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**JOINT TRAINING BETWEEN TECHICAL SCHOOLS AND  
ENTERPRISES**

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# INTRODUCTION

## 1. Necessarity of the theme

Technical labor is motivation of social-economic development and becomes a prerequisite for Vietnam's industrialization – modernization progress

The 2011-2020 socioeconomic development strategy [66] stated that: "... Implementing close cooperation between enterprises, employer units, educational institutions and the Government to develop human resource... Implementing high-quality human resource training projects with key industries and main majors. Attaching special importance to recognize, promote talented people and train manpower for developing an intellectual economy..."

The 2011-2020 educational development strategy [83] signed by the Prime Minister on 13 June 2012 stated an obvious target of developing vocational education and tertiary education: "Finalize the structure of vocational education system and universities; adjust economic sectors and level of training, improving training quality, to meet the needs of human resources for social-economic development; train citizens who have creative ability, independent thinking, citizen's responsibility, profession's moral and skills, foreign language capability, self-employment capability and adaptation ability to the fluctuated labour market and become citizens with competitive ability on regional and global scales..."

Nowadays, technical schools in Vietnam have developed both quantity and quality following a general trend of professional technical schools in the world. A nationwide network of technical schools with varied types of schools, majors, training methods as well as resources follow an integrating approach to the global trend.

The schools' training curriculum need to satisfy the job position's requirements so that post-graduates can be able work immediately in producing position of the enterprises

Policies of joint training between technical schools and enterprises have been existed for a long time in our country. They **have** been put into Law on Education, Law on Vocational Training and other legal documents of the state. However, they **have** not been implemented and achieved expected results because of objective and subjective reasons.

Rising from above theoretical and practical contexts, I decided to choose the theme: "*Management of joint training between technical schools and enterprises*" to do my research with an expectation of contributing to improve quality and sufficiency of manpower training.

**2. Objectives of the study:** To propose some methods of managing joint training between technical schools in Bac Ninh province and enterprises, aiming at ensuring "outcomes" – workforce which meet the requirement of enterprises.

## 3. Objects of the study

**3.1. Object of the study:** Joint training between technical schools in Bac Ninh province and enterprises

**3.2. Entity of the study:** Management of joint training between Technical schools and enterprises.

## 4. Scientific theories

If management methods of joint training between technical schools are implemented with exact CIPO model features which promote the shared role and responsibilities as well as responsibility of each party; create an cooperative environment in each phase: from enrolling to finding job for students then both management and outcomes of joint training will be improved.

## 5. Tasks of the study

- Researching theoretical basis for joint training and management of joint training between technical schools and enterprises

- Assessing **the fact** of managing joint training between technical schools in Bac Ninh province and enterprises, **shortcomings** and reasons.

- Proposing some methods of managing joint training between technical schools and enterprises in Bac Ninh province

- Testing some methods in technical schools in Bac **Ninh** province to test the correctness of scientific theories

## 6. Scope of the study

- Due to the study's limit condition, this thesis researched the status of managing joint training between technical schools in Bac Ninh province with the electromechanics, electric major. This theme is conducted in 6 technical training institutions and 40 FDI enterprises which use manpower at technical education level in Bac Ninh province, Department of Education and Training, Bac Ninh business guild, Management board of Bac Ninh industrial zones.

- To study the status of joint training, the study used statistics, collected data, events, researches from 2010 to 2014.

## **7. Approaching methods and specific methods of the survey.**

### **7.1. Approaching methods:**

- System-structure approach of training process, development opinion, practical opinion, objectives opinion are main methodologies for conducting this survey.

- Supply and demand approach, market mechanism have affected on every aspects of society, culture and economy. Manpower's training is also affected. The rule of market mechanism: supply - demand; competition rule significantly affected training's orientation and organization. JT between technical schools and enterprises becomes the inevitable trend of social needs, in accordance with objective rules. Therefore, JT and JT's management should be studied in view of market access, based on analysis, evaluation and feedback from the labor market in order to devise practical solutions to management and efficiency.

- Process approach is managing the training following which is carefully analysed and defined with a clear division of tasks for technical schools and enterprises from enrolling phase, teaching and learning activities to outputs. The process approach helps managers with controlling activities from the beginning compiled agreed standards, and pay attention to new context's impact, especially implementation of the Resolution on the basic and comprehensive renovation of education and training.

