs and social needs.

1.3.2 SWOT analysis

SWOT is an acronym for Strengths, Weaknesses, Opportunities and Threats. This concept is defined with internal and external factors in an organization. Strengths and weaknesses are described as internal factors over which organizations need to have some measure to control. In contrast, opportunities (O) and threats (T) are external factors that organizations do not essentially have to control (Goranczewski & Puciato, 2010).

“SWOT Analysis is the most important tool for analysis and evaluation of the total strategic position of an organization and its environment. Its major purpose is to identify the strategies that will establish a firm with a specific business model. It will best arrange resources in an organization and capabilities to the requirements of the environment in the operating” (Hunger & Wheelen, 2003), p.93-99) . In other words, it is the basis for assessing potential internal constraints as well as opportunities and challenges from the external environment of a business. It shows all the positive and negative factors inside and outside of the business that might have bad impacts to its success. In addition, Lee argues that studying a consistent environmental in a firm in which will help leaders to predict change trends and also helps them in decision-making. It is good for forecasting and implementing strategies. Additionally, it also helps to put them into the decision making process of the organization. (Lee & Sai On Ko, 2000). In summary, it seems that SWOT is used as a tool to evaluate internal and external factors of an organization by analyzing its current situation and measuring its threats and opportunities in the future.

1.3.3 Balanced Scorecard

According to Kaplan & Norton (1996), balance scorecard is a measure system of a corporation by looking at financial and nonfinancial factors from a variety of perspectives; it is an approach to equip with information, to manage to support in strategic policy formation and achievement; or, it is a set of measures of overall activities in a company and it helps the business to have a comprehensive view of all problems that are happening. It may support the user with a collection of

relevant information in concerned areas of performance in an objective and unbiased fashion. (Kaplan & Norton, 1996).

The balanced scorecard helps managers to measure the effectiveness in organization from four key perspectives. It describes a balanced context with total strategy by suggesting some activities need to be improved. The balanced scorecard uses both qualitative and quantitative measures. This tool relates evaluation of performance effectiveness to the choice of strategy. It assists businesses in clarifying their vision and their strategies and provides basic data to interpret these into action (Kaplan & Norton, 1996). This concept suggests that a manager can use the balance scorecard to measure the effectiveness of implementing a strategy.

1.4 Scope of the study and limitations

This research concentrates on the VET activities in the Central College of Transport No. 2 in the period of 2011-2015 and gives some strategic solutions for sustainable development of VET in CCOT2 in the period 2016-2020. Being a case study, it is certain that its proposed strategic solutions might not be absolutely suitable for situations facing other vocational schools. Nevertheless, this case study can hopefully help the Government, policy makers and leaders to have strategic visions and more understanding of the status of the VET system and to provide better policies to solve this situation in the future. Moreover, because the concept of Sustainable development of VET is not popular in Vietnam, the data collection of some information and data may be limited. This study shows essential factors to ensure VET for sustainable development such as enrollment, training and finance. Nevertheless, in the research I have tried to analyze the problems as deeply as possible and look into the argument from critical ideas or practical points of this vision.

1.5 Structure of the thesis

This thesis is divided into six chapters. Chapter 1 introduces the study background, the research aims and objectives, and, the research problems and questions. It also highlights some key concepts, the scope of study and limitations and finally the structure of the thesis. The second chapter presents the literature review for this research. It includes theories of sustainable development with concepts

of sustainable development in strategic management, and Sustainable development of VET. The chapter also looks at strategic management and the concepts of strategy, strategic management, SWOT analysis, Balance scorecard, change management, and financial management before giving an overview of VET in Vietnam. Chapter 3 describes the research methodology and design, survey, survey design, sampling design, data collection and data analysis. Chapter 4 presents the context of shipbuilding and transportation industry in Hai Phong, an analysis of the status of VET in the Central Vocational College of Transport No. 2 in the period of 2011-2015, a development of the standards for sustainable development of VET, and evaluation results of CCOT2 activities. Chapter 5 shows the survey results with answers of stakeholders, the conclusions and proposals of some solutions for sustainable development of VET in the CCOT2. The chapter 6 gives a summary, conclusions, implication for practice, the limitations of the thesis and suggestions for future research.

CHAPTER TWO: LITERATURE REVIEW

2.1 Sustainable development

2.1.1 Defining sustainable development

Many researchers have discussed the concept of sustainable development. In 1980, the term of *sustainable development* first appeared in the publication with world conservation strategy (published by The International Union of UNESCO (1992) UN Conference on Environment and Development: Agenda 21 (Switzerland, UNESCO) or Conservation of Nature - IUCN) with a single simple content, it presented the development of mankind. It is not concentrate on the development of social economy but also promoted the necessary needs of society and environmental impacts in global. (International Union for Conservation of Nature, Natural Resources, & World Wildlife Fund, 1980). Then, Barbier distinguishes between the two aspects of economic development in this period. The first aspect he focused on is basic needs with an emphasis on helping the poor; the second stresses that real development needs to think of the environmental problems, local social values and cultural factors and stakeholders (Barbier, 1987). At the same time, it was popularized by the Brundtland Report (also known as *Our Common Future*) of the Commission for Environment and Development World (WCED; now known as the Brundtland Commission). This report stated that sustainable development is "development that meets present needs without compromising, harming the ability to meet the needs of future generations, etc.", (WCED 1987, p.8 & p.43) Meanwhile, sustainable development have to admit social justice, preservation, environment protection and the efficiency of economic development. Following this idea, in 1992, in Rio de Janeiro, the delegates participating in the United Nations Conference on Environment and Development have confirmed this concept, and have sent a clear message to all levels of government on the urgent need to promote economic integration, social development with environmental protection. Dernbach showed that sustainable development might change the aim of national leaders. In the postwar period, they must to protect the environment and natural resources, as well as economic resources in the society for generations in the future (Dernbach, 1998). In addition, sustainable development will help nations in the world to have a greater equity. On the other hand, Banuri (2013) observes that "there is considerable professional disagreement about this definition, mostly on how to put the idea of sustainable development into operation, but also to do

with questions of definition and on its claims to synthesis” (Banuri, 2013, p.208-217,).The conference was known as The World Summit on Sustainable Development. It is called with other name as Rio+10 Conference and the Johannesburg Summit. This conference was held with the participation of the governances and economic experts, social affairs and environmental experts from 200 countries. In this conference concludes the action plan of sustainable development in the period of 10 years and made decisions that related to health, policies of water, energy, agriculture and biodiversity.

The Asian Development Bank (ADB) affirmed that sustainable development is a new type of development, integrated production process for natural resource conservation and improving environmental quality. Sustainable development is to meet the needs of generation in the present without compromising the ability of us to meet the needs of generation in the future.

Report of world commission on environment and development defined sustainable development “A process by which the needs of present generations can be satisfied without compromising the ability of future generations to satisfy their needs”. (WCED, 1987, p.43). It seems that sustainable development is the development linked with social responsibility of three important factors: society, economy and environment. Basically, it satisfies the current need but does not affect future generations. Gadotti (2008) states that “Education for sustainable development must continue working with environmental education which brought a new view of human relationship with the world environment - which is no longer conceived as an object, but as a living creature that shares the same destiny with human beings. Environment knowledge is ethical and political. It is not only a matter of understanding ecological principles, but also involves a new concept of reality.” (Gadotti, 2008, p.21-30.). These show that sustainable development is the development that follows the goals of economic development of a country in connection with social responsibility and this development does not have bad impacts on natural environment. Certainly, it satisfies the needs of both current and future society.

2.1.2 Sustainable development in strategic management

Business enterprises suppose that sustainable development is implementation of strategies of organization and doing activities to meet the need of the business and its stakeholders at present while defending, sustaining and enhancing either human resource or natural resource that will be

essential issues in the future (Garriga & Melé, 2004). This definition insists on original meaning of World Commission on Environment and Development. It shows that economic development is the satisfaction of the need both a enterprise and stakeholders. It admits the dependence of business on human resources and natural resources, Additionally, financial and physical capital. It focuses on economic activities must not be undermined, irreparable or destructive of both natural environment and human resources. This concept of sustainable development is designed to help executives apply it to their companies. However, it emphasizes the sustainable development that can not be obtained by a single business (or the whole enterprise community) independently. Sustainable development is a common philosophy that everyone involved in the global economy must be implemented if we meet current needs without having bad environmental impacts in the future.

Sustainable development is business activities its organization. It only not make chances for consumers to be used green products but also encouraged businesses used safe materials and producing processes do not bad environmental impacts. These attracts businesses to invest products to enhance the economic development and promotes social benefits as well protects natural environment. Therefore, enterprises can healthy compete. These things will helps them to get positive feedbacks and supports from social community of their contribution and efforts.

Business strategies for sustainable development show the final phase and the most important period of enterprise. The aim is to find out situations of environmental quality, raising wealth, and promoting competitive advantage. Firms need to make policies of sustainable development in business strategies. Sustainable development is developing a nature of many corporate environmental policies. In the pursuit of economic, environmental and community benefits, management considers the long-term interests and needs of the stakeholders.

Strategic management is the management resources in a firm to obtain aims and goals of that strategy. Strategic management process includes all steps for example to make a strategic plan with objectives, to analyse the external environment and the internal factors of organization, to evaluate the performance of strategies and to ensure that the strategies are known largely in the organization. Especially, strategic management must to identify its position and compared to its competitors. These helps for leaders to recognize opportunities and threats facing an organization, whether they come from within the organization or from competitors. (Pearce et al., 1997).

Strategic management may be described as a series of decisions and acts which leaders manage and must consider to give decisions of the performance result in the factory. The manager must have a profound knowledge and capability to analyze competitive and general environment in the firm so as to take right decisions. They should carry out an analyzing process (Strengths, Weaknesses, Opportunities, and Threats), i.e., Leaders should make opportunities from their strengths and consider the weaknesses of their organization to limit threats or the risk in the implementing strategy. That is a plan with predictable solutions or unexpected solutions. This plan can be applied with both small and big scale companies by thinking of strategy, making plan with appropriate strategies. They can get a sustainable competition and ensure the future development of a businesses. This helps them to find out the way on their success. (Pearce, 2011).

In a post-industrial society, to ensure that sustainability can be satisfied at a global level, people need not only consider thinking of new strategies, but also must manage suitable strategic systems in long-term to support the hopeful achievements of new development models.

The objectives of the strategy must be consistent with the direction of sustainable development and must reflect new values. Real sustainability is not the limited development of the natural environment but also the promotion of economic and social development and the use of natural resources. The strategic objective of regional development is not purely economic, but must also take into account as sustainable development, ecosystem protection, social progress and the use of other resources for example human resources and natural environment. Leaders' predictions and future perspectives based on strategy with long-term perspectives, and changes the attitude with environment and the visions of their leaders and management skills are essential conditions to strategic success. Strategic planning must be based on a continuous period and focus on the long-term future of the specific area. It focuses factors in strategy's implementation as economy, society, environment and resource coordination. This must be consistent with the strategic thinking of sustainable development to ensure economic development, social progress, environmental protection. Figure 1 presents the elements of regulatory compliance in an organization.

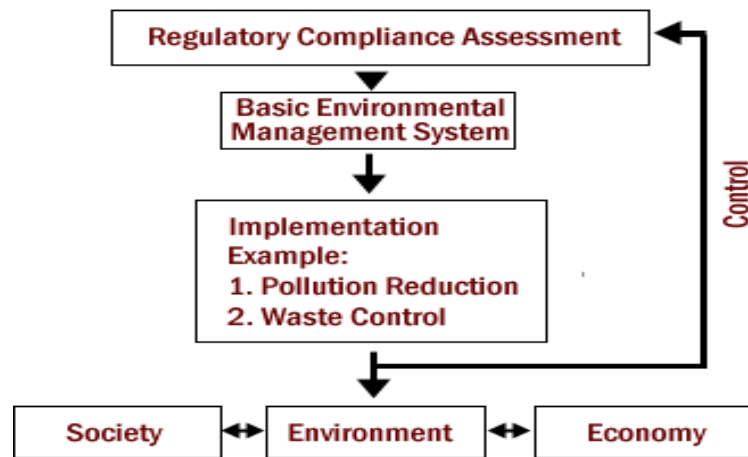


Figure 1. Regulatory compliance in an organization.

Source: The Sustainable Development Journal, International Institute for Business and sustainable development, a global guide (https://www.iisd.org/business/sd_journey.aspx)

As a consequence, an organization is called with sustainable development when its strategic goals aim to the sustainability. It is certain that strategy will obtain expected goals with sustainable development if it connects with social responsibility. For example, employers must obey regulations and government policies in the managing process especially in satisfaction of the need of stakeholders and economic prospect in the future; it contributes to social cohesion with the sustainable development. It ensures the stability of products without having bad impacts on environment. As a result, to perform a good strategy, leaders of an organization have to manage its strategies effectively by implementing all steps of strategy with sustainable rules, changes management, coordinating and monitoring all activities of the organization, adjusting action plans and learning from the changes.

2.1.3 VET and sustainable development

According to UNESCO, “Education for Sustainable Development allows every human being to acquire the knowledge, skills, attitudes and values necessary to shape a sustainable future”(UNESCO, 1997, p.36).

Education for Sustainable Development insisted of key factors in the learning and teaching process. They are policies for the Sustainable Development of Education such as poverty reduction, sustainable consumption, climate change, climate change, disaster risk reduction. These helps for teachers to use positive teaching methods to encourage for students to change your behavior and do

actions for sustainable development. Consequently, Education for Sustainable Development admits the importance of leaders in strategic management of critical consideration, predict future contexts and making strategic decisions (Frisk & Larson, 2011). A report by the International Centre for Technical and Vocational Education and Training (UNESCO-UNEVOC in Bonn, Germany, 2006) presented that "Education and training are the primary agents of transformation towards sustainable development, increasing people's capacities to transform their visions for society into reality. When reoriented towards sustainable development, VET not only provides appropriate scientific and technical skills, it can also provide the understanding, and motivation and support needed for applying them in the interest of helping create a sustainable future" (UNESCO-UNEVOC, 2006, p.9-10).

Nevertheless, the process of reorienting VET fixes with goals of sustainable is an important duty with big scale and requires many people have to participate in this process as developing curriculums and syllabuses, making principles and standards for sustainable development (UNESCO, 2006). Orr admits that "The crisis [of unsustainability] cannot be solved by the same kind of education that helped create the problems etc. School, colleges and universities are part of the problem" (Orr, 1992, p.83). Therefore, reorienting the curriculum towards sustainability requires significant educational reform or what Cuban (1988) called "second order change" (Cuban, 1988, p.73). "The first order change seeks to improve the effectiveness or efficiency of educational processes through new courses or materials without disturbing the basic organizational or instructional milieu of education, the second order change reforms the fundamental ways in which educational systems and institutions function and includes new goals, structures, and roles for school, teachers, and students". (Cuban, 1988, p.72-73). Therefore, this process requires many problems in the society for example policy, legal framework, syllabus, curriculum, teacher's qualification, administrators, policy maker and training institutions, managers. Especially, the management of VET activities as infrastructure, equipment. Moreover, VET quality has includes relationship of stakeholders of VET as enterprise, apprenticeship, labour market, industry, social need, teachers, develop curriculum, economic development policies. (UNESCO, 2006).

It can be seen that concepts of sustainability can be understood as an interchange in such relationships. It satisfies vocational training need of apprentices in each career. In other words, it helps apprentices to have knowledge, skills and good attitudes to develop themselves, to get a job

and meet the need of employers as well the need of the labor market. Moreover, vocational training contributes to the sustainability of future generations and society development.

In other hand, Navaratnam & O'Connor (1993) supposed that “Quality of vocational education is the sum of the quality of course designs, quality of learning, quality of graduated, quality of services, quality of teaching, quality of management”. (Navaratnam & O'Connor, 1993, pp.113-122). According to Oakland, quality assurance is making a plan and systematic activities to prevent of quality problems to establish a good quality for example management, assessment, reviewing and the audit of manufacturing process (Oakland, 2012). Quality assurance presents activities of an organization to satisfy the customer’s need of production quality. (Christopher et al., 1991).

In summary, Sustainable development of VET is ensuring goals of development in the long run. Both the forms, satisfactoriness of the customer’s needs and products of VET are always improved, and its quality is guaranteed meet expectations of the stakeholders (Dresner, 2002). Thus Sustainable development of VET is a balance between the demand of apprentices and the need of the labor market. Sustainable VET is seen through stable enrollment at vocational colleges, ensured training quality, low unemployment rate and stable finance. Additionally, training quality has to be ensured; 80% of the students can find right jobs after graduation; and vocational training process should promote the social development without affecting environment.

2.2 Strategic management theory

2.2.1 Strategy

Strategies play an important part in the success of an organization or a country. In the warfare, the strategy implies the ability to use military, economic, political and other means of nations to achieve the goals of the war. In terms of warfare, strategy means those actions that deceive enemy, the plans that are used, and the manner in which troops are moved (Freedman, 2013).

A significant amount of literature has focused on strategy. Firstly, it can be considered as special branch of management sciences. They suggest that the term is very popular in research institutes and other organizations in the society. Strategy has the nature of applied science. It is said that it is the formulation of long-term goals and targets. Some other supposed that is a selection of actions.

Chandler found that strategy is an allocation of resources to achieve goals (Chandler, 1962). It can be seen that strategy is setting all activities of an organization with hopeful goals and targets in the specific time to gain achievements in the future. Figure 2 presents an example of strategic objectives.

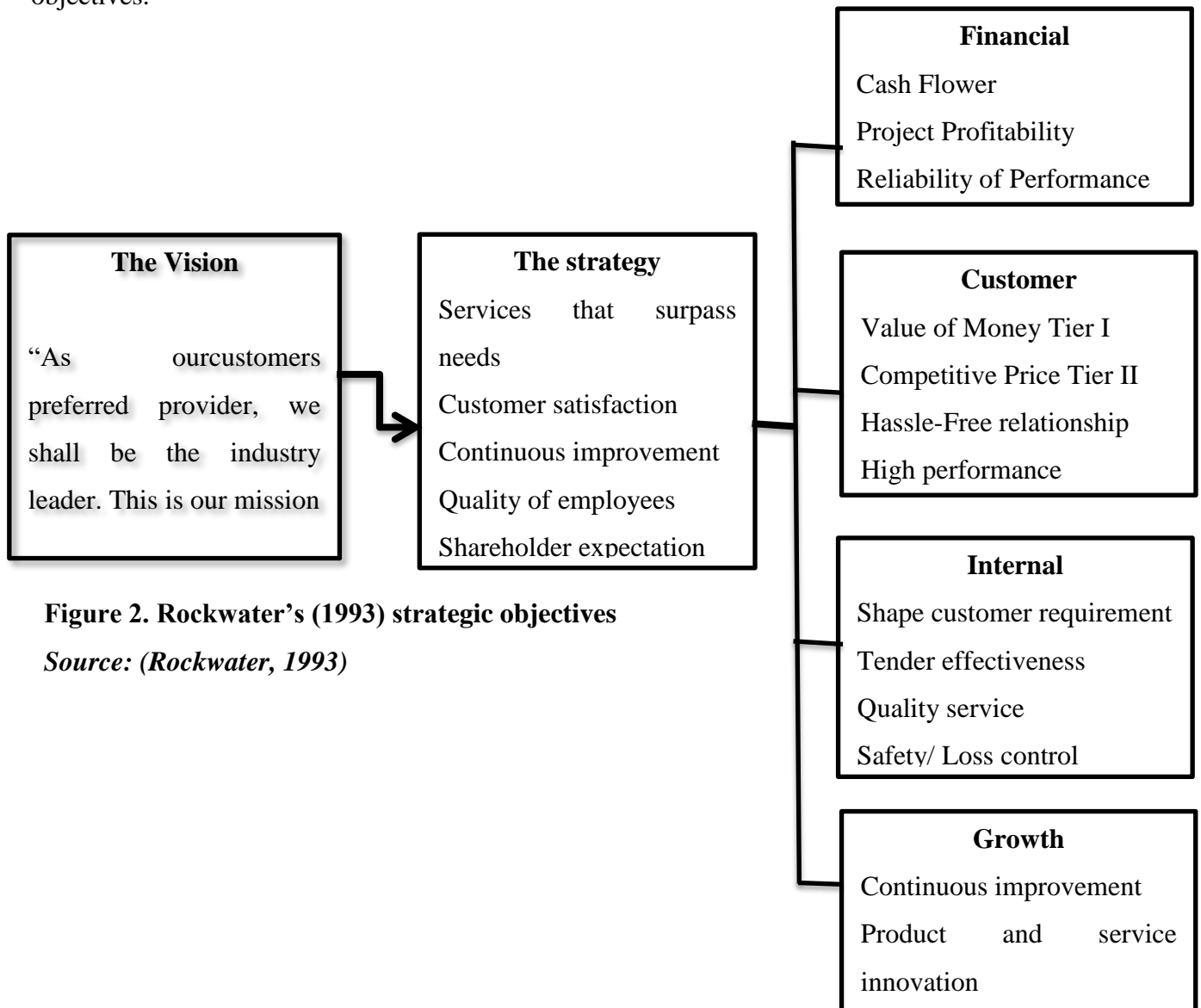


Figure 2. Rockwater’s (1993) strategic objectives

Source: (Rockwater, 1993)

Nowadays, strategies are used in organizations for conscious management of external and internal factors and their interactions so that the objectives of profitability, continuity and development can be achieved. There are some basic elements in the strategy process; for example, environment scanning, strategic plan, strategy implementation, evaluation and control strategy. Strategy creates new things. This supports the idea that strategic process includes strategic leadership and strategic management. In order to have a good strategy, a strategic manager has to conduct five tasks of creating mission and vision, setting goals, creating a strategy, implementing the strategy, and

evaluating performance and redirecting efforts. Mission tells what the organization is doing at this moment as industries (services) and needs that are satisfied at the moment. On the other hand, strategic vision dictates future orientations of the organization: how the organization would like to be in the future and needs that are going to be satisfied in the future.

2.2.2 Strategic management and SWOT analysis

There are different aspects about strategic management, which are now examined in more detail. Andrews (1971) agreed that strategic management is a business strategy because it is “the pattern of decisions in a company that determines and reveals its objectives, purposes, or goals, produces the principal policies and plans for achieving those goals, and defines the range of business the company is to pursue, the kind of economic and human organization it is or intends to be, and the nature of the economic and noneconomic contribution it intends to make to its shareholders, employees, customers, and communities” (Foss, 1997, p. 52). Pankaj Ghemawat (1986) claims that strategic management includes some different sets of deliberations whose relative emphasis by business strategists, specialists and academic researchers has constantly changed every day, as ideas have expanded about the making of competitive thinking to the collective business of value creation (Ghemawat, 1986).

Legge (1995) supposed that strategy is a constituting process that involves both strategy making and operating. Moreover, strategy may be highlighted and is often the realization of both intentional strategy formulation and, as the business does on these plans, strategic responses to unexpected goals. Hence, strategic management involves clear thinking about the strategy and limitations that originates from both inside and outside facts in the company. As such, strategic management requires consideration of the technological, economic and societal environment in which the firm implements and a careful thinking about of the capabilities and activities of their competitors (Legge, 1995).

All these suggest that strategic management is management of a general strategy of an organization in order to gain long-term goals in the future. In order to make a strategic plan, an important step is the leader should have thought about the status and strategy's objectives. Otherwise, leader can use the tool “SWOT” to analyze internal and external factors of his/her office such as strengths, weakness, opportunities and threats. Through analyzing, the leader could identify the position of his

organization. Additionally, a leader should evaluate external factors of politics, culture, society and environment to avoid emergency situations, limiting factors and other difficulties that might happen in the implementation of the strategy. Figure 3 illustrates the steps in the SWOT analysis.

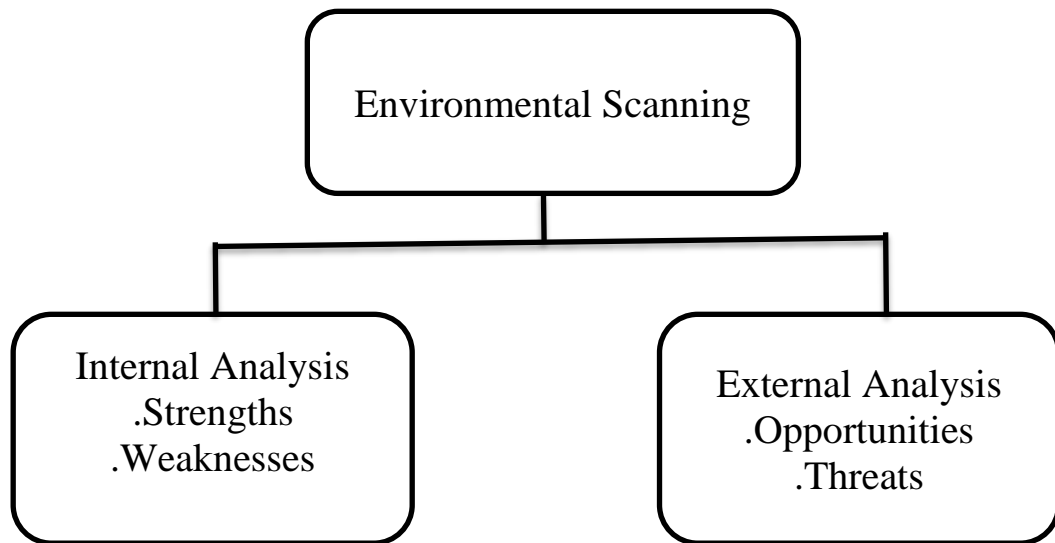


Figure 3. SWOT analysis framework

Source: (Luecke, 2005)

The strategic structure includes four stages: (i) Vision and critical factors of success, (ii) Strategic determination and strategic positioning, (iii) Strategic projects, strategic targets and indicators, and (iv) Values (Luecke, 2005). This structure is similar to the concept popular in Vietnam but the latter insists on the five steps of (i) considering the problem to distinguish between the nature and the phenomenon of that problem; (ii) identifying the vision and targets of the strategy by seeing the ideas of operation or mission of the office or organization's expectations and group interests; (iii) making a diagnosis of strategy through strategic positioning; (iv) making decision of strategy as well as implementing methods; and, (v) reviewing and strategic management to adjust the strategy for the actual situation, respective objectives and to be ready to solve future problems.

Making a plan with SWOT is considering all factors for a perfect strategy such as economic perspective, process perspective, personnel and learning perspective and customer perspective. Some researchers have introduced two new strategic trends of agile strategies and relationship-based strategy. Both strategies imply that interaction between individuals. However, agile strategy shows the abilities of leadership in using human resources, strategic choice, making quick decisions in implementation, limiting risks and conditions to operate the strategy (Sarkis et al., 2007).

Nevertheless, relationship-based strategy focuses on creative interaction in an organization, the agreement of all members, and mobilization of collective power. These things would make a success of an organization. So it requires the leader to have an effective communication by sharing with his staff and listening to their ideas. Strategic vision is a map to organization's future because it is the direction of action, the position we would like to be in the future, capabilities to develop, and customer's need to satisfy (Morgan & Hunt,1999).

Some may argue that strategic management is management of a general strategy of an organization in order to gain long-term goals in the future. It could be argued that this concept has concern with two aspects: Strategy and strategic management. It would seem that is the success of an institution starts from a good strategy and perfect tactics. In other way, strategic management is methodologies of an organization reacts and interacts with environment in order to gain objectives. It is an essential method to carry out visions and policies of leadership. Leaders must have good knowledge of society and have a systematic thinking of strategy or a good vision of organization's future. Moreover, leader's qualities are predictive ability, giving specific goals in the future.

An intelligent organization has a proactivity in doing a strategy because of some reasons: Firstly, they recognize the environment through analyzing the nature of process as well as the relationship between leadership system and environment to give strategic choices with wills. Secondly, the vision of leadership has to be changed by the current situations. These things help them to prepare for future contexts by systematic analyzation of future events and to build some scenarios. strategic management process includes analyzing of business decisions with multi - functions before performing them. Strategic management insists executives must analyze internal, external factors, opportunities, threats to formulate and execute action plans and to evaluate the success and changes of organization, desired results, the limitations of strategy. (Kaplan & Norton, 1996).

Strategic management asks for a commitment to making a strategic plan, which shows an organization's capabilities to set objectives to make the decisions and do duties that need to be implemented to create these results. The research will use SWOT as an analytical framework to measure the internal and external factors of CCOT2. SWOT analysis will be illustrated in the 4.4 section of Chapter 4. The strengths and weaknesses in the current situation of CCOT2 will be analyzed to answer the research questions.

2.2.3 Balanced Scorecard (BSC)

Nowadays, most managers know the impact in measuring performance. But they do not think that measurement is a necessary factor of their strategy. For example, managers can suppose new strategic solutions and carry out the strategy with innovative ideals in the implementing process of strategy to gain achievements of performance, and they have continued using the same short-term financial indicator for decades, such measures operating income, as return on investment and sales growth. These managers must to use new measures to monitor new objectives and processes in strategy. Additionally, They always think of the strategy with their old measures if they are appropriate with the new ideals in current period. (Kaplan & Norton, 2005).

It provides businesses with a complete framework that illustrates a tool of performance measures. This tool presents the objectives in strategy of an organization. The balanced scorecard is not a exercise of measures, it is a management system. It creates advance improvements in such censorious aspects for example process market development, product and customer. (Kaplan & Norton, 1996). First, The balanced scorecard is known by Kaplan and Norton (1996). It is a essential tool of the management process to measure the effectiveness of a business. It support managers to complete framework that will be applied in a reasonable set of effectiveness measures in performance with organization's goals. The balanced scorecard is not only a measurement exercise but also it a management tool. It can promote successful improvements in such critical aspects of a firm for example market development, customer, products, goods. (Kaplan & Norton, 1996).

The scorecard help managers to measure the implementation of their firm in four different perspectives. It helps executives to measure internal processes as activities of improvement and innovation, the satisfaction of customers. These measures will adds to traditional financial indicators by four perspectives in Balance Scorecard. Clearly, many companies already have carried out theses measures for their activities. However, these measures are continuous from first step to final step and got from special processes. The scorecard's measures, on the other hand, are based on key goals of strategy and competitive demands of an organization. In addition to these, managers have to select censorious indicators with limitation within each number of the four

perspectives, the scorecard mentions the strategic vision. Figure 4 presents four perspectives in Balance Scorecard.

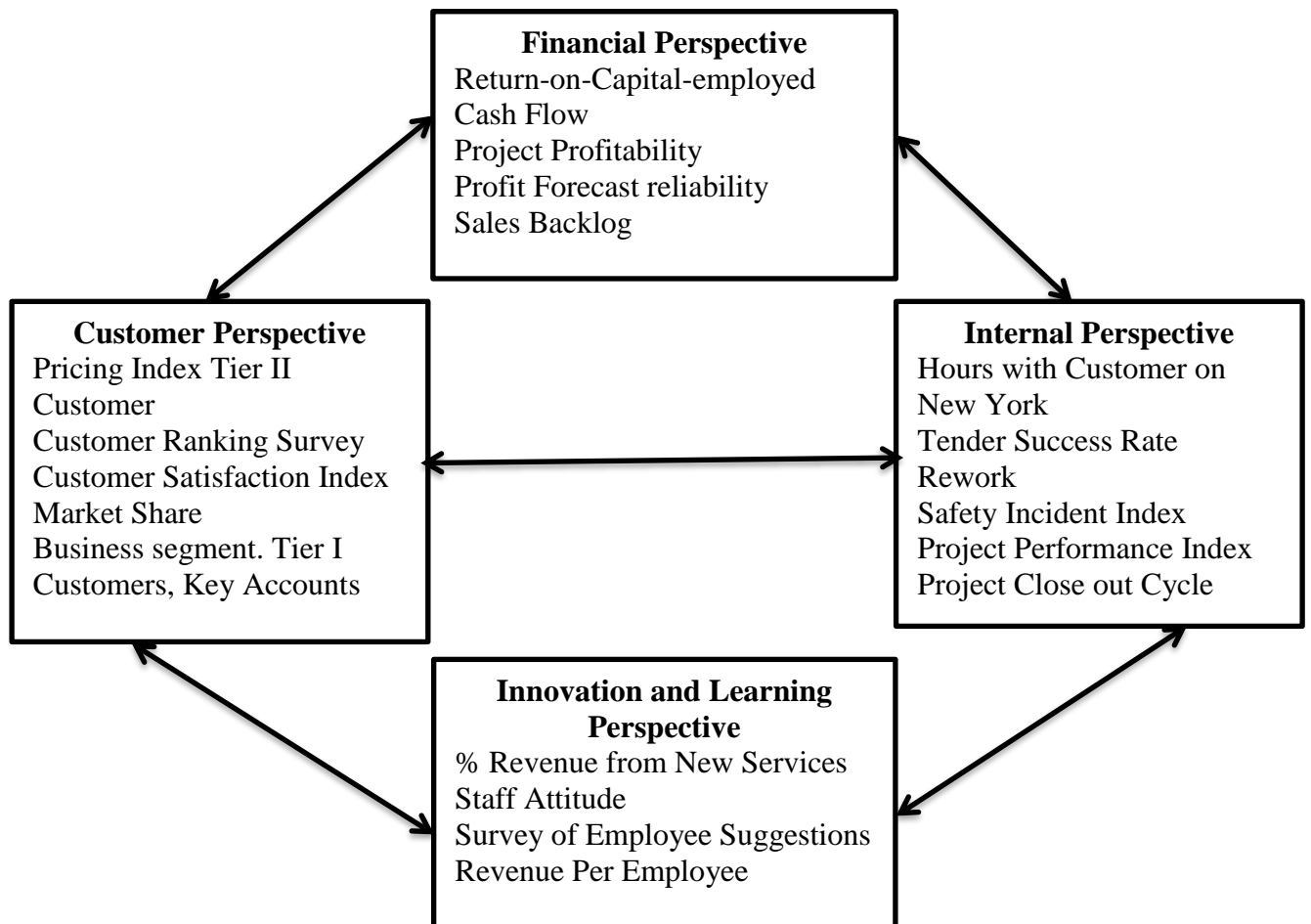


Figure 4. Rockwater's Balanced Scorecard

Source : (Kaplan & Norton, 1995)

Traditional management systems depend on financial metrics are basically so limited that it is unable to connect a company's strategy in the long term with its operations in the short term. In their third article of Harvard Business Review illustrated about the balanced scorecard, Kaplan and Norton (1996) presented the importance of scorecard in the management a strategy. It helps a leaders to communicate that strategy, to measure the performance throughout the company, target adjustment with the strategy, fixing strategic goals to long-term targets. It controls annual budgets, and implement in each period to review of improvement the strategy. In essence, functions of a balanced scorecard best as the cornerstone of a strategic management system (Kaplan & Norton, 1996). A measurement exercise, the balanced scorecard is a management system that can motivate

breakthrough improvements in such critical areas as product, process, customer, and market development.

The scorecard shows executives of chances to choose measures the efficiency with four different perspectives. By replacing traditional indicators, it adds the measures of customer' satisfaction, internal evaluation, and innovative and improve activities in the strategic management. These measures differ from those traditionally are used by companies in some important ways: First, many companies already have applied to measure the performance for local activities.. Second, the measures of scorecard are settled with special objectives and business demands of a company. And, managers must select one of limit indicators of the four perspectives, the scorecard gives concentrate on the strategy.

The balanced scorecard shows that we think of the organization with four perspectives by gathering information, developing data, and analyzing it toward these perspectives (Kaplan & Norton, 1996). The Learning & Growth is the fist perspective . It insists the training and enhancing corporation, behavior, culture in the office. These thing related to each personal responsible and community's ware fare. In an organization, the workers is main labour and their knowledge is key resources. In the current period, climate forecast always changes, modern technology innovate everyday. Knowledge is becoming more necessary for workers than the previous thus workers have to continuous learning to develop themselves. Managers should focus on training funds where they can help the most. In any period, learning and growth is a necessary condition for success of individual and organization. Kaplan and Norton admits that 'learning' is more than 'training'; It relates to counselor and coach in a company, as well as opportunities workers can get essential helps from colleagues and community to solve problems when it is needed by communicating with each other. It are really technological tools; what the criteria of Baldrige called "high performance work systems" (Kaplan & Norton, 2005, p.76).

Secondly, it is the Business Process Perspective. This one refers to internal business processes. Results measurance of this perspective allow executives to know the efficiency in performance activities of their business, and measure the customer's satisfaction of product quality and good services. People know these processes, they have to design these metrics with our important responsible because outside consultants can not do them again and develop them. (Kaplan & Norton, 2005).

Business Process Perspective is the second perspective, This one presents business processes its organization. Indicator based on this perspective help for the executives to understand how their business activities are carried out and the customer's satisfaction of its products and services. People designs these indicators is who understand these processes the most because it is their duties and they do it for them self and external consultants also may not help them.