### **7.2. Specific methods of the survey:**

Group of: desk research and inheritance Methodology; Reality research Methodology; Expert Methodology.

## **8. Protected arguments**

Manpower training management in the current period is sufficient when implementing joint training with enterprises. This is an inevitable requirement of manpower's training to meet the requirement of enterprises and to improve training's quality in industrialized – modernized and integrated current context.

Joint training management with enterprises is an effective method which help technical schools promote their strengths, improve their weaknesses, change training activities of schools, make the outcomes fulfil the requirement of the labour market and enterprises, then enhance vocational training's quality.

Joint training management with enterprises with CIPO model is management based on process approach from "input" to "outcomes" by managing 4 factors: Context – adjusting impacts of contexts requires schools and enterprises to cooperate in investigating the market, analyzing job's characteristics, predicting manpower's demand, risks and challenges of joint training; Input – associating in enrollment, sharing resources consisting of infrastructure, equipment, teachers, technical staff of enterprises, building target, content of the curriculum; Process – Associating to manage training process including teaching process of teachers, learning and practising process of students; Outcome – Associating to monitor outcomes including quantity and quality of graduates, number of students having a job, level of enterprises' requirement satisfaction will contribute to decide training quality during process of managing joint training.

## **9. New contributions of the thesis**

### **9.1. Theoretical contributions**

- Systematizing theoretical basic of joint training's management between technical schools and enterprises; Clarifying advantages and responsibility of joint training between technical schools and enterprises in manpower's training; Developing contents of managing joint training between technical schools and enterprises apply CIPO approach for training management.

### **9.2. Practical contributions**

- Studying, assessing status of joint training and managing joint training between technical schools in Bac Ninh province and enterprises.

- Proposing methods of managing joint training between technical schools in Bac Ninh province and enterprises to improve training result, satisfy the requirement with trained labours.

## **10. Structure of the thesis**

Apart from introduction, conclusions, recommendation list of references and appendices, the thesis are structured into 3 main chapters:

Chapter 1: Basic theoretical issues about managing joint training between technical schools and enterprises.

Chapter 2: Status of managing joint training between technical schools in Bac Ninh province and enterprises

Chapter 3: Methods of managing joint training between technical schools and enterprises

## **CHAPTER 1. BASIC THEORETICAL ISSUES ABOUT MANAGING JOINT TRAINING BETWEEN TECHNICAL SCHOOLS AND ENTERPRISES**

### **1.1 Overview**

Process of analyzing and systematizing reference materials of foreign and Vietnamese authors, we can sort contents relating to management of joint training (JT) with enterprises as below:

*1.1.1. The issue of training to meet the needs of society*

*1.1.2. The issue of joint training with enterprises*

*1.1.3. The issue of training models*

Results of above research projects confirm that JT is one of efficient methods in training labours to meet the demand of enterprises's development; by JT with enterprises, schools will build their reputation and brand in training.

JT is researched and implemented in foreign countries, many JT models are established, but not researched following CIPO orientation. The management role of schools and enterprises is not clearly defined in JT.

There are currently no particular researches in managing JT with enterprise in technical schools.

### **1.2. Some basic concepts**

#### ***1.2.1 Joint training in the technical schools (TS)***

**Training:** Training is a process which equips for students with job-related knowledge, skills and at the same time educates learner's moral qualities, attitudes so that they become labors who "have knowledge, professional skills at various levels as well as have ethical conscience, sense of discipline, industrial working manner and good health. It creates chances for workers to find jobs, meet the requirements of economic development – society and strengthen national defense and security." This process takes place in educational institutions such as universities, colleges, technical schools and technical centers...following a plan, program or content within a specified period for each specific job to help students achieve a certain level of professional workers.

"Training" concept in this thesis means a process that provide students with necessary attitudes, skills, knowledges of one job and intergating skills in enterprises to do all the job's tasks or self-creating jobs in that job's area.

**Joint training:** JT is a combination of training institutions and enterprises to make a plan, and to implement together on the basis of mutual accountability community's principle, mutual benefit and ensuring the intended target.