The next is Customer Perspective. Recently, there are many philosophy of management has shown that the importance of customer perspective and customer satisfaction in any firm as if the enterprise do not meet the customer's need. Eventually they will find other providers to satisfy their needs. This perspective is very important if this indicator is not good, the future of an organization will be affected although at present, current financial context of company may bright. In measure indicators for satisfaction, we should analyse kinds of customers and types of performance processes to provide products or services to the groups of different customers. (Kaplan & Norton, 2005).

The final is Financial Perspective. According to Kaplan and Norton, they admit the importance of traditional need for financial data. In this perspective, managers will focus on priority items for example timetable, accurate funding data and they must to do anything to provide it. In fact, there are many problems has appeared so it requires the handling and processing of financial data. In this perspective, it concentrates on unbalance of finance. Going along with the implementation of database, data will be processed centrally and automatically. It is certain that financial data with relevant as cost benefit data, risk assessment. (Kaplan & Norton, 2005).

Balance scorecard is used to measure the implementation of an organization and especially with businesses. At present, it is not applied in CCOT2. However, this paper will only use it as a framework to design questions for the questionnaire of the survey to find the answers for this thesis. In addition, it can support strategic solutions to promote its importance in sustainable development of CVOT2, based on the two perspectives of finance and customs of Balanced Scorecard.

2.2.4. Financial management

The above concept of sustainable development shows that the economy is one of three essential conditions for sustainable development. This proves that finance is a key factor to ensure the sustainable development of organizations. VET for sustainable development is ensuring with stable financial resources, but vocational schools are facing with difficulties in finance. Therefore, good financial management plays an important part in sustainable development of VET.

Recently, researchers have given different definitions of public finance. There are popular concepts with a narrow definition like public finance is being the supply of money for public expenses with the of tax and borrowing items. (Shoup, 2017). Before long, Bailey agreed that public finance comprises any revenues passing through state, regional or local government budgets derived from whatever source and however spent (Bailey, 2004). It suggests that public finance includes which public sector financial managers are involved in. It is setting the total of control activities of finance as public sector financial planning, public sector accounting and financial reporting, public sector controlling, public sector assurance, and internal control. It is argued that financial management is managing financial activities of a firm to ensure the effectiveness its finance. This helps manager to control the risk in the implementation by making a balanced budget: neither in surplus nor in deficit. It is an important step in the current period when global economy faces many difficulties.

2.2.5. Change management

Every day, organizations have to face many different possible situations. Hence, managers are always ready to face with current problems. This means that they must quickly adapt to the environment. Furthermore, managers have to encourage staffs to work well, to have good attitudes and to be ready to change. It has admitted the role of environment factor in the sustainable development. Change management is the management of the change in the organization's environment.

We also have to take in account that the concept of change refers to a transfer from one situation or state into another. There are major variations when defining the scope and significance of change. One model of definition separates gradual and radical changes (Miller, 1981). There are some conditions of successful change projects such as change with a clear direction; demand for change, thorough preparation, the ability of quite swift implementation, personnel with sufficient expertise and abilities to implement the change and projects generate feasible projects. To manage change,

leaders need to have the following competences: companionship, leadership, courage in conflicts, an example to other people, leadership based on trust and justice, and coaching leadership. Furthermore, employees' competence in changes is essential factors in the success as competence of motivating their own action, they have positive attitude to changes, an ability to adopt openness and consider other abilities specially awareness of successful action. It is confirmed that motivation of knowing the essential factors in changes and professional abilities (Todnem, 2005).

There are different aspects on change management that are now presented more specifically. Firstly, it is total of management activities to see proactively and to run a change process useful with marketing environment to ensure for business's development in the change marketing environment. (Aladwani, 2001). In an active environment and changing society, there is increasing economic competition among countries as well as competition between one organization and others. Thus, every office or country must change to get used to new circumstances. Kotter claims that the role of leadership is to gain objectives with the challenge in the change. Leadership concentrates on the change of behavior; in contrast to this, manager focuses on keeping stable situations (Kotter, 1996). In Kotter's view, there are eight steps in a change management process: giving an urgency situation, creating a vision for the change, sharing the vision with staff, overcoming the difficulties in implementation, creating short-term goals, maintaining the change and anchoring the changes in the culture (Doppler et al., 1998).

Change management is one of the difficult and sensitive missions. In addition to this, almost everyone does not like changes so a leader has to have skills for change management. Sometimes the change could be better or worse. It is the challenge for leadership. It requires you to dare to face the failure in the change (Aladwani, 2001). The training material on leadership for high-ranking Vietnamese officials at Ho Chi Minh National Academy of Politics supposes that "There are four periods in the change management. Firstly it is making a plan for change through studying the context, discussing, and identifying what is needed to achieve specific goals and implement planning. Secondly, it is creating a change. People should be given inspiration to change through making an announcement, communication of a change plan and doing a pilot test in the small scope. The next is deployment of change implementation by listed activities, specific missions, and combined mechanism between departments in an organization, encouraging everyone to take part in the change process, reviewing and controlling the change to correct suitable objectives. Finally, it is

consolidating the change, evaluating it and its difficulties and giving some proposals” (Ho Chi Minh National Academy of Politics, 2015).

This supports the idea that every organization has its own advantages and difficulties to do the best, to choose a useful strategy for factual situations, to solve the difficulties, or to obtain hopeful goals. Thus, in order to have a successful strategy, this requires each organization to adapt to the current situation, to be ready to face with difficulties and change itself to obtain success.

2.3 VET in Vietnam

2.3.1 Overview of VET in Vietnam

According to the United Nations, (1992), human resource development, including education, training and use of human potential can promote socio-economic development and improve the living standards. The human factor and human capital have become important factors in economic growth. Thanks to the foundation of education and training, including VET, workers can improve their occupational knowledge and skills, thereby improving labor productivity and contributing to economic development. Thus it can be seen that VET is the most important element, which is decided by the development of human resources. Together with the mechanisms and policies for effective use of human resources, to have high quality human resources of high competitiveness in the labor market, we should increase investment to enhance the quality of education in general and VET in particular.

Education and training play an important role in Vietnam’s sustainable development because of the following reasons:

First, the growth theories by Goodwin (1982) and Lewis (2013) indicate that rapid economic growth should be based on at least three basic pillars: (i) applying new technologies, (ii) development of modern infrastructure and equipment, and (iii) improving the quality of human resources. Among them, the most important factor of sustainable economic growth is education, especially training of high skills. Facing the scarcity and possible depletion of natural resources and other resources, the quality of human resources is the most powerful ‘weapon’ to win every economic competition. People are trained to develop themselves with skills, knowledge, experience

and innovative capacity (i.e. the work capacity of human resources). This suggests that people can obtain it through education and training and accumulate their good experience in the work process even through the basic training form of VET. Thus, it can be seen that VET plays a decisive role in the formation and implementation of capacity building for human beings. Additionally, VET can help workers to improve their occupational knowledge and skills.

Second, it is the role of VET in the quality aspect of human resource, which comes from personal interests of the people (the employees). Theories of modern human capital argue that "all human's behavior stems from individual needs for economic interests; they are implemented in a competitive market. Other forms of expression are not considered within scope or the deformation of this theory "(Fitzsimmons, et al., 1999). It means that individuals' investment in VET to accumulate occupational knowledge and skills can bring long-term benefits, and it's fundamental for sustainable development. This major investment from a social perspective will create the quality of human resources that benefits the national economy and promotes economic growth. Becker, an economist, gave the evidence of the correlation between education, qualifications and income. Higher occupational skills will give a worker higher income, and vice versa. A survey by the Institute for Vocational Science Studies also shows that the unemployment rate among trained workers is lower than that of unskilled workers, and even that of university graduates (Hien, 2010) This is a motivation for people to invest in VET, which has a positive impact on them and also a reason why people always want to make such investment.

Third, VET creates a competitive edge in the context of fierce competition in the labor market, those with less education, lower skills or no skills may not compete against those who have better qualification and higher occupational skills, and thus will become a "vulnerable" group at work with low incomes, being temporarily or even permanently unemployed and subject to social benefits. VET helps them to "hold out" in everyday life, providing them with opportunities to return to the labor market. But if we do not help them develop their own capability and raise the "human capital", they will be popped out of the labor market sooner or later. In order to escape this vicious cycle, people have to improve "human capital", and one of most effective ways is to invest in education or VET.

Fourth, the role of VET to improve the quality of human resources is expressed through economic development needs. Industrial economy requires workers with better knowledge, higher

occupational skills, and more ability to control the media, machinery and technology. As a result, their work capacity will have much effect on social development. In addition, there are also factors of mechanisms, policies and institutions, which depend very much on the technical capacity of the labor force. To gain objectives of economic development, governments must put investment in VET.

Each stage of economic development requires a proper scale and structure of VET as well as its relevant size and structure in different technical human resources. If the period of development is in low educational structure, the priority order will be education and vocational education and training. On the contrary, the period of high economic development, especially in the knowledge economy, the structure would be higher education, vocational education and general education. VET is an essential condition for the national industrialization and modernization process, so governments of many countries have long-term strategic development of education and training and investments of adequate budget in this field. For example, the US annually spends about 5% - 7% of its GDP for human resources training and development, and other developed or industrialized countries also have huge investments in education and training (e.g. the Netherlands: 6 - 7% of its GDP, France: 5.7%, Japan 5%). In addition, the governments of industrialized countries also have policies to mobilize the active participation of businesses and large corporations in investment to develop vocational education, especially the development of high quality training centers of leading techniques and patents in different sectors of the economy.

Some countries in Southeast Asia also have quite impressive strategic investment in VET development. To equip the younger generations with knowledge and skills in a modern world, for example, Brunei has set out a number of strategic orientations namely "the National Education System for the 21st century SPN XXI" towards training people to develop both knowledge and skills to meet the needs of the lines in the first decades of the new century; and, at the same time, to raise trainers' knowledge and skills, which are decisive for the training of future generations.

The 9th National Congress of the Communist Party of Vietnam (CPV) pointed out that Development of education and training is one of the important dynamics to promote the industrialization and modernization of the country, human resources are basic elements for social development, economic growth and sustainable. (Document of the 9th CPV Congress, 2001). The 10th National CPV Congress set out a policy to develop education, training and VET for the period

2006 - 2010 with the goals of vigorous development of the vocational education system, increasing the scale of VET colleges and vocational high schools for industrial/economic zones, creating dynamics for the labor force, and creating a fundamental change in the quality of VET through opportunities to learn advanced knowledge from the region and the world. Various forms in VET, such as nonpublic VET, internal corporate training, and village training, must be further socialized to encourage the development and flexibility (Document of the 10th Party Congress, 2006). The Special Draft of Socio-economic Development Strategy for the period of 2011-2020, which was presented at the Eleventh VPC Congress, also pointed out that development of human resources, especially quality ones, with a focus on radical innovations within comprehensive national education is one of three strategic breakthroughs... The goals are VET promotion and job creation, especially in rural and urbanized areas; support for policy beneficiaries, VET for the poor (Document of the 11th CPV Congress, 2011).

These are very essential VET orientations as the basis for VET development to improve the quality of human resources that contribute to the sustainable development in Vietnam in the next period. Hence, the goals of vocational education and training in Vietnam are to train human resources to do the manufacturing, business and services; to train learners to have abilities to work and integrate into the world; and to help learners could be able to find a job and get employed through continuing study or lifelong study (The Law on Vocational Training, 2014).

In recent years, there have been many research on the subjects in the field of VET in Vietnam. These studies are admitted in a number of topics, articles, research projects. There are also five highly- evaluated master theses focusing on the main topics of VET (i.e. Building a system of measures to improve the VET training quality; Solutions to improve the efficiency of VET for rural workers; Development of vocational training programs at elementary level and floriculture; Effective measures to improve VET in order to meet economic needs; Develop vocational training programs at elementary level and floriculture and solutions for technical workforce training to meet the requirements of labor restructuring in the conditions of market economy and globalization). Moreover, there are three doctoral dissertations on VET focusing on research and proposal of VET policies for rural workers, training of management personnel to meet the needs of economic restructuring and VET for rural labor.

Most of the above researches show the current situation of VET in an organization or a locality, the problems of VET in Vietnam such as the effectiveness of vocational training, training quality, or improvement of training quality to meet the social need. Illustrating VET in Vietnam with the literature of training methods, vocational training system, policies, and structures, they do not describe sustainable development of VET and the role of VET in Vietnam in the development of the country as well its impacts on the society. This study will suggest two major conceptual frameworks with a new approach to strategic management and sustainable development, as standards for the sustainable development of VET, and thus fill the missing conceptual framework of the previous research. Table 1 shows the number of VET institutions in Vietnam.

Year	The number of vocational institutions			
	Total	Vocational centers	Vocational high schools	Vocational colleges
2011	1,292	849	307	136
2012	1,317	867	305	155
2013	1,339	875	302	162
2014	1,345	877	303	165
2015	1,410	920	300	190

Table 1. VET institutions in Vietnam

Source: Report on Overview of Vocational Training in Vietnam, 2011-2015

2.3.2 VET systems

There are three forms of vocational training institutions in Vietnam. Firstly, vocational skills are provided through short-term informal VET training by VET centers. Next, vocational high schools provide elementary VET, basic vocational skills, and two-year training with intermediate degrees to learners having high school or secondary school degrees. The third training form carried out by vocational colleges with three-year degrees for learners having had secondary school degrees, and two-year degrees for graduates from vocational high schools, in addition to training of advanced vocational skills or basic vocational skills (The Law on Vocational Training, 2014).

The Law on Vocational Training defines VET includes both formal and informal training, college training, intermediate and basic levels in the formal VET. These are full-time courses. The college

training lasts from two to three years. An intermediate course lasts from one to two years, and a basic course over three months (Section 5, items 5 and 6; Section 33, items 2 and 3 of the Law on Vocational Training No. 74 dated 27/11/2014). On the contrary, informal VET is conducted at college, intermediate and basic levels but those are part-time courses employees. Apart from the above types of training, informal VET is also in form of short-term vocational training courses like an improvement course of vocational skills for apprentices lasting from one month to three months. (The Law on Vocational Training, 2014).

2.3.3 Training principles of VET

This is an important part of training process because it is the theoretical framework for vocational institutions to design courses, to build curricula, to make and carry out action plans. The training process of VET for sustainable development must obey the general training principles which are built from social policies, regulations and economic development strategies of the country.

First of all, VET must reflect the vision, the effective social policies and economic development strategies of CPV and the State. This requires VET training programs and curricula be suitable with the policy guidelines and the renovation process of the country. It has to ensure training on demand. This principle suggests that training must be delivered to satisfy social needs. The training contents, programs, and curricula must come from practical needs of production and provide training of what society needs.

Training in connection with practical, hands-on learning: This principle requires training contents to equip students with occupational knowledge and skills to be a good worker in the company. Training has to ensure the effectiveness: this principle requires attention to training quality rather than the number of trainees. Training of quality and efficiency and training cost must be used reasonably and effectively throughout the process of identification of training needs, planning and implementation, and evaluation of training results. The process of training includes training objectives, curriculum content, plans, implementation, training methods, finance and material facilities for training, socialization in training, and training quality.

A training curriculum provides training contents, evaluative criteria of learning results, evaluation methods and training quality. More specific training goals of a course will result in higher training quality (Degree No. 3/2017/TT-BLĐTĐBXH dated 02/03/2017).

The training objectives reflect desired results that an apprentice should achieve in terms of knowledge, skill and attitude after finishing the training process.

Training planning, contents and programs must be consistent with the knowledge and skills for each subject that are linked together according to scientific and cognitive logics. With a technical knowledge base, the learner can get occupational knowledge which forms the technical thinking ability to solve works in practice. Planning and training programs must satisfy the teaching principles to ensure efficiency, flexibility and the continuing and lifelong learning as well as adapting to changes in science and technology and in the labor market (Appendix 1: Degree No. 3/2017/TT-BLĐTĐBXH dated 02/03/2017).

A training plan includes the name of VET, a summary of the training goals, the level of enrollment and the duration of a training course, with relevant durations allocated to the operation of the whole course (in weeks) and the list of subjects and time allocation (theoretical lessons and the number of hours for practical subjects) with every subject in each semester and in the whole course. Especially it must contain related exams and tests in the end of the semester, school year and graduation exams as well as some guides to make the training plan (*Training Plan Sample*, quoted from Decision No. 62/2008/Đ-BLĐTĐBXH dated 04/11/2008 of model, sample system, book and notebook in management of teaching and learning in vocational training).

Planning and training programs is a basis to control and evaluate the results of training activities. Regarding the forms of organization and training, the training form combines the activities of teachers and students to carry out the training contents. There are different forms such as class, study, experiment, practice, and field study.

A training methods is a way in which the teacher teaches and students learn in order to help students shape their personality and obtain desired targets of, for example, teaching methods, morality of apprentices and a method combining theory learning and practice in the workshop.

Infrastructure and equipment for training are machinery, equipment, essential materials and supplies needed for training, maintenance as well as workshop, classrooms, laboratories and technical

infrastructures to cater for the training, the conditions of accommodation, meals, lodging and treatment for teachers, students, staff, and employees.

Socialization of VET means enlisting support of infrastructure, equipment and materials from the State and social organizations participating in a project, financial contributions from students, and collaboration with civil-society organizations and manufacturing enterprises to give employment to graduates.

2.3.4 Institutional policies and legal framework on VET

In recent years, Vietnam has established a relatively synchronized and unified legal system for vocational training (including the Law on Vocational Training taking effect on 29 November 2006, the Law on Vocational Education No. 74 on 27 November 2014 and other related legal documents such as Inter-circular No. 20 dated 30/05/2014 by the Ministry of Education and Training (MOET), the Guidelines for implementation of the regime of fee exemptions for students by the Ministry of Finance and the Ministry of Social Affairs (MOHA), Decision No. 08 dated 26/3/2007 of the Ministry of Labor-Invalids and Social Affairs regulating enrollment of apprentices; the vocational training strategy of Vietnam for the period 2011-2020, developed by MOLISA and MOET; Vietnam's Vocational Training Report in 2012; the strategy for Vietnam's vocational training development by 2020 and Project of Vocational education system in Vietnam by 2020, with a vision to 2030).

However, the legal framework for operation of vocational training is inconsistent. Although the state policy for vocational schools has had some adjustments, it is still slow and incomprehensive. Some policies enacted (tax and credit incentives, fees, etc.) but not yet effective, it does not really encourage the stability and development of the profession. Socioeconomic development strategy by 2020 shows that Vietnam will become basically and industrialized and Nevertheless, the legal framework to govern in the operation of vocational training is synchronous incomplete. State policy for vocational school has some adjustments but also slow and incomprehensive. Some policies on tax and loan incentives, training fees, etc. are quite ineffective and do not really encourage the stability and development of the field.

The socioeconomic development strategy by 2020 predicts that Vietnam will become basically an industrialized and modernized country and emphasizes that human resource development is one of the three strategic breakthrough solutions, in which vocational training is regarded as a critical element of socioeconomic development. Moreover, Vietnam adopts the principle of "radical and comprehensive educational reform", including vocational training, which poses a new opportunity for vocational training development. Yet VET in Vietnam will face some challenges of how to develop sustainably in competition against universities and the international integration of vocational training.

2.4 Summary

This chapter has discussed the theory of strategic management and sustainable development and presented an overview of VET in Vietnam. The first part of this chapter presents the theories of sustainable development, which have been discussed by many researchers. These proves that with the goals of sustainability and social responsibility, a strategy for sustainable development in an organization satisfies the need of stakeholders and social cohesion. The chapter presents the theories of sustainable development in strategic management and VET and sustainable development. They are key conceptual frameworks to make essential standards for the sustainable development of VET. These standards will be discussed in chapter 5.

The second part of the chapter deals with the definition of strategy, the theory of strategic management with the framework of balance scorecard. This concept focus on evaluation the effectiveness of implementing in strategic management with four perspectives for example Learning and Growth Perspective, Business Process Perspective, Customer Perspective and Financial Perspective. Based on this conceptual framework, researcher is going to design the questionnaire of the survey in Chapter 3. Otherwise, with financial and customer perspectives in this literature review will suggests for some strategic solutions for the sustainable developments of VET in the CCOT2 in chapter. Furthermore, the theory of SWOT analysis focuses on internal and external factors of an organization to identify its position in the society. The framework of SWOT analysis will be applied to evaluate the training activities in CCOT2 in Chapter 4. This part also looks at theories of financial management and its importance for controlling all financial activities in an organization in line with financial regulations, which will form a suggestion of one of the

strategic solutions in Chapter 5. Moreover, change management presents the idea of strategic management with organizational changes by seeing a difficult situation, creating a vision for the change, communicating this vision throughout the organization to overcome the difficulties with goals, maintaining the change management and preserving the change culture in the organization. In strategic management, change management is an important factors in the success of a strategy so it promotes that a leader must to adapt himself to changes and to face up to the difficulties and changes in his organization. It will be considered as a strategic solution in the chapter 5.

The final part of this chapter gives an overview of VET in Vietnam, in which helps readers understand more of the status of VET with intuitional policies, training principles, VET systems. and these concepts will be applied in this research or used to form strategic solutions in Chapter 5 applicable to the larger scale of VET in Vietnam.

In conclusion, this chapter presents three key conceptual framework of thesis for example sustainable development, strategic management and VET in Vietnam These concepts emphasizes the importance of VET in the sustainable development of society, its relationship with sustainable development and key factors in the strategic management such as SWOT analysis, Balance Score Card, financial management, change management. Chapter 3 will present with the research methodology. It will describe the methods used in the study, the data collection and data analysis

CHAPTER THREE: RESEARCH METHODOLOGY

3.1 Research design

This research employs a qualitative and quantitative approach for a case study that allows calculation of distinct data and qualitative evaluation of the theoretical concepts. Case study is considered as “an empirical inquiry that investigates a contemporary phenomenon in depth and with its real life” (Yin, 2009, p.18). This study concentrates on VET in the specific context of CCOT2, one of three public vocational colleges under the Ministry of Transport, located in Hong Thai, An Duong district, Hai Phong city. The college was established in 1986 and is a key vocational college for the shipbuilding mechanical industries in Hai Phong. Evaluated with level 3 of quality audit, it is among the highest level of vocational schools ranked by the Department of Vocational Training Accreditation under the General Department of Vocational Training. One of the 45 high-quality vocational colleges invested by the central government, CCOT2 delivers training for 5 key occupations of welding and ship building at the international level, industrial electricity and metal cutting at the ASEAN level, and automobile technology at the national level.

A case study is appropriate to answer the research questions. Firstly, it is easy for author to collect data because she has worked for the college for 15 years. Additionally, being a vice manager of the Training Department, the author has many advantages in doing this thesis. The author uses qualitative methods in this research to analyses document data. By making interpretations and assessments based on the data of CCOT2, the author will find the answer to the research questions. First, this thesis collects and analyzes data from documents of CCOT2 in form of annual training, enrollment reports, and financial reports of the period of 2011-2015 and the solutions for strategic development of CCOT2 to 2020. Secondly, this study uses the survey method with questionnaires that are designed for three types of respondents: (i) graduates, (ii) enterprises, (iii) trainers and managers. The analysis lays a foundation for understanding the research problems and research questions.

3.2. Document data

This thesis to assess uses qualitative approach the VET activities of CCOT2. Documents of CCOT2 in the period of 2011-2015 are main source of data. The data includes all reports of CCOT2 for example annual training and enrollment report, financial report, results of graduated students in the period of 2011-2015, developmental strategy of College Central Transport no. 2 in the period of 2011-2015, developmental strategy of College Central Transport no. 2 in 2020 and the vision of 2030. Moreover, this thesis used the data in the report of the overview in Vietnam's vocational training, institutional policies, legal framework of VET, and previous researchers of VET. The data is analyzed using SWOT analysis to evaluate the status of VET in CCOT2. The results are illustrated by tables, figures and interprets by text. In addition, a survey has been conducted to generate additional data.

3.3 Survey

This research will conduct a survey to collect data. Saunders (2003) and Zikmund (2003) defined that survey is a method of collecting basic data based on a representative sample by communicating of individuals. Information is gathered from different surveys. These surveys describe activities are operating, problems are happening and reasons for specific business activities. Saunders et al (2003) discussed that survey is the best methodology to measure the satisfaction and customer's attitude. In other hand, data collection method by using questionnaire is a safe way to gather information. The survey does not require the regular involvement of the researcher in the implementation process. Furthermore, questionnaire in the survey as enables hypotheses. By a test, data will be identified and be describe more understand. (Bryman & Bell, 2007). Selltiz et al (1981) supposed that questionnaires are cheap and convenient method for the respondent to complete, to implement and to gather basic data. However, using questionnaires have some limitations for example research methods in general. Some respondents may do not answer questions or answer the question not truthfully. The aim of this survey is to evaluate the customer's attitude towards vocational education and training activities by CCOT2. Questionnaires are designed based on the framework of SWOT analysis and Balanced Scorecard with customers being graduates, teachers, managers, leaders and enterprises. Furthermore, the questionnaire is designed for the financial perspective (Appendices 1, 2, 3).

3.3.1 Objectives of the survey

Nowadays VET and sustainable development has a mutual relationship. The first objective of this survey is to measure the customers' satisfaction of training quality as well as their need of training activities by CCOT2. The second is to measure the effectiveness of training activities and financial management by CCOT2. The final objective is to measure the importance of strategic solutions for sustainable development of the training activities in CCOT2.

3.2.2 Survey Design

This research uses survey questionnaires with closed-ended questions. The questionnaires were designed and sent to three groups by post and emails: Group 1 having 40 people (i.e. 20 leaders and managers from the Department of Labor, Invalids and Social Affairs, CCOT1, CCOT3 and 20 teachers from CCOT2); Group 2 consisting of 12 enterprises in Hai Phong; and, Group 3 made up of 97 graduates since 2015 who are currently working in factories. The survey focuses on such contents as evaluating the effectiveness of vocational training by CCOT2 and the job situations of the students after graduation, evaluating the implementation of financial activities by CCOT2, finding out the need of enterprises and the capability of graduated students in the labour market, and measuring the imperativeness of strategic solutions for sustainable development of VET in CCOT2.

3.2.3 Design of the Questionnaires

The most difficult thing is how to design the questionnaire for each different group mentioned above. There are three questionnaires in this survey. With 22 questions, the one for the graduates focuses on evaluation of the effectiveness of vocational training by CCOT2 and finding out the job situations of those students after graduation. The second questionnaire for the teachers, leader, and managers comprises 20 questions. Having 17 close questions and 3 open questions, it focuses on three aspects of CCOT2: training, finance and strategic solutions for sustainable development of VET in CCOT2. Intended for the businesses, the third one is designed to look at three main factors that the survey wants to be evaluated by the enterprises: the training quality, the quality of the graduates, and the annual corporate needs of recruitment and other needs.

3.2.4 Data collection

The questionnaires of this survey were sent to each respective group with different objectives. For the graduates, I chose those graduating from such key occupations as welding and shipbuilding because one occupation is of international level, and the other is of ASEAN level. Recently, these training faculties are experiencing a decreasing or even minimum enrollment although most of the enterprises have the need of recruiting graduates from these training sectors. The questionnaire was sent to 97 graduates by the post and email, but six were missing due to some mistakes in their address. So I had to phone and asked the investigators to interview them face to face.

This survey was conducted in five months' time to get feedbacks from the students, collect the data, analyses, reach final results and finish the survey. It was difficult to receive the answers from all the intended graduates because they are working in different companies, and their contact numbers have been changed. Furthermore, some students moved to work for other companies, and some are working even overseas. Thus some questionnaires are left unanswered. As a vice manager of the training department of CCOT2 who usually has to participate in this project, the author of this research usually does the survey of the trace study, an ODA project to survey the job situations of students six months after graduation. The results of that survey are used in this study.

Additionally, the author sent 12 questionnaires to 12 enterprises in Hai Phong, including Song Cam Damen Shipbuilding Company, Hong Ha Shipbuilding Company, etc. to investigate the quality of the graduates and their corporate needs of recruitment. Because it would take about two weeks for the questionnaire to be sent to the companies and back to the author by post, she emailed the questionnaire to them through her personal mailbox to save the time. It took two weeks to complete the data analysis. It was not easy to send the questionnaire to the leaders and managers of the vocational institutions but the author tried her best to send 20 questionnaires to those working at CCOT1, CCOT3, Hai Phong Tourism and Services Vocational College and the North Vocational College and 20 trainers and staff members in her college to survey their management of finance and vocational training as well as the imperativeness of strategic solutions for sustainable development of vocational training in the CCOT2. The data collection from these respondents took one month. Most of them completed the questionnaire except questions No. 13 and 14 in belief that these questions were the matters of CCOT2.

3.2.5 Data analysis

The survey was implemented with the respondents consisting 97 graduates, 40 teachers, managers, and leaders and 12 enterprises in Hai Phong. The questionnaires were designed to follow the customer and financial perspectives by measuring the customer's satisfaction and their need to find out the current problems and propose respective solutions for them. I received all the answer questionnaires except for two sent to the graduates working in the military. With most being closed questions, there are some open questions to get information of, for example, personal information and the name of the respondent's company. Some open questions were used when I wanted to know specific answers when the respondents ticked the choices of "Other" in the questionnaires. After the database is collected, they were put in the Microsoft Excel 2003 or 2010 and critically analyzed to meet the research aims and objectives. It is a tool to manage, analyze and process data because of it is simple, easy to use and save money. It is useful for analyzing data for the survey such as choosing models to do the survey in random method, we can input = *rand()* and *if*. Moreover, because I used this software to merge mails and to send to the respondents, the data was sorted or be set up with new options by option menus and create the pivot tables or make pivot chart report to describe the survey data. This command helped me filter and show information or data for the answers. Creating pivot tables or pivot chart tables is the best tool in this software. It helps me easily present the results of the survey such as the number of the respondents, the answers with "other" options, even it expresses missing answers by counting how many people did not answer the questions. Because there are three different groups of respondents, the collected data were put in three different files for the research aims. The findings had some limitations because of the limited number of respondents being the trainers of CCOT2 taking part in the survey. Additionally, some questions of the questionnaires are left unanswered with no tick in any option, and some graduates working overseas cannot complete some information. However, the data analysis was implemented carefully with all the steps such as feeding data, identifying problems for analysis, classifying and grouping the data under different topics. The data is aggregated on a separate sheet, and then the results are described with tables. Finally, the findings of this survey are presented in tables and the data interpreted in separate subtopics related to the survey questionnaires in order to figure out the research problems, so the reliability of the data is ensured. The results of this survey have supported some ideas to answer the research questions and to understand the current situation of CCOT2.

CHAPTER FOUR: THE CURRENT SITUATION OF VET IN THE CENTRAL VOCATIONAL COLLEGE OF TRANSPORT NO. 2 IN THE PERIOD OF 2011-2015

4.1 The context of the shipbuilding industry and the transportation industry in Hai Phong

A major sea port of Vietnam, Hai Phong has about 125 km of coastline and more than 100,000 km² of continental shelf. Its location is also adjacent to many international maritime routes, which are in the area of high economic growth rate and lively shipping market, convenient for ships to travel easily between continents.

Given new opportunities from the economic growth of the country, foreign trade has been improved and ocean freight has become increasingly important in the maritime industry, including the shipbuilding industry. The transport by sea is becoming more important than ever. Vietnam's Marine Strategy to 2020 determines that marine economy is the driving force to attract and promote economic development in other sectors, so the marine economic structure must be given a fundamental and comprehensive transformation in line with the direction of industrialization and modernization. An important solution for the implementation of the Marine Strategy to 2020 is the development of the shipbuilding and repair industry. The Government has decided to focus state budget between 2013 and 2015 to develop five coastal economic clusters of Chu Lai Economic Zone (Quang Nam Province) and Dung Quat (Quang Ngai Province); Dinh Vu - Cat Hai Economic Zone (Hai Phong city); Nghi Son Economic Zone (Thanh Hoa); Vung Ang Economic Zone (Ha Tinh); Phu Quoc Island Economic Zone and Nam An Thoi Island Cluster (Kien Giang). Those coastal economic zones will provide a more favorable investment environment for some coastal areas and may stimulate the development of shipbuilding.

Established in 1961, the shipbuilding industry of Hai Phong has been developed ever since and has confirmed its position domestically and internationally. The local shipbuilding industry has built large vessels of high tonnage up to stringent international maritime inspection standards from

22,500 MT to 36,000 MT, 53,000 MT or FSO5 floating tank containing marine oil with a tonnage of 150,000, with USD 170 million worth of tonnage and success in the water, confirming the strength of Hai Phong and marking a turning point for Vietnam's shipbuilding industry. The shipbuilding products of Hai Phong are exported to Singapore, Japan, Denmark, Greece, Iraq and many other countries.

However, Vietnam's shipbuilding industry in general and Haiphong's shipbuilding industry in particular are still severely affected by the global financial crisis and economic recession. Some corporations such as the Shipbuilding Industry Group (Vinashin) have been heavily affected and thus comprehensively restructured. At present, Song Cam Shipbuilding Joint Stock Company is the first among the remaining enterprises with stable products, whose indicators on industrial production value, turnover, profit, budget contribution, income of laborers always increase over time while most of the shipbuilding enterprises are facing difficulties, shortages of supply, usual cancelation of contracts, etc. that make their labor force half-employed.

Nowadays, Hai Phong has 27 shipbuilding companies and 23 mechanic-repairing enterprises. In the current trend of integration, most of the companies have embarked on the globalization. The industry is thus subject to competition but also opens up many opportunities.

4.2 VET in the CCOT2

4.2.1 The history of CCOT2

The Central College of Transport No. 2 (CCOT2), originally a school next to Bach Dang Shipyard in 1961, has gone so far through 52 years of construction and development. To meet the requirements of the political duties, the Ministry of Transport made Decision No. 1523/QĐ dated 8 June 1965 to establish the Vocational Schools of Shipbuilding Engineering under the Mechanical Engineering Department, the Ministry of Transport, whose main duty was to train technical workers for technical transport and defense fields. Facing the campus difficulties, the school was agreed by the Ministry of Transport in 1976 to build a new headquarter in Hong Thai commune, An Hai district (now An Duong district), Hai Phong city, but this task wasn't officially implemented until 1978. On 31st May 1980, the vocational school basically accomplished its construction, which was a

good condition for the annual number of students from 300 to 500. Based on the actual situation, in February 1984, the Ministry of Transport decided to transfer management of the school from the Mechanical Engineering Department to the Ministry of Transport and rename it after Shipbuilding Mechanical Engineering Worker School No.1. In August 1992, it was renamed the Technical Professional College of Transport No. 2 under the Ministry of Transport.

On September 6th 2004, the Minister of Transport signed Decision No. 2646/QĐBGTVT establishing the Central Transport College No. 2 from the Technical Professional College of Transport No. 2 (Developmental Strategy of CCOT2 in the period of 2011 - 2015 and the vision in 2020) under the Ministry of Transport, so the training was upgraded from primary to secondary level. This event marked a new step in the construction and development of the school. The added duty was to train the three following careers at professional secondary level: shipbuilding technology, civil and industrial electricity, and ship machinery maintenance and repairing. The college also trained technical workers at grades 4/7, 3/7 with 8 careers of ship's hull manufacture, welding, turning, electricity, metal working, ship machinery, cars & motorbikes and pipeline assembly technology. In February 2007, the Minister of MOLISA made Decision No. 262/QĐBLĐTBXH to establish the Central Vocational College of Transport No. 2 under the Ministry of Transport. Under the same Minister's Decision No. 1093/QĐBGTVT dated 17 April 2007 and Decision No. 2816/QĐBGTVT dated 17 September 2007 (Developmental Strategy of CCOT2 in the period of 2011 - 2015 and the vision in 2020), the college was assigned duties, authorities, responsibilities and organizational structure to train technical workers at college vocational level, professional secondary level, secondary vocational level and primary vocational level to equip trainees with professional ability and skills, good health, moral, professional conscience, and industrial behavior so that they will be able to find jobs, create jobs by themselves or study at higher level meeting the requirements of the labor market. Regarding international cooperation, the college maintains the training to provide a good source of trainees for recruitment of Japanese shipbuilding companies, through sending them to work for IMM JAPAN and KANTO under its cooperative ties. Its training quality has been trusted and highly appreciated by such corporations as KAVASAKI, MITSUI and CHOIRYO KOJI... In May 2010, the college became a member of the UK Vocational Training Association (CITY & GUILD), trained to provide vocational certificates and degrees of Mechanical Engineering, Automatic Electricity and Welding Technology.

In May, 2017, the Minister of MOLISA made Decision No. 679/QĐBLĐ-TBXH renaming the Central Vocational College of Transport No. 2 (CVCOT2) to the Central College of Transport No. 2 (CCOT2); however, its function has no change.