#### ***1.2.2 Management of joint training with enterprises***

**Management:** Management is the process of carrying out selection, organization and implementation of the resources, impacts of the management entities under an active plan and in accordance with objective rules to influence the management's object to create the necessary changes for the existence (maintenance), stability and development of the organization in a fluctuated environment.

**Management of training:** Management of training is the process of planning, organizing, leading, checking resources and training activities of the organization in order to achieve the training purposes of the organization. Management of training in the technical schols is a process of planning, organizing, directing, testing and assessing training activities which aim at achieving the objectives of

training, to implement the requirements in training the people who have necessary qualities and competencies, work actively and creatively, and meet professional standards set out and job's demand in the society.

**Management of joint training:** "Management of joint training" in this thesis at micro level is management of organizing process in implementing between parties in joint training on a voluntary basis and agreement on the content, form, extent, associated training models. **Enterprise:** Enterprise is defined that: "Enterprise is an economic organization, having the legal status of the business registration as prescribed by law for the purpose of implementing business activities, activities of production, supplying and exchanging goods in the market according to the principle of maximizing benefits to consumers".

### **1.3. Technical school in the national educational systems**

**1.3.1. The concept of technical schools:** According to the author, TS are technical institutions at technical level in the national educational system. These schools have corporate capacity, seal and separate accounts.

#### **1.3.2 Functions and responsibilities of the technical schools:**

According to Law on Education [75], Law on Vocational Training [77], TS are institutions in the national educational system. TS help students acquire basic professional knowledge and practicing techniques of professions to solve common problems in accordance with trained major, to apply techniques, technologies in their work, independent working, team working. TS must focus on training practicing capacity, respect moral education, improve health, skills training as specific job's training requirement, improve educational attainment as training requirement, education must match between skills with theory in order to help learners to practise a profession. "Students completing the technical programme, eligible under the regulations, can take examination, and if qualified, shall be granted a degree by the school principal."

According to Article 3 of College Regulation [7]; Article 6.7 of the Technical school regulation [10] defined duties and powers of TS: "... Building enrollment targets, organizing enrollment, teaching, learning, managing trainees and other targeted educational activities, educational programs; accrediting graduate diploma or certificate within its jurisdiction; Building and issuing training programs on the basis of the provisions of the framework programs and the framework program sectors of Intermediate level by Ministry of Education and Training and Ministry of Labour, Invalids and Social Affairs. These organizations compile or choose majors' text books used as official teaching and learning materials at schools which ensures that texts books are sufficient at schools. Compilation or selection and approval of training majors' textbooks are complied with the regulations of the Ministry of Education and Training; and Ministry of Labour, Invalids and Social Affairs.

#### **1.3.3 Training contents in technical schools**

Technical education is a kind of various enrollment's objects, a type of training and structuring career. Technical training has a close relationship and is influenced by the demand and development level of socio-economy, labor market on the national scale, each region, local and socio - economy.

Each framework curriculum are equivalent to a specific training major. The curriculum is designed with units of study and skills (for those graduating from junior high school); knowledge of general subjects; knowledge, skills of basic or specialized subjects.

#### **1.3.4. Types of training**

According to the Regulation on Professional Technical training [10], there are two forms of training: Formal training and regular training.

Students graduating from secondary schools: 3-4 years duration;

Students graduating from high schools: 2 years duration;

Students graduating from high school and having a technical training certificate with the same major: 1.5 years duration;

### **1.4. Purpose, principles and content of joint training between technical schools and enterprises**

The state documents of training management in general is relatively full, however documents about JT, particularly JT with enterprises are almost none. Therefore JT with enterprises in schools is done mainly based on relationship, proactively and voluntarily, with no legal binding. The state should issue legal documents to encourage and create favorable conditions for enterprises to voluntarily participate in the training of human resources for the benefit of enterprises, training institutions, students and the whole society.

*1.4.1 Targets of JT with enterprises*

*1.4.2. Principles of joint training*

*1.4.3 Contents of JT between TS and enterprises*

## **1.5. Theory of organizing joint training and managing joint training between technical schools and enterprises approach to apply CIPO model**

### ***1.5.1. Organizing joint training with CIPO model::***

In the world today, there are JT with enterprises models: concurrent training modal , sequential training model and alternating training model. Every models have their own advantages and disadvantages.