For 52 years of continual efforts, the college has trained 40,000 workers and thousands of people in different types of training for the transport sector and society. It has built and repaired over 150,000 tons of vehicles. Currently the college is training 2,500 students at vocational college level; 1,100 students at intermediate level and thousands of students at primary level and other joint-training programs. Many graduates have become managers, skilled technicians, and leading workers in many factories and shipbuilding enterprises inside and outside the industry. Some have been striving to become city leaders, members of the National Assembly, scientists, labor heroes, etc. For its achievements in training to serve the cause of national construction, the college was awarded many noble rewards by the Communist Party and the Government such as two Third-class Labour Medals (1985 and 1990), a Second-class Labour Medal (1995), a First-Class Labour Medal (2000), a Third-class Independence Medal (2005), and a Second-class Independence Medal (2010). The college received the Banners from the Ministerial Council in 1986 and the emulation flag from the Prime Minister in 1999. Since 1998, the college has continuously achieved the title of "Excellent College", the emulation flag of the Government, the excellent emulation flag of the Ministry of Transport and the emulation flag of Vietnam General Confederation of Labour.

4.2.2 Human resources

By 31/12/2015, CCOT2 was staffed by 179 people, including 107 males and 72 females, as leaders, managers, teachers or staff members, including 121 (84 male and 37 female) trainers. Figure 5 illustrates teachers and trainer's qualification in CCOT2

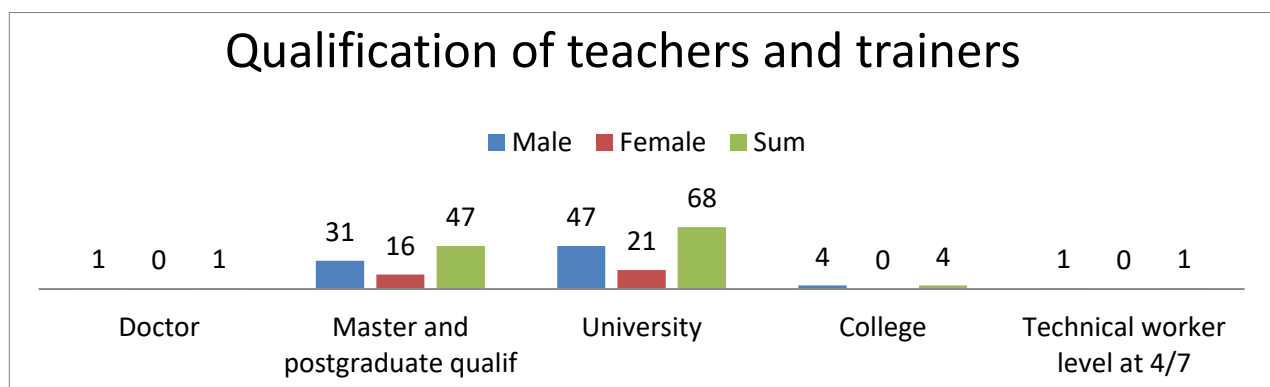


Figure 5: Qualification of CCOT No. 2 teachers and trainers

Source: Developmental Strategy of the Central College of Transport No. 2 in the period of 2011 - 2015 and the vision to 2020

4.2.3 Infrastructure and equipment

Table 2 presents the infrastructure in CCOT2

No	Items	Total area (m2)
1	Leadership area (for Principal, deputy principal...)	953.34
2	Theory classrooms	2,302.07
3	Workshops	6,724.61
4	Services area	
4.1	Library	110
4.2	Student hostel	457.13
4.3	Dining room	610.9
4.4	Public health department	10
4.5	Sport areas	1,027.86
5	Other area	
5.1	Garage	776.34
5.2	Driving training pitch	16,775.81
5.3	Driving test pitch	36,035
	Total	65,783.06

Table 2. Infrastructure

Source: Developmental Strategy of the Central College of Transport No. 2 in the period of 2011 - 2015 and the vision to 2020.

*Equipment

CCOT2 is among the 45 vocational colleges selected for investment to be of national high quality in 2020 by Decision No. 761/QD-TTg on May 23, 2014 by the Prime Minister. That is the project of developing high quality colleges in 2020 with 05 key careers (02 careers with international level is welding, ship building; 02 ASEAN level careers are maritime electricity and metal cutting; one

career of national level is automotive technology). Therefore CCOT2 was given a full investment in equipment and machinery for vocational training worth 21 billion VND invested by that National Target Program (13.640 billion VND for shipbuilding training, 1.915 billion VND for welding, and 5.457 billion VND for maritime electricity in the school years of 2012 and 2013. The college is also equipped with 5.5 billion VND worth of automotive technology, and its construction of new workshops for three careers of welding, electricity, and metal cutting was 6.5 billion VND. In 2015, CCOT2 received an investment in automotive technology worth 4.3 billion VND to buy training software and equipment.

Currently, the workshops of welding, electricity and metal cutting have been completed and are put into use. However, those investments in the vocational training infrastructure meet only the basic equipment list for the minimum occupation training. The investment in the equipment and construction of the vocational training infrastructure has contributed to enhancement of the training capacity building.

The ratios of investment in infrastructure and equipment compared to the total investment in shipbuilding technology, welding, and maritime electronic were 94%, 21%, and 51% respectively.

4.2.4 Financial resources

The internal spending rules of CCOT2 is based on Decree 43/2006/NDCP dated 25/4/2006 of the Government regulating the autonomy and self-responsibility in finance for public service units. Accordingly, the financial activities and financial management are implemented with transparency and abide by the law. In addition, the annual financial allocations have to ensure the recurrent spending. These expenditures focus on investment expenditures of infrastructure, equipment and innovation of teaching and learning in order to improve the quality of training. There must be a balance between revenue and expenditure items. The financial statements of CCOT2 are monitored and controlled by the state audit. CCOT2 is considered an organization with good financial management in the approval process of annual settlement.

Its business activities have been expanded such as through an increase in the training scale of short-term courses, joint-training, learning theory combined with production activities to make products of economic value. The activities are also expanded to increased revenue sources and application of

economic solutions such as building regulations of internal spending, limiting spending and strengthening the management and supervision.

It also seeks financial resources and social mobilization to increase resources for training. Its innovation in financial management methods strengthens the development and fully exploit the revenue from training and service activities and effective use of financial resources. The diversification of financial sources increase the guaranteed income funds for training activities, improve the living standards of its staff, and enhance investment in infrastructure and other activities.

The school has developed regulations and attracted financial resources inside and outside, sources of foreign investment and from international organizations, gradually implementing socialization of financial investments and the self-control mechanism of financial management. Table 3 describes financial resources in CCOT2 in the period of 2011 – 2015

<i>No</i>	<i>Financial resource</i>	<i>Year</i>				
		<i>2011</i>	<i>2012</i>	<i>2013</i>	<i>2014</i>	<i>2015</i>
1	State budget for the recurrent expenses	10,446	14,150	18,250	18,818	18,181
2	Expenditures of anti-degradation	3,750	4,000	3,200	4,000	3,300
3	Expenditure on national target programs	5,000	9,360	7,000	12,000	9,400
4	State investment in basic construction					
5	Training fees (College, Intermediate level)	8,634	6,088	4,086	2,455	2,220
6	Revenues from training services, production, business and other business revenues					

Table 3. Financial resources of CCOT2 in the period of 2011-2015

Source: Annual financial reports, CCOT2

4.2.5 Training curriculum

The contents of the training program under the framework program of the Ministry of Labour, Invalids and Social Affairs meet the needs of the development of vocational training at different levels.

The entire curriculum consists of standardized modules that ensure integration between occupational knowledge, skills and attitude to practice a complete career; ensure interoperability between different levels of training; reduce the amount of theory and increase practice, ensuring that subjects of vocational training modules in intermediate occupations consist of 15% to 30% of theory and 70% to 85% of practice, and the subjects of vocational college level 25% to 35% of theory and 65% to 75% of practice.

The college has received five key vocational training programs for use: technology shipbuilding shell fabrication, welding (at the international level), metal cutting, ship electricity (at the ASEAN level) and automotive technology (at the national level).

4.2.6 Enrollment scale and enrollment results

Evaluating the development of CCOT2, we must first look at the enrollment scale because it plays an important part in the sustainability of vocational training activities of the college. However, the enrollment scale of CCOT2 between 2014 and 2015 is decreasing by 50%. Figure 6 presents enrollment scaling in CCOT2 in the period of 2011-2015.

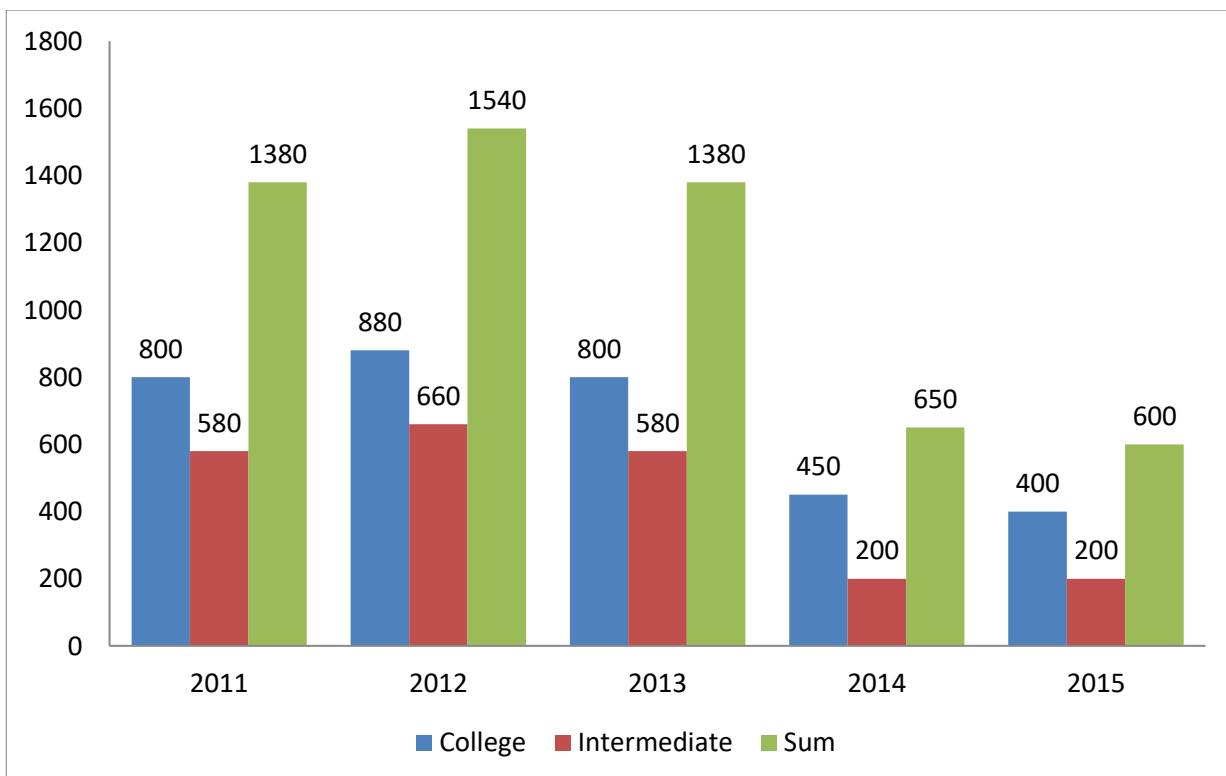
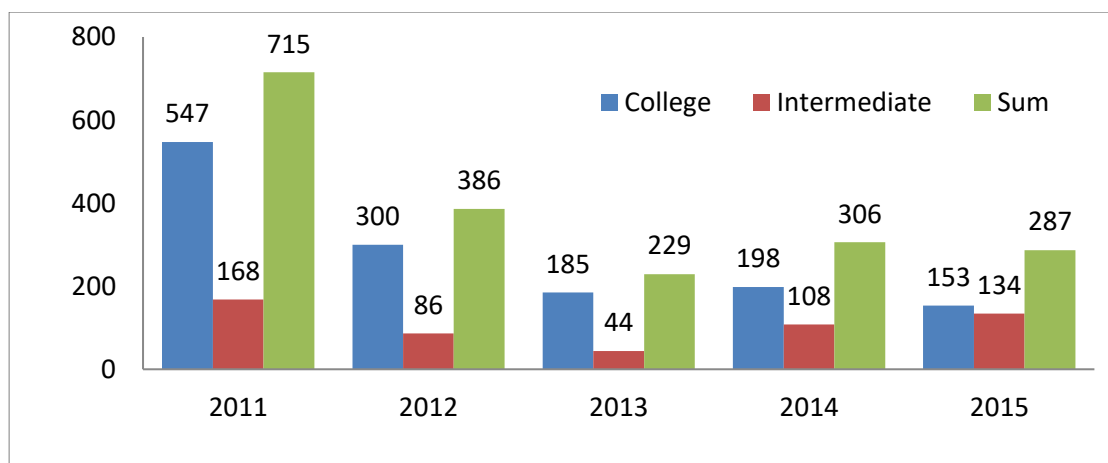


Figure 6: Enrollment scaling of the period of 2011-2015

Source: Annual decision of Ministry of Transport on the allocation of annual enrollment targets

Figure 7 illustrates the enrollment results of CCOT2 in the period of 2011-2015.



Source: Annual enrolment report of CCOT2

Figure 7: Enrollment results of the period of 2011 – 2015

Figure 8 describes the graduated students results of CCOT2 in the period of 2011-2015.

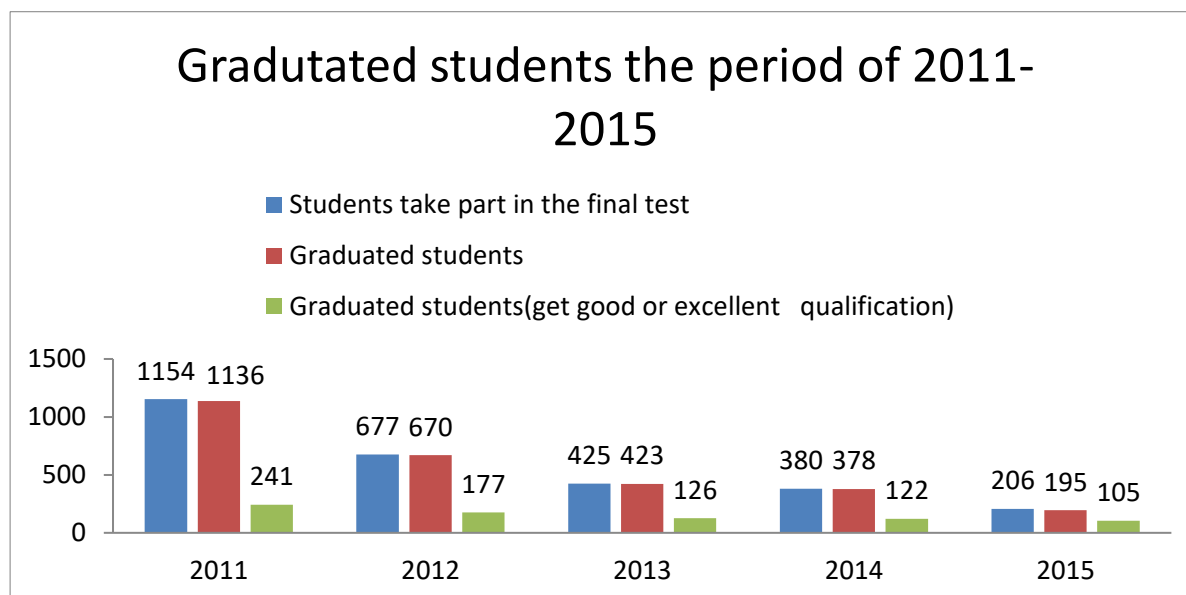


Figure 8. Graduated students in the period of 2011-2015

Source: Annual training report of CCOT2

4.3 Survey results

4.3.1 Results from the graduates

97 respondents of the survey are college graduates of such key occupations as welding and shipbuilding. The questionnaire for them aims to measure their satisfaction of the training quality by the college and identify their quality.

Firstly, it shows the training quality. These data of the survey suggest that most of these students appreciated their course's training quality highly (from 61.84% to 66.67%) (see Appendix 5. Training quality). Nevertheless, the fact that 16.67% to 28.95% of the respondents have a medium evaluation of the training quality proves that the training quality has some gaps. Most students said that the equipment and infrastructure are aspects that need to be improved (see Appendix 6. Aspects for improvement). Nevertheless, 66.67% of the intermediate-level graduates supposed that internship or practical in-company training need to be improved (see Appendix 6p. Aspects for improvement). This finding contributes to the answer of the research. The training quality contains not only the training process in the college but also that in the enterprise. Hence, vocational institutions have to control well internship or practical in-company training. On the other hand, the number of respondents having good evaluation of practice in the workshop is 71.05% but 16.67% of them thought it is average (see Appendix 7. Practical evaluation in the workshop). Although it is small number compared to the total, it is a problem that vocational institutions must consider. In addition to these, 30.26% of the respondents give a medium evaluation of the teaching methods (see Appendix 8. Theoretical teaching). On the other hand, 21.05% show little satisfaction with their trainers' professional level. Though syllabus and curriculum are essential conditions to ensure training quality but merely 14.17% to 16.27% of the respondents somewhat agree with and 2.63% disagree with the syllabus and curriculum (Appendix 10. Syllabus and curriculum). Although these numbers are not high, they prove that the syllabus and curriculum have not absolutely satisfied the apprentices' need. To sum up, the training quality of CCOT2 is 28.95% with medium level because such things as the quality of internship and training in the enterprise, equipment and infrastructure, teachers' qualification, and practice in the workshop of vocational colleges do not strongly meet the need of students.

Secondly, the survey data show that the job situation of students after graduation is not stable because students moved from one company to another in a short time. On the other hand, the data table of job-finding time reveals that most students find a job related to their training qualification one to three months after graduation, but 5.26% stated that their job did not relate to their qualification in the college level and 16.67% to that in the intermediate level. 88.89% of the respondents were working for public companies while 2.63% of them are self-employed (Appendix 11. Job situation). The finding suggests that students want to look for a stable job in a public company although they are working in small companies of 10 to 200 people each (see Appendix 16. The scale of company). The respondents got an average monthly wage of 4 to 8 million VND though some of them received 2 to 4 million VND a month (see Appendix 15. Monthly wage), almost of their working position in the company is very modest at third level from 48,68% to 83-33% (Appendix 18. Working position), yet all of the respondents do not learn any further after graduation. The fact the 22.22% to 23.68 % of the respondents have been trained in the company (Appendix 17. Training in the company) supports that the training quality of the college basically meets the need of enterprises.

Nevertheless, to strongly meet the need of enterprises and students going to work without further training of practical skills in the factories, vocational institutions need to ensure the training quality. As a result, training quality assurance plays an important role in sustainable development of vocational institutions. In order to develop VET sustainably in CCOT2 in particular and VET system in Vietnam in general, training activities in vocational schools must be controlled to ensure the training quality.

4.3.2 Results from the enterprises (Appendix 17)

The aims of this survey questionnaire is to measure enterprises' satisfaction of the graduates and the training activities in CCOT2. When first requested to evaluate the graduates from the college, most enterprises (83.3%) admitted that students trained by CCOT2 have good attitude of duties, staff and colleagues in the company and good knowledge of labour safety. However, when the enterprises were asked if the graduates meet the requirements of their working position, 66.6% of the enterprises agreed with this opinion while 0.4% enterprises somewhat agreed with it. On the other hand, 75% of the enterprises agree with the idea that the graduates make quality products that meet relevant technical requirements while 25% somewhat agreed with it. In addition to these, 66.6% of

the employers though the graduates' vocational skills are at a medium level. These results suggest that the quality of the graduates from the college does not strongly meet the need of the enterprises. Secondly, the results of this questionnaire shows opinions of the enterprises over the training activities of CCOT2. While 75% of them agreed with the flexibility of vocational training methods applied by CCOT2, 66.6% agreed with the form of vocational training; 50% believed that the training fields of the college satisfy the needs of the city and the labour market; 58.3% were satisfied with both the training curriculum and the training levels delivered by CCOT2 for the current labour market and enterprises.

While the results show that CCOT2 does not meet the need of enterprises, to do so requires the college to renew the curriculum, enhance its training quality and innovate training forms and methods for different training levels.

4.3.3 Results from the teachers, managers and leaders (Appendix 20)

This survey questionnaire focuses on the evaluation by trainers and managers about the two main issues of training quality and financial activities, the two important aspects for sustainable development of VET. 20 trainers and managers of CCOT2 have answered questions number 13 and 14, which are private questions that enable us to see the financial status of the college. On the other hand, this questionnaire suggests strategic solutions for sustainable development of VET in CCOT2. Firstly, the analysis of the training quality indicates that 65% of the respondents in this group agreed with the satisfaction of the labour market over the training program, 17.5% people somewhat agreed with this opinion, and 5% disagreed with it. These data show that the curriculum has some problems. For the question of satisfaction of the curriculum and training methods to the requirement of apprentices, 60% of the respondents agreed with the statement, 37.5% somewhat agreed with this and 5% disagreed with it. Additionally, 45% of them agreed that the contents of the training courses meet the requirements of current jobs. The findings reveal that the courses have some gaps that need to be figured out. 42.5% of the leaders and teachers supposed that after the course, students would develop essential career skills in the future. 75% of the respondents thought that the courses give students the knowledge of labour safety, 67.5% people agreed with the idea of students getting knowledge of social responsibility for their jobs and company during the course, but 20% of respondents did not agree with, 12.5% somewhat agree this opinion. These results show that the

vocational schools do not fully equip students with the knowledge of social responsibility during the training.

The second part of the questionnaire looked at the financial aspect with 9 questions. A lot of teachers, managers (40%-75%) agreed with these questions, but some (7.5-17%) disagreed with these question. Question numbers 13 and 14 were answered by the respondents as teachers of CCOT2. 50% of the teachers believed that the annual revenue of CCOT2 is not enough to cover the training activities, and 10% of them strongly agreed with this opinion. This result shows that CCOT2 is facing financial difficulties. Therefore, teachers' salary and other payments are not paid in line with their qualifications. This is illustrated by the fact that 42.5% of the respondents agree with questionnaire statement of monthly salary, 60% agreed and 12.5% disagreed that other payments of vocational institutions are not appropriate for their qualifications. Those data suggest that of vocational institutions are facing difficulties in their financial activities.

Hence, to solve the financial difficulties, the college should reasonably control all items of revenue and expenditure, use the balance sheets, and allocate the finance effectively. The final questions in this questionnaire suggest strategic solutions for CCOT2. All of the 40 respondents agreed or strongly agreed with these solutions. These findings proved that the strategic solutions to solve the situation in CCOT2 are very suitable and should be applied by the college because they are imperative methods to solve its problems and help CCOT2 develop sustainably in the future.

4.3.4 Summary

In conclusion, these findings answered the research question of the current situation in CCOT2 in the period of 2011-2015. Hence, enhancing the attractiveness, quality training, relevant ones of vocational education and training, allowing it to play an important part in promoting competitiveness, business operation and innovate abilities will provide young people and adults with various flexible learning opportunities to obtain skills to develop their careers. Moreover, it promotes their participation in further education and training and contributes to people's perfection and positiveness that promote social inclusion, contribution to better employability, the highest quality mobility and safety in the workplace. The labour market need to improve the prediction and management of change and strengthening business competitiveness. To solve these problems, we

must to make standards and solutions for the sustainable development of VET in CCOT2 in the next chapter.

CHAPTER FIVE: STANDARDS AND STRATEGIC SOLUTIONS FOR SUSTAINABLE DEVELOPMENT OF VET IN CCOT2

5.1 Essential standards to ensure the sustainable development of VET

Sustainability of VET is development of VET in the long run with social responsibilities which aim to achieve the goals of social development. On one hand, we can understand that development of VET must certainly be suitable for social development strategies and economic orientations of the country as well as the natural environment. On the other hand, development of VET has positive impacts on economic development and without negative influence on future generations.

Vocational training colleges are considered as sustainable development if they ensure all the following standards.

5.1.1 Enrollment

Enrollment has an important role in the development of vocational training institutions because it determines their existence. All vocational training activities will take place if apprentices take part in the training process. Moreover, it proves that the institution's current vocational training meets the needs of society. On one hand, that is the reflection of the quality of training and affirms the prestige as well as the institution's position in society. On the other hand, it contributes to the revenue from the training fees and solves these difficulties in the financial activities. Therefore, vocational training institutions have to enhance the annual enrollment scale so that the number of new students is enrolled enough for the annual enrollment scale. By comparison with the duties of a school year, at least 80% of the target must be reached not only qualitatively but also quantitatively. This shows that the enrollment must satisfy both vocational training need of apprentices and the need of employers.

5.1.2 Training quality assurance

** Training syllabi and curricula*

Training syllabi of VET is listing all the training activities of a course. It is established with goals of each subject in the course. It obeys strict rules of appropriate authorities. The course has to be carried out with a scheme and finished in an expected time. The content of training curricula and syllabuses have to meet the need of apprentices and society. It must be systematic and obey regulations of the program framework provided by the General Department of Vocational Training. The goals of each curriculum should aim to serve specific apprentices at a different level and they must be suitable with the strategy of economic development in the locality and the country. Training curricula must be built with new knowledge and modern technologies. Moreover, curricula and syllabuses for vocational training have to ensure that all apprentices can gain an understanding of social responsibility through equipping them with knowledge of risk reduction, labour safety and environment protection. Specially, student must obey regulations of the course, do their college duties to become workers with good attitude, after graduation, in the workplace as well as in the community. Added to these things, training curricula help apprentices to understand changes in government policies, labour market, individuals' responsibility for society and community. Syllabi are implemented with the contributions of teachers, trainers, management and experts of that aspect.

*** *Training activities***

Vocational institutions should provide a course scheme with specific goals of each subject. All learning and teaching activities must be aligned with the schedule and scheme of the course so that the training process can take place smoothly in avoidance of risks and minimization of bad impacts on society and natural environment. It must make sure that apprentices will be equipped with understanding of sustainability, social responsibility and awareness of environmental protection. The result of the course is students' passing the final exam, getting vocational qualification and finding a good job. Finally, apprentices can join the labour market and may contribute their knowledge and skills to the economic development of society.

*** *The management of training activities***

The training process has to be evaluated and controlled regularly by internal controllers and external organizations. Trainers have to convey to students all the knowledge of a course and measure the study of the students through tests. Moreover, the former should equip the latter with all knowledge of social responsibility: Protection of their habitats, avoidance of bad influences on the environment, and possible risks or accidents at work. Students are obliged to finish the course by

obeying the course rules, take part in all course activities, and pass all the tests of theories and skills of all subjects of the course.

5.1.3 Financial management

Problems in the finance of VET are one of the most important topics affecting its stockholders (Burke, 2005). The VET costs are mostly financed by the state budget. One main VET revenue comes from training fees collected from apprentices. However, colleges have to meet the difficulties in the enrollment so financial management is very essential to ensure the sustainable development, hence their revenues and expenditures should be effectively used, allocated and balanced, and their financial activities must be controlled by internal and external organization every year.

5.1.4 The job situations of students after graduating from vocational colleges

The results of training programs contribute to the development of social economy. This shows that most of the students, after graduation, can find a good job with their qualification. It can be seen that with assured training quality, graduates from vocational schools can basically meet the need of society and receive good feedbacks from enterprises. The unemployment rate among those graduates is low and they can get great jobs with their vocational qualification. Hence, an essential condition for the sustainable development of VET is 80% of the graduates from vocational schools can find a job with their qualification.

5.1.5 Satisfying customer's need

Customers play an important role in an organization's success and development. An organization is believed to have effective implementation when it meets its customers' need. Vocational training institutions are judged sustainable when their VET training quality meets social needs. This proves that there is a balance between the demand and the supply. This is also a condition to ensure the training quality. It is major index to measure the effectiveness of an organization's implementation.

5.2 Evaluation of CCOT2 activities

This research uses the SWOT tool to analyze the status of vocational training activities in CCOT2. Based on the standards for sustainable development of VET, CCOT2 has the following strengths and weakness.

Strengths (S)	Opportunity (O)
It is a public college of the Ministry of Transport. It has a tradition of 52 years	Get many projects and preferential policies of the State, to be invested in learning materials and infrastructure
It is admitted with the third level of accreditation certificate	Become one of the 45 high-quality schools of the country in 2020
Approved by the Prime Minister, for investment to become one of the 45 high-quality schools of the country in 2020	
Modern facilities, machinery, equipment are invested	Meet the requirements to improve the quality of human resources of the sector and international integration
There are multi-training professions, The training quality of some shipbuilding and welding is well appreciated	Meet current requirements of learners and employers, Provide stable source for labor market
The organizational structure is suitable with the management requirements, meeting the current training scale and inheriting long-term development according to the strategic orientation of vocational training college with high quality.	Meet the need of organization's development and scale in the future
The material infrastructure are gradually proposed to the Ministry of Transport, the Ministry of Labor, War Invalids and Social Affairs and the General Department of Vocational Training to invest in modern and appropriate training programs to meet the demand and improve the quality of human resources of the sector and	Meet the need of organization's development and scale in the future

international integration.	
Weakness (W)	Threats (T)
Most of the professions are on the list of heavy and hazardous occupations	The number of learners is reducing so how to attract learners to these professions
Teachers have limited qualifications because most of them are former students of the school who are sent to study to improve their qualifications.	Teachers do not meet professional standards.
Revenues of training services, production, business and other business revenue are very limited	Difficult finance (the college needs to save other expenditures and develop an internal spending rule)
State investment in basic construction	The college need to save other expenditures for investment in basic construction Propose funding of state investment in basic construction
The number of annual students is not enough for annual enrollment scale	Revenues from training fees are limited, enrollment scale decreases, state budget falls down
Counseling and introduction of jobs to students after graduation are very limited. The reports of the employment situation of students after graduation are not conducted regularly but only when a contract is signed and performed.	Not satisfy the need of customers: students, enterprises, labour market. Employment situations of students after graduation are not stable (Students do not find a job with professional qualification or unemployment)
The training program has not yet been designed with sustainable orientation to meet social needs.	Risks can happen in the training process Design with sustainable orientation to meet social needs
Equipment for teaching, learning and scientific research has improved, but has not kept pace with the development of science and technology and production practice.	Difficulties in the process of integration and development when not meeting the requirements of labour market and modern production technology.

Table 4. SWOT analysis of CCOT2 activities

To sum up, CCOT2 is a vocational college being invested to be one of 45 high-quality vocational training in Vietnam, with its training strengths in technical mechanic and shipbuilding careers. It is admitted to be third level of accreditation certificate, the highest level of vocational colleges. However, in the period 2011-2015, CCOT2 faced difficulties in enrollment, finance and some gaps of training quality such as teachers, curriculum, and syllabus. Therefore, becoming one of 45 high-quality colleges is both an opportunity and a big challenge to CCOT2. Furthermore, to develop VET sustainably in CCOT2 is one of its important duties. Based on essential standards to ensure sustainable development of VET, it can be seen that VET activities by CCOT2 are not sustainable because of such reasons as the decreasing trend in its enrollment scale in this period – the rate of new students going to the college is very low from 16.5% to 51.9%. Furthermore, this enrollment always changes. Some training sections do not have enough numbers of apprentices for training. This proves that it is not stable. Additionally, the college's finance is also unstable because the revenue from training fees fell down and the annual budget was cut down. Besides, the rate of its graduates getting a good or excellent qualification is very limited (20.8% in 2011, the highest being 50.9%). This suggested that its training quality is unstable.

The current situation of VET in CCOT2 has not yet seen the risks that might occur during the training process as there is a low sense of compliance and environmental protection, waste of raw materials during training and production services, or a waste of human source when the graduates neither find a job nor meet the requirements of labour market. This may be one-sided evaluation of the researcher. Hence, to find the answers of the job situations of the graduates, the customers' satisfaction and other conditions to ensure the VET training quality in the situation of CCOT2, the research will continue finding by implementing another survey to support these ideas in research results.

5.3 Strategic solutions

5.3.1 Enhancing the annual enrollment scale

First, enhance the awareness and responsibilities of the managers, teachers and employees of the importance of the current enrollment for the development of CCOT2. Secondly, strengthen the communication of recruitment of apprentices and vocational training in the media and public places.

A marketing plan should be provided with specific goals for various subjects in a given period. In addition, the training quality assurance must be strengthened. On the other hand, CCOT2 should do the survey of stakeholders to get their feedbacks of the graduates. This help vocational schools to figure out and satisfy their customers' need. Moreover, the Government should have policies to encourage apprentices to participate in vocational learning and help them understand that vocational learning is not only their own needs but also their responsibility for the society and social cohesion.

5.3.2 Strengthening the VET management capacity

**** Strengthening financial management (Controlling internal expenses)***

Revenues should be increased by expanding the training activities associated with production, businesses, and international cooperation in vocational training. In addition, they can be increased from training fees by improving enrollments. Internal spending rules should be provided, on the basis of the rules by the Ministry of Finance, to save money and ensure effective spending.

The monitoring, control and evaluation of financial activities should be enhanced to ensure that the activities are implemented in line with the regulations of the Ministry of Finance while the state budget allocation with items approved by the Ministry of Transport are checked by both internal and external audit.

It is believed that the current spending of CCOT2 is usually associated with its training and managing activities of teachers and staff, so it is good if CCOT2 can make financial plans based on its annual state budget allocation approved by the Ministry of Transport and increase revenues from training fees, career services, repair and shipbuilding. These improvements will limit unnecessary spending while giving the limited budget to items of priority. At the same time, they can help avoid financial risks, make effective expenses, balance the state budget allocation, and specially provide satisfactory salary, benefits and regimes for the staff, teachers and employees of the vocational schools.

**** Developing curriculum and syllabus of VET for the sustainable development***

Training programs must always be updated with changes of technical and scientific technologies. Furthermore, they should be designed with concepts of sustainable development for all VET courses. Next, more focus should be paid upon sustainable development of such occupational relevant areas as saving materials, repairing, re-cycling and re-using of products in the workplace by waste control, minimization of pollution and control of pollution in the workshop and workplace, protection of machinery and equipment, and following the principles of occupational safety at work. Finally, training curricula and syllabi should be built with participation by vocational training experts and enterprises to satisfy social needs and ensure the cohesion, dimension and social responsibility. Therefore, the training curriculum should be revised to remove unnecessary modules of vocational training to satisfy social needs.

**** Strengthening forecast and demand survey of labour market***

Ensuring employment for students after graduation is the most important part of a training process. If vocational training schools deal with this well, it will contribute to settlement of the difficulties facing them in enrollment and attract more students to their vocational courses. In order to do this, the forecast and demand survey of labour market is a decisive factor. Notably, the forecast and demand survey of labour market in the vocational schools is so limited that it leads to the dissatisfaction of the need of apprentices and enterprises and thus causes the waste of human resources, bad impacts on sustainable development of the colleges. As a result, CCOT2 should have a professional department to implement the duties of forecast and demand survey of labour market to balance between the demand and the supply. This can limit the risks that might happen in the training process and thus avoid the waste of human resources.

****Change management***

In a strategic management process, change management is a decisive condition for success in the management of an organization. It is said that the implementation a strategy always involve possible changes because it is a new environment that everybody thus has to adapt to and change their attitude and behavior accordingly. Moreover, many new policies are conducted to change the current situation, especially to change people's thinking. This suggest that CCOT2 has to manage the changes that might happen in the organization. Additionally, if change management is

controlled well, it will limit difficulties and avoid risks during implementation of a strategy. This can contribute to sustainable development of CCOT2.

****Monitoring of outcomes***

Sustainable development of VET requires development of systematic monitoring of both social and environmental outcomes. This will lead to monitoring of the VET program and measuring of outputs, outcomes, and impacts. Hence, it will require improvement of indicators and statistical collection procedures and establishment of analyzing and reporting mechanisms. To sum up, CCOT2 should set up a professional department to supervise the program, evaluate the training quality, graduation results, employment situations of students after graduation, and feedbacks of enterprises and labor market on graduates working as their employees to measure the effectiveness of vocational training delivered by the college and to satisfy stakeholders' need in order to give some methods to improve and solve current situations.

5.3.3 Enhancing the quality of VET

Firstly, the management of learning and teaching should be strengthened. CCOT2 should control and regularly evaluate its vocational training activities to ensure that they follow the scheme and curriculum of the course. Next, infrastructure and equipment for VET should be relevantly provided. Every year, vocational schools should review and check their infrastructure and equipment that require maintenance and repair and, at the same time, propose purchase of new VET infrastructure and equipment in the following year. This will be an ideal condition for a good preparation to ensure that the vocational training process is operated smoothly. Finally, a team of qualified teachers with national level and reasonable structure should be built; their experience in factories should be improved; good workers with high skills should be attracted to participate in vocational training; and those who do not meet the teaching requirements should be gradually rearranged to other jobs.

5.3.4 Establishing the relationships between students, vocational colleges and businesses

The relationship between vocational schools and enterprises is the decisive factor for the success, quality, prestige and position of vocational institutions in the current integration process, promoting their enrollment and promoting the human resource training to meet social needs.