CIPO model [49] is a process control model was proposed by Jaap Schireren . This model is quite suitable for the JT between TS and enterprises in the current period. It consists four elements: C- Context; I - Input; P – Process; O - Outcome [52] This model applies to examine the basic contents of the JT.

**Input (Input):** A begining phase of the JT programme, planning, selecting involved including: the number of enrolling students; the school's resources for serving JT (teachers, infastructure, teaching equipment, workshop, training curriculum, implementation plan, managers); resources of enterprises for serving JT (highly qualified technical team, financial capability, factories and production chain, human needs, managers).

**Process (Process):** The full implementation phase of goals, plans and content of training programs following the schedule. This is the process of transforming the elements "input" into new products, the graduates achieve expected quality and meet the requirements of businesses, society.

**Outputs (Outcome):** The output is the end stage of the JT process, outcomes are evaluated with the following criteria: knowledge, skills and attitudes. Thus, through the outputs can assess the quality of training as well as the appropriateness of the resources. Based on the outcomes, the school decides to revise, adjust, supplement or terminate training programs.

Outcomes are evaluated based on the following factors: Output (Output) the quantity and quality of graduates; Outcome of number of students have jobs in accordance with their trained majors at schools; the number of higher education students; Satisfaction of individual needs; The extent to meet the needs of enterprises, schools and society.

**Context (Context):** Context can impact directly or indirectly on the JT activity between schools and enterprises consisting of: fluctuation of social-economic status, political institutions, development of scientific technology, policy of the Communist Party and the state on education and training, legal documents, directives, resolutions and circulars on professional education, development of human resource's needs for industrialization- modernization of the country, level of manpower, social awareness and psychology about manpower training ... the market mechanism, demand – supply relation, policies on JT ...

### ***1.5.2. Management of joint training applying the CIPO model:***

The mangement's content groups of JT in TS with enterprises approach the CIPO model including: Input management; Process management; Output management and Regulatory management to the impact of context on manpower training in TS.

#### ***1.5.2.1. Input management:***

Input management between JT with enterprises includes: management of enrollment, Management of target adjustment, content of the curriculum to fulfill the demand of enterprises; Management of resources to ensure joint training process (teachers, facilities, teaching equipment)

#### ***1.5.2.2. Process management:***

*Process management of JT includes: Management of teacher's instruction activities; Mangement of students' learning activities and Management of teaching and learning's order and discipline.*

***1.5.2.3. Outcome management (Outcome):*** Management of outcomes in JT with enterprises includes: Management of tesing –assessing outcomes; Management of outcome's information (career guidance ativities and accepting students after graduation)

#### ***1.5.2.4. Impacts of context (Context – C) on training management:***

Contexts and environment are various so it is necessary to define contexts impacting on JT between the schools and enterprises, so that they can choose the best regulated methods for JT activities. External factors influence, directly impact or rule over JT activities with enterprises.

### *1.5.3. Content of joint training management between technical schools and enterprises according to CIPO*

#### *1.5.3.1 Input management*

*Enrollment management:* Depending on the enrollment form with the division of responsibilities and powers, as well as various management levels for each party, such as:

Management of human resources: In JT with the participation of human resources from both sides at different levels and roles, depending on the performed duties. Human resources for JT consist of: Teachers, technical staff, managers. This team directly involves in JT, actualizes, determines the success level of JT. Thus, in school side, they need to build sufficient teaching staff who meet professional standards with comprehensive structure.

Management of technical material resources: Finance guarantees JT activities including: Budget; Learning fee; Revenues and other support. In addition, enterprises are responsible for investing, partially contributing financial aid – for manpower training (this funding is regarded as mandatory funding which they must spend when using trained labor). In the case of sending employees to training institutions, labour spends time studying in training institution so they absorb certain knowledge and skills.

Facilities and equipment in the workshop significantly affect practice skills. TS's facilities directly used for training and teaching including classroom; workshops; models, visual aids; The general teaching equipment and machines; Supplies, practice materials. Technical capacity of the schools is under their management.

However, when students practice in companies under the guidance of technical staff, they use their technology equipment, technical facilities. Depending on the agreement and negotiation between TS and enterprises, these schools will incur the cost-sharing responsibilities when using equipment