Firstly, vocational schools need to have close cooperation with businesses so that the latter can participate in supporting their enrollment and scholarships for students with excellent academic achievements. Such coordination can enable vocational schools to send high school students to visit the infrastructure of enterprises to orient and recommend of vocational training and career. Second, vocational schools should coordinate with such agencies as the Labor Confederation and the Department of Labor, Invalids and Social Affairs through seminars and training courses on law with enterprises. At the end of these seminars, vocational schools can introduce their information to participating businesses. In particular, vocational schools can implement surveys of enterprises to gather, among other things, the name of the latter, their type of business, telephone number, email address, organizational structure, recruitment needs..., in order to build close relationships with businesses that favour understanding of the current situation and the needs of enterprises.

Second, the relationship between alumni and vocational schools should be further strengthened to create a mechanism for regular contact between alumni working for companies and the colleges. Vocational schools can hold meetings as opportunities to exchange experience between theory and practice. Alumni will connect vocational schools with enterprises in good relationship that enable vocational schools to improve their training program to gradually satisfy the needs of enterprises. Fourth, first-year students should be given longer time for practice because most students of vocational colleges lack confidence or soft skills needed to meet tasks assigned by enterprises. They also lack knowledge of professional standards and requirements and thus become easily discouraged when encountering difficulties at work. In addition, students sometimes lack learning spirit.

Third, vocational schools should work in parallel with enterprises, catching the peak seasons of enterprises to introduce students to practice at their workplace. This activity creates many benefits for both businesses and training institutions. Practicing in the factories will provide students with opportunities to work in a practical environment, develop their skills to solve problems, and expand their relationships. With gained practice experience, students will become confident and ready to work after graduation. The internship is also a survey that challenge students in the process of doing

a career. No matter how much they achieve, the internship also gives students many different opportunities. Fifth, companies should cooperate with vocational schools in setting goals and standards for training programs and evaluating the quality of graduates. Accordingly, the training programs are regularly updated with knowledge of science and technology production applied by advanced countries, helping graduates to have more opportunities to find a job.

CHAPTER SIX: CONCLUSIONS AND RECOMMENDATIONS

6.1 Summary and Conclusions

To sum up, sustainable development play a key role in a national economy. Along with economic development in Vietnam, vocational education and training (VET) form one of the essential factors for its human resource and socio-economic development. Therefore, how to develop VET sustainably is a question that is not easy to answer. This research studied the situation of the Central Vocational College of Transport No. II (CCOT2) in the period 2011-2015 to find its existing problems in the VET system and give solutions to solve those problems. The study used a conceptual framework developed from the key framework of strategic management, sustainable development and VET in Vietnam. In order to understand the current problems of VET in CCOT2 in the period of 2011-2015 and give strategic solutions to solve these problems in the period of 2016-2020, this study has answered the following research questions:

1. What does strategic management for sustainable development include?
2. What is the status of VET in CCOT2?
3. What are the standards and strategic solutions for the sustainable development of VET in the CCOT2 in the period of 2016-2020?

To find the answers for the questions, the study has looked at CCOT2, a public vocational college under the Ministry of Transport, which is being invested to be one of the 45 high quality vocational colleges in Vietnam as a case to study. 20 trainers and managers and 97 graduated students of the college have taken part in the research, and relevant documents have been used to collect data for this research. The documents include such data as financial reports, annual training reports, and the questionnaire for the graduates in 2015, the development strategy of CCOT2 in the period of 2011-2015 and the vision to 2020, and the vision in the period of 2016-2020 and the vision to 2030. Moreover, this research have conducted a survey to find the answers for the research questions.

On the one hand, the key theoretical concepts of the study are VET, SWOT analysis, Balanced Scorecard. The literature review consists of the three major parts of strategic management, sustainable development, an overview of VET in Vietnam. It also looks at two major conceptual

frameworks in the theory of strategic management with a new approach to the strategic management and sustainable development. On the other hand, these conceptual frameworks are used to make standards for sustainable development of VET and they have filled the theoretical gaps in the conceptual framework of previous researches in Vietnam.

Although most of the previous studies concentrated on the theory of strategic management, they did not focus on change management with the idea that society and people face economic competition between organizations. Hence people have to change the attitude, thinking, and their actions and eventually change themselves to get used to new circumstances. John Kotter argued that if leaders want to have a good strategy to gain objectives, they have to face challenges in the change and keep a stable situation in an organization. Sustainable development is the development of the economy in association with social responsibility and protection of natural environment. This development meets current and future social needs and is suitable with the orientation of economic development in a country. On the one hand, development process does not have bad impacts to environments.

These findings from the study fill some missing views in these theories. Consequently, with these two major theories, this study has presented the theory of sustainable development in strategic management. This definition has shown that strategy will obtain expected goals with sustainable development if it connects with social responsibility (for example, employees must obey regulations and government policy in the managerial process). Especially it satisfies the need of the stakeholders and economic prospect in the future; it contributes to social cohesion with sustainable development. After all, it is VET for the sustainable development with the definition of UNESCO with promotion of people's competence by education and training for apprentice of the importance of sustainable development help them to change your behavior. The finding has supported the idea in the literature that conditions to ensure sustainable development of VET is stable enrollment and finance of vocational schools and satisfying customers' needs. Additionally, training quality has to be ensured through a rate of 80% students being able to find right jobs after graduation and promotion of social development through the vocational training process without affecting the environment.

One of the significant findings of this thesis is that most of the previous studies of VET believed that the problems of VET in Vietnam were training programs, teachers and infrastructure. Nevertheless, this study claims that the main problems of VET at present are enrollment and

finance. It also shows that in order to enhance the training quality, vocational schools should satisfy the customer's needs and the conditions to ensure training quality and strengthen the internship or practice in the enterprise by controlling and taking care of the internship process in businesses. The next contribution of this study is the provision of the standards of sustainable development of VET to measure the sustainability of an organization.

On the other hand, the findings from documents and studied of current situations of CCOT2 found that although it is one of the 45 vocational college with high training quality in Vietnam and a public vocational college of the Ministry of Transport, with training of 13 careers with 5 key careers (1 careers at the national level, 2 careers at the ASEAN level, 2 careers at the international level) and two centers of vocational skill evaluation at the national level, , CCOT2 faced in the period 2011-2015 the difficulties in enrollment and finance as well as some gaps in its training quality such as teachers, curriculum, and syllabus.

By comparison with the essential standards to ensure sustainable development of VET, we concluded that the activities of VET in CCOT2 are not sustainable because of such reasons as the decreasing enrollment scale in this period with fewer new students going to the college (i.e. 16.5% to 51.9%, see Figure 6 and 7). Some of its training sections could not attract enough apprentices for training. Additionally, its finance was not stable because its revenue from training fees and its annual state budget allocation both fell down. Besides, the rate of graduates getting a good or excellent qualification was very low at 20.8% in 2011, reaching a low peak of 50.9% (Figure 7). This suggest that the training quality is not stable. Nevertheless, to fill some shortcomings when studying the situation of CCOT2 in the results of the study, this research has done the survey with the respondents being 97 gradates, 30 trainers and managers of CCOT2, 20 managers and leaders in other vocational institutions and 12 enterprises in Hai Phong city.

Firstly, this survey found that the graduates have supported the ideas in chapter 4 that 88.98% of them got employed mostly by public companies and 2.63 % of them are self-employed. The training quality has some gaps because the internship in the enterprise is not very good. 21.05% of the graduate-respondents do not satisfy with their trainers' professional qualification, and the theoretical teaching in the class is not good with 30.26% of the graduates rating this activity at a medium level. Syllabus and curriculum are essential conditions to ensure training quality, but up to 14.17% of the graduate-respondents somewhat agree and 2.63% disagree with the syllabus and

curriculum of the college. Although these numbers are not high, they prove that the syllabus and curriculum do not absolutely satisfy the apprentice's need. Added to these, they are working in companies with working position in level number three. The job situations of graduated students are not stable when they have moved from one company to another in a short time, and some graduates do not work with their trained qualifications. The findings suggest that CCOT2 does not meet apprentices' need and the graduates' job situations are not stable.

Second is the findings from enterprises. These results suggest that the quality of graduated students does not strongly meet the needs of enterprises. Therefore vocational schools should renew their curriculum, enhance training quality and innovate training forms and methods for different training levels to satisfy the needs of enterprises and the labour market. The findings from trainers and managers prove that financial activities in vocational training institutions are very difficult and the courses in vocational institutions have some gaps that need to be seen. Hence, to develop VET sustainably in CCOT2 is one of the important duties of the college. From the above findings, this study also has recommended nine strategic solutions of four groups for sustainable development of VET in CCOT2. These solutions are absolutely different from the solutions in other research and support enhancing the management, controlling the risks, promoting the social responsibility and satisfying customer's need. Especially, it has concentrated on enhancing enrollment by vocational institutions.

Most of the respondents agreed or strongly agreed with these solutions. It is said that these strategic solutions should be applied to CCOT2. Eventually, these solutions are imperative methods to solve these problems and to help CCOT2 develop sustainably in the future.

Consequently, the findings of this study have answered every research question. On the other hand, this study has met the objectives of the research and built a structure of research framework that links research topics with key theoretical frameworks for a specific case study.

6.2 Implications for practice

This study admitted the important role of VET in sustainable development of Vietnam. In the recent years, much research of VET proved that VET is being developed quantitatively without referring to gaps in the current vocational training. Furthermore, this study gives actual visions of leaders, managers and teachers in vocational institutions. VET in Vietnam is facing difficulties in

enrollment, finance, training quality, satisfactions of customers, professional qualification and institutional policy.

On the other hand, this research provided researchers with the context of VET in Vietnam and the current situation of VET in CCOT2 with its strengths, weakness, opportunities and threatens. It is certain that this theoretical framework is very important for future research to evaluate the sustainable development of vocational institutions. On the other hand, the findings of this research have shown that the current situation of VET in CCOT2 is not stable although it is a vocational public college of the Ministry of Transport, and evaluated to be at the third level of accreditation. On the one hand, CCOT2 is one of the 45 vocational institutions being invested to become high quality ones in Vietnam, but its VET has some gaps such as enrollment. This finding has found that many problems are happening in Vietnam's VET system at the present time.

Furthermore, the results of the survey of this study have found some gaps in VET such as enrollment, training and finance. These are major factors to ensure the sustainable development of a vocational training institution. There is an unbalance between the demand and the supply. VET currently does not satisfy the needs of both apprentices and the labour market. Additionally, VET is not attractive enough to apprentices, so in order to have good enrollment, vocational schools should create more attractiveness for VET and motivations for apprentices to enroll in a vocational college. Of course, the training quality should be ensured, and vocational schools should control it strictly. Furthermore, following the job situations of students after their graduation is very important in the improvement of the training quality and identifying the sustainable development of VET.

All in all, this thesis has made important practical contributions. The major findings of this study have answered the research questions by analyzing the current situations of VET in CCOT2. It is very useful in the actual context of VET. Especially it has supposed some suggestions of strategic solutions for other organizations to solve similar problems facing VET in CCOT2. On the other hand, the results in this thesis will help the Government, policy makers and leaders of vocational training institutions understand more about actual conditions as well as problems facing VET that will help them to give better policies of sustainable development of VET.

6.3 Limitations of the study and suggestions for future research

6.3.1 Limitations of the study

This research is a case study of the current situation in CCVOT2. A practical situation that happened in a small scope, it might not occur in other organizations. Additionally it is implemented with qualitative and quantitative research methods in a vocational college. It is certain that strategic solutions might not absolutely suitable with the situations of other schools. Therefore it is very difficult to make a theoretical generalization and to apply the solutions extensively.

Furthermore, sustainable development is a huge topic because it is related to the three major factors of economy, society and environment, but this study looked at sustainable development of VET only and thus mention the three current problems of VET - enrollment, training and finance. As a result, this study discusses the two factors of sustainable development (i.e. economy and society) while paying little attention to the environmental aspect although the training process might have some problems that lead to bad impacts on environments or some risks that might happen after the training process. On the other hand, because of the limited time of this research, its number of samples are accordingly limited. This survey would have better results if it had added more respondents being trainers and teachers from the vocational institutions.

6.3.2 Suggestions for future research

In this research, sustainable development of VET is focusing on the factors of economy and society. Consequently, future research might focus on the environmental aspect of sustainable development of VET. Besides, researchers might study policies for sustainable development of VET or use standards of sustainable development of VET to measure the sustainability of a vocational training institution. Additionally, researchers might study the application of the strategic solutions for sustainable development of VET in CCOT2 and measure their effectiveness. Even through, it suggests that the future researches might study similar situation in another vocational training institution to generate more empirical research on the sustainable development of VET.

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APPENDICES

APPENDIX 1: QUESTIONNAIRE FOR GRADUATES

MISNISTRY OF TRANSPORT

Code of students



VOCATIONAL COLLEGE OF TRANSPORT NO II

- Address: Hong Thai, An Duong, Hai Phong

- Tel: 031 8602835 Fax: 031 3670794

- Email: truongcdngtvtw2@vnn.vn

Website: <http://cvcot.edu.vn>

Questionnaires of student's job situations after graduation

Dear students,

We will be very happy if you fill in the questionnaire with your work experience after graduation.

The information is very important to us to enhance the training quality. Many thanks.

If you have any questions regarding this questionnaire, please contact:

Quach Thi Thanh Binh, Ms.

Mobile: 0984349222

Email: binhqtt@cvcot.edu.vn

1. (Please put x in each box with one question)

Personal information

Sex Male Female

1. Date of birth ___/___/19__

3. Relationship to vocational training in CCOT2, Which kind of certificate/ vocational qualification do you get when you finished the course?

Average Over Average good Very good Excellent

A. Experiences in the labor market

4. Please tell about the job situation at now

Working for a public company -> then answer question 15

Self - employment -> then answer question 15

Did not find a job/ unemployment -> then answer question 16

Continuing studying -> answer part C

Do not want to work -> answer part D

Other, write reasons..... -> **answer part D**

5. How many hours do you work a week? Hours

6. How long have you started to work in the current job after graduation from CCOT2?

- Under 1 month 1-3 months 3- 6 months Over 6 months

7. How do you find a job?

- Placement by vocational training institute Personal contacts (family, friends)
 Through job service office Job advertisement in the internet
 Job advertisement in newspaper / radio / TV Job fair

8. The training course of CCOT2 supplied you knowledge and skills that meet your current job?

- Strongly agree Agree Somewhat agree
 Disagree strongly disagree

9. How do your job relate to your training at CCOT2?

- Related Closely related not related

10. Training equipment of CCOT2 is useful for the current job?

- Relative Closely Relative Not relative

11. How much do you earn a month? (unit: VND)

- <1 million 1-2 million 2-4 million 4-8 million >8 million

12. How many people are working with you in the company? If you are self-employed, please tell me how many people are working in your company (including you)?

- 1 2-10 10-200 200-300 > 300

13. Do you get trained in the working place?

- Yes No (move to question 14)



How long have you trained yourself in your company since you started work?

- Under 2 weeks 2-5 weeks 1-2 months 2-5 months Over 5 months

14. If the working positions in your company were divided into ten levels, level 1 being the lowest and level 10 being the highest, which level of position are you at now?

- 1 2 3 4 5 6 8 9 10

15. Please provide the name, address, telephone numbers of your company

Name: _____

Address: _____

Telephone: _____ Email/website:

Fields of production of your company:

- | | |
|--|---|
| <input type="checkbox"/> Agriculture, Forestry and fishery | <input type="checkbox"/> Construction |
| <input type="checkbox"/> Industry | <input type="checkbox"/> Services (hotel, restaurant, bank, etc.) |
| <input type="checkbox"/> Education /Training | <input type="checkbox"/> Transport |
| <input type="checkbox"/> Trade | <input type="checkbox"/> Others |

If you are current unemployed, please answering questions 16 & 17:

16. Which job did you apply for?

- A job in line with my trained qualification
- A job not in line with my trained qualification
- Both

17. Why couldn't you find a job? (You can tick many boxes for this question)

- My training course did not meet the work requirements
- My language command was not satisfactory
- My information technology level was not satisfactory
- I did not have experience in that job
- My practical skills in machinery and equipment are not good
- I did not have enough information of that job
- I did not have soft skills
- Others

C. Continuing study

18. Are you learning?

- Yes No => (move to **part D**)

If you are learning, please write the name of the training institution and the form you are leaning:

Institution: _____

Name of the course: _____

Qualification level of the course:

University College School Others

D. Training evaluation

19. Do trainers' professional qualifications meet training requirements?

Very satisfactory Satisfactory Little satisfactory
 Not good Strongly not good

20. The content of syllabus and curriculum is updated suitable with need

Strongly agree Agree Somewhat agree
 Disagree Strongly disagree

21. Do you evaluate theoretical and practical teaching in CCOT2?

Practice: Very good Good Average Bad Very bad

Theory: Very good Good Average Bad Very bad

22. If you can improve the quality of the course, which aspect you will improve?

- Studying documents (Books, v.v.) Pedagogical qualifications of teachers
- Equipment (Machines, tools, v.v.)
- Knowledge of the teacher's professional theory of the subject they teach
- Facilities (class room, library) Interns/ practice in factories and enterprises
- Practical skills of teachers in the field they teach
- Others, write specifically.....

23. General evaluation: I am satisfied with the quality of the training I have received from the vocational training institution

Very good Good Average Bad Very bad

Data security:

All of your answers will be kept confidential, staff or training institutions will not be able to know your participation in this survey and your answers about information outside of the school in this questionnaire. All information that identifies you as your name or address will be removed from the database at the end of this survey (approximately 1 year).

APPENDIX 2: QUESTIONNAIRE FOR TRAINERS, MANAGERS



MINISTRY OF TRANSPORT
THE CENTRAL VOCATIONAL
COLLEGE OF TRANSPORT NO II

(Questionnaire for teachers, trainers and managers)

QUESTIONNAIRE

Dear all,

With a hope that my contributions in the research will improve the current situation for sustainable development of CVOT2 and VET in Vietnam, please give your opinions of the following problems:

(All information will kept secret and used only for the purposes of this research)

I. INFORMATIONS (You tick the x in the box in each selection)

1. Sex Male Female

2. Age:.....

3. Office:.....

4. Qualification:.....

5. Language Level:.....

6. Current position:.....

7. Managing time/teaching time (How many years?):If you are a manager, please answer Question 8.

8. Do you take part in teaching? (If yes, please write the name of subjects or modules you are teaching) No Yes

II. OPINIONS (Put x in the box of your choice)

Levels: 1 = strongly disagree, 2 = disagree, 3 = somewhat agree, 4 = agree, 5 = strongly agree

I	Training	1	2	3	4	5
1	Training program satisfies the requirements of the labour market					
2	Training curriculum and methods satisfy the needs of apprentices					
3	The contents of the syllabus meet all requirements of jobs					
4	The course helps students develop essential skills for future careers.					
5	The goals of the training course meet the needs of apprentices					
6	The course equipped students with labor safety and risk reduction					

7	The course equipped students with the knowledge of the apprentice's social responsibility for vocational practice, the working environment and the company.					
II	Finance					
8	Teacher's salary is paid in line with your professional qualification					
9	Annual expenditure items are listed by a plan					
10	Financial reports of annual expenditures are published					
11	Financial activities of your college are controlled by internal audit and state audit					
12	State budget is allocated effectively and reasonably spent					
13	The annual revenue of CCOT2 is not enough for its training activities					
14	All items of CCOT2's revenues and expenditures have been balanced					
15	Payment for other activities of teachers is not appropriate					
16	Revenues from training and production services are sufficient to cover other activities and training costs.					
III	Strategic solutions					
1	Enhancing the annual enrollment scale					
2	Strengthening the capacities of management in VET					
2.1	Strengthening financial management (Control internal expense)					
2.2.	Developing curriculum and syllabus of vocational training for sustainable development					
2.3.	Strengthening forecast and demand survey of labour market					
2.4.	Change management					
2.5.	Monitoring of outcomes					
3	Enhancing quality of vocational training					
4	Establish relationships between students, vocational schools and businesses					

Thank you for your answers.

APPENDIX 3: QUESTIONNAIRE FOR ENTERPRISES



THE CENTRAL VOCATIONAL COLLEGE OF TRANSPORT NO TWO

Add: Hong Thai - An Duong - Hai Phong.

Tel: 0318602875- Fax: 0313670794

Website: [Http://www.cvcot.edu.vn](http://www.cvcot.edu.vn) – Email: truongcdngtvtw2@vnn.vn

Many thanks for your cooperation in recent years. In order to enhance our training quality and to satisfy our custom's need, please give me some opinions of the following issues by putting x in the box or circle in each selection.

(All information will be kept secret and used only for the purposes of this research)

I. ENTERPRISE'S INFORMATION

Organization/ Company:

Address:

.....

Tel: Fax:

Website:

Full name:

Position: Tel:

Email:

II. OPINIONS (Put x in the box of your choice or circle your selection)

Levels: 1 = strongly disagree 2 = disagree, 3 = somewhat agree, 4 = agree, 5 = strongly agree

No	Questionnaire	1	2	3	4	5
1	Flexible vocational training methods in the CCOT2					
2	Graduates from CCOT2 meet their work requirement in your enterprise					
3	Our students have a good attitude with duties					
4	Our students have good knowledge with labour safety					
5	Our students have a good attitude with staff and colleagues in the company					
6	Products produced by the student satisfies the technical requirements of your company					

7	Their vocational skills are applied with average level in the current jobs					
8	Training forms at addresses in enterprises and localities are flexibly organized to meet the needs of the society					
9	Our training fields satisfy the needs of the locality and the labor market					
10	The current training form of CCOT2 (college, secondary, primary, and short-term) meet the current requirements of the labor market and enterprises.					
11	Our organization have a good relationship with enterprises					
12	An assessment of the occupational skills of our student and the integration with the corporate and institutional environment					
13	Training curriculum satisfies the current needs of your enterprise					

14. Student Highlights (if applicable).....
.....
.....

15. The required fields and skills of student internship meet the needs of business agencies
Career.....
.....
Skills.....

16. Requests of your agency/ enterprise to CCOT2
.....
.....

17. The demand for students to practice internships of your agency/enterprise:
 Usually sometimes Others

18. The need to recruit our students go to work in your agency/enterprise:
 Usually sometimes Others

19. Your agency/enterprise will continue to receive students of the internship in the future.

Yes

No

20. Agency/enterprise will continue to recruit our graduates to work in your respectful organization in the near future

Yes

No

Thank you for your precious comments. We look forward to receiving your cooperation in the future.

APPENDIX 4: Financial resource of CCOT2 in 2015

No	Content	2015
	A - Total revenues of the organization	
I	Revenue items	7,800
1	Collection of training fees and charges	2,224
2	Revenue from products and services	5,386
3	Revenue from other careers	190
II	Revenue from state budget allocation	162
1	Collection of training fees and charges	
2	Revenue from products and services	162
III	Revenues retained for use in the College	3,043
1	Collection of training fees and charges	2,224
2	Revenue from products and services	650
3	Revenue from other careers	169
IV	State Funding	31,390
1	Recurrent expenditure plan	18,690
2	National target program	
3	The project of innovation and vocational training developments	9,400
3.1	Anti-degradation	3,300
	B – Total expenditures of CCOT2	
I	Plan of expenditures from state budget	31,390
1	Recurrent expenditure	18,690
a	Personal expenses	15,088
b	Expenses from products and services	1,560
c	Professional expenses	1,279
d	Property repair expenses	389
e	Other expenses	374
4	spending as implementation of national target programs	9,400
5	Other spending	
5.1	Anti-degradation	3,300
II	Plan of expenditures retained for use in the College	3,043

1	Recurrent expenditures	3,043
A	Personal expenditures	992
B	Expenses from products and services	235
C	Professional expenses	542
D	Property repair expenses	105
E	Other expenses	1,169
III	Total expenditures from state budget and revenues retained for use by the College	34,433
1	Recurrent expenditures	21,733
A	Personal expenditures	16,080
B	Expenses from products and services	1,795
C	Professional expenses	1,821
D	Property repair expenses	494
E	Other expenses	1,543
2	Implementation spending of national target programs	9,400
7	Other spending	
	Anti-degradation	3,300

APPENDIX 5: Training quality

Course	Training career	Training quality	Total	%
K06.CĐN	Industrial electricity	Very good	3	3.95%
		Good	44	57.89%
		Average	22	28.95%
		(blank)	7	9.21%
	Total		76	100.00%
	Welding	Very good	6	66.67%
		Good	2	22.22%
		(blank)	1	11.11%
	Total		9	100.00%
K06.CĐN Total			85	
K07.TCN	Industrial electricity	Very good	1	16.67%
		Good	4	66.67%
		Average	1	16.67%
	Total		6	100.00%
	Welding	Very good	6	100.00%
	Total		6	
K07.TCN Total			12	

APPENDIX 6: Aspects for improvement

Course	Training career	Aspects for improvement	Total	%
K06.CĐN	Industrial electricity	Infrastructure	12	15.79%
		Teachers' specialized knowledge	1	1.32%
		Internship / practical in-company training	4	5.26%
		Equipment	52	68.42%
		(blank)	7	9.21%
	Total		76	100.00%
	Welding	Infrastructure	7	77.78%
		Internship / practical in-company training	1	11.11%
		(blank)	1	11.11%
	Total		9	100.00%
K06.CĐN Total			85	
K07.TCN	Industrial electricity	Internship / practical in-company training	4	66.67%
		Equipment	2	33.33%
	Total		6	100.00%
	Welding	Infrastructure	6	100.00%
	Total		6	
K07.TCN Total			12	
Grand Total			97	

APPENDIX 7: Practical evaluation in the workshop

Course	Career	Answers	Total	%
K06.CDN	Industrial electricity	Very good	1	1.32%
		Good	54	71.05%
		Average	14	18.42%
		(blank)	7	9.21%
	Total		76	100.00%
	Welding	Very good	5	55.56%
		Good	3	33.33%
		(blank)	1	11.11%
		Total	9	100.00%
K06.CDN Total			85	
K07.TCN	Industrial electricity	Good	5	83.33%
		Average	1	16.67%
	Total		6	100.00%
	Welding	Very good	6	100.00%
	Total		6	100.00%
K07.TCN Total			12	
Grand Total			97	

APPENDIX 8: Evaluation of theoretical teaching

Course	Career	Answers	Total	%	
K06.CĐN	Industrial electricity	Very good	1	1.32%	
		Good	45	59.21%	
		Average	23	30.26%	
		(blank)	7	9.21%	
	Total		76	100.00%	
	Welding	Very good	5	55.56%	
		Good	3	33.33%	
		(blank)	1	11.11%	
	Total		9		
	K06.CĐN Total			85	
K07.TCN	Industrial electricity	Good	6	100.00%	
	Total		6	100.00%	
	Welding	Very good	6	100.00%	
	Total		6		
K07.TCN Total			12		
Grand Total			97		

APPENDIX 9 : Professional level of teachers

Course	Training careers	Evaluations	Total	%
K06.CDN	Industrial electricity	Little satisfactory	16	21.05%
		Very satisfactory	5	6.58%
		Satisfactory	48	63.16%
		(blank)	7	9.21%
	Total		76	100.00%
	Welding	Very satisfactory	8	88.89%
		Satisfactory	1	11.11%
	Total		9	11.84%
K06.CDN Total			85	85
K07.TCN	Industrial electricity	Very satisfactory	1	16.67%
		Satisfactory	5	83.33%
	Total		6	6
	Welding	Very satisfactory	5	83.33%
		Satisfactory	1	16.67%
	Welding Total		6	100.00%
K07.TCN Total			12	12
Grand Total			97	97

APPENDIX 10: Syllabus and curriculum

Course	Training careers	Evaluation	Total	%	
K06.CDN	Industrial electricity	Somewhat agree	11	14.47%	
		Agree	52	68.42%	
		Strongly agree	6	7.89%	
		Disagree	2	2.63%	
		(blank)	5	6.58%	
	Industrial electricity Total			76	100.00%
	Welding	Agree	2	22.22%	
		/strongly agree	6	66.67%	
		(blank)	1	11.11%	
	Welding Total			9	100.00%
K06.CDN Total			85		
K07.TCN	Industrial electricity	somewhat agree	1	16.67%	
		agree	4	66.67%	
		strongly agree	1	16.67%	
	Total		6	100.00%	
	Welding	somewhat agree	1	16.67%	
		strongly agree	5	83.33%	
	Total		6	100.00%	
K07.TCN Total			12		
Grand Total			97		

APPENDIX 11: Job situations

Course	Career	Situations of Job	Total	%
K06.CDN	Industrial Electricity	Others	6	7.89%
		Working for a public company	68	89.47%
		Self-employment	2	2.63%
	Total		76	100%
	Welding	Working for a public company	8	88,98%
		Others	1	11.11%
		Total	9	100%
Total			85	
K07.TCN	Industrial Electricity	Working for a public company	6	100%
	Total		6	100%
	Welding	Working for a public company	6	100%
	Total		6	

APPENDIX 12: The time to find a job after graduation

Course	Career	Time	Total	%
K06.CDN	Industrial electricity	1-3 months	38	50%
		3-6 months	11	14.47%
		Under 1 month	21	27.63%
		(blank)	6	7.89%
	Total		76	100%
	Welding	1-3 months	6	66.67%
		3-6 months	2	22.22%
		(blank)	1	11.11%
	Total		9	100%
Total			85	
K07.TCN	Industrial electricity	3-6 months	4	66.67%
		Under 1 month	2	33.33%
	Total		6	100%
	Welding	1-3 months	5	83.33%
		3-6 months	1	16.67%
	Total		6	100%
Total			12	

APPENDIX 13: Evaluation of training skills

Course	Career	Skill evaluations	Total	%
K06.CĐN	Industrial electricity	Somewhat agree	18	23.68%
		Agree	47	61.84%
		strongly agree	4	5.26%
		Disagree	1	1.32%
		(blank)	6	7.89%
	Total		76	100.00%
	Welding	Agree	3	33.33%
		Strongly agree	5	55.56%
		(blank)	1	11.11%
	Total		9	100.00%
Total			85	
K07.TCN	Industrial electricity	Agree	4	66.67%
		Strongly agree	2	33.33%
	Total		6	100.00%
	Welding	Somewhat agree	1	16.67%
		Strongly agree	5	83.33%
	Total		6	100.00%

APPENDIX 14: Current job related to the training

Course	Career	Answers	Total	%
K06.CDN	Industrial electricity	Closely related	13	17.11%
		Not related	4	5.26%
		Related	53	69.74%
		(blank)	6	7.89%
	Total		76	100.00%
	Welding	Related	8	88.89%
		(blank)	1	11.11%
	Total		9	100.00%
Total			85	
K07.TCN	Industrial electricity	Closely related	1	16.67%
		Not related	1	16.67%
		Related	4	66.67%
	Total		6	100.00%
	Welding	Related	6	100.00%
	Total		6	
Total			12	

APPENDIX 15: Monthly wage

Course	Career	Current wage (unit: VND)	Total	%
K06.CĐN	Industrial electricity	>8 million	8	10.53%
		2-4 million	13	17.11%
		4-8 million	49	64.47%
		(blank)	6	7.89%
	Total		76	100.00%
	Welding	>8 million	3	33.33%
		4-8 million	5	55.56%
		(blank)	1	11.11%
	Total		9	100.00%
Total			85	
K07.TCN	Industrial electricity	>8 million	2	33.33%
		4-8 million	4	66.67%
	Industrial electricity Total		6	100.00%
	Welding	>8 million	2	33.33%
		4-8 million	4	66.67%
	Welding Total		6	100.00%
K07.TCN Total			12	

APPENDIX 16: Scale of company

Course	Career	The number of people working in the same company	Total	%
K06.CĐN	Industrial electricity	10-200 people	31	40.79%
		200-300 people	24	31.58%
		2-10 people	4	5.26%
		> 300 people	11	14.47%
		(blank)	6	7.89%
	Industrial electricity Total		76	100%
	Welding	10-200 people	1	11.11%
		200-300 people	2	22.22%
		> 300 people	5	55.56%
		(blank)	1	11.11%
	Welding Total		9	100%
K06.CĐN Total			85	
K07.TCN	Industrial electricity	10-200 people	5	83.33%
		200-300 people	1	16.67%
	Industrial electricity Total		6	100%
	Welding	10-200 people	3	50.00%
		> 300 people	3	50.00%
	Welding Total		6	100%
K07.TCN Total			12	

APPENDIX 17: Training in the company

Course	Career	Training in the company	Time	Total	%	
K06.CDN	Industrial electricity	Yes	<2 weeks	10	13.16%	
			25 months	1	1.32%	
			25 weeks	6	7.89%	
			(blank)	1	1.32%	
		Yes Total			18	23.68%
		No	(blank)	52	68.42%	
		No Total			52	68.42%
		(blank)	(blank)	6	7.89%	
		(blank) Total			6	7.89%
		Industrial electricity Total				76
	Welding	Yes	/<2 weeks	2	22.22%	
		Yes Total		2	22.22%	
		No	(blank)	6	66.67%	
		No Total		6	66.67%	
		(blank)	(blank)	1	11.11%	
		(blank) Total		1	11.11%	
	Welding Total			9	100.00%	
K06.CDN Total				85		
K06.TCN	Industrial electricity	No		19	90.4%	
		(blank)		2	8.6%	
	Industrial electricity Total			21		
	Welding	No		3	100%	
	Welding Total			3		
K06.TCN Total				24		

APPENDIX 18: Working position

Course	Career	Working position	Total	%	
K06.CDN	Industrial electricity	1	1	1.32%	
		2	6	7.89%	
		3	37	48.68%	
		4	11	14.47%	
		5	11	14.47%	
		6	3	3.95%	
		7	1	1.32%	
		(blank)	6	7.89%	
	Industrial electricity Total			76	100.00%
	Welding	2	2	22.22%	
		3	2	22.22%	
		4	4	44.44%	
		(blank)	1	11.11%	
	Welding Total			9	100.00%
	K07.TCN	Industrial electricity	1	2	33.33%
		3	3	50.00%	
		4	1	16.67%	
	Industrial electricity Total		6	100.00%	
	Welding	1	1	16.67%	
		3	5	83.33%	
	Welding Total		6	100.00%	
K07.TCN Total			12		

APPENDIX 19: Opinion of enterprises

No	Questionnaires	1	2	3	4	5
1	Flexible vocational training methods in the CCOT2		1	2	9	
2	Graduates from CCOT2 meet the work requirement of your enterprise			4	8	
3	Our students have a good attitude with duties				10	0
4	Our students have good knowledge with labour safety		2		7	3
5	Our students have a good attitude with staff and colleagues in the company				10	2
6	Products produced by our students satisfy the technical requirements of your company			3	9	
7	Their vocational skills are applied with average level in the current jobs			2	10	
8	Training forms at addresses in enterprises and localities are flexibly organized to meet the needs of the society			4	8	
9	Our training fields meet the needs of the localities and labor markets		4	2	6	
10	The current training forms of CCOT2 (college, secondary, primary, short-term) meet the current requirements of the labor market and enterprises.			5	7	
11	Our organization have a good relationship with enterprises		1	7	4	
12	An assessment of the occupational skills of our student and the integration with the corporate and institutional environments			2	10	
13	The training curriculum satisfies the current need of your enterprise			5	7	

APPENDIX 20: Opinion of leaders, managers and teachers

I	Training	1	2	3	4	5
1	Training program satisfies the requirements of the labour market		2	26	7	5
2	Training curriculum and methods satisfy the needs of apprentices		1	5	24	10
3	The contents of training course meets the requirements of current jobs		2	20	15	3
4	The course helps students to develop essential skills for future careers		3	20	10	7
5	The goals of training course meet the needs of apprentices		3	7	35	5
6	The course equipped students with labor safety and risk reduction			10	30	
7	The course equipped students with knowledge of apprentice's social responsibility for their job and company		8	5	27	
II	Finance	1	2	3	4	5
8	Teacher's current salary is paid in line with your professional qualification			3	17	10
9	Annual expenditure items are listed by a plan		7	6	17	10
10	Financial reports of annual expenditures are published	10	3	10	20	7
11	Financial activities of your college are controlled by internal audit and state audit				10	30
12	State budget is allocated effectively and spent reasonably	3		7	20	10
13	The annual revenue of CCOT2 is not enough to cover the training activities		2		10	8
14	All items of CCOT2's revenues and expenditures have been balanced			6	12	2
15	Payment for other activities of teachers is not appropriate		5	10	24	1
16	Revenues from training and production services are sufficient to cover other activities and training costs.		5	7	18	10
III	Strategic solutions	1	2	3	4	5
1	Enhancing the annual enrollment scale					
2	Strengthening the capacities of management in VET				13	27
2.1	Strengthening financial management (Control internal expense)				37	3
2.2.	Developing curriculum and syllabus of vocational training for sustainable development				28	12
2.3.	Strengthening forecast and demand survey of the labour market				10	30

2.4.	Change management				35	5
2.5.	Monitoring of outcomes				28	12
3	Enhancing quality of vocational training				25	15
4	Establish relationships between students, vocational schools and businesses				10	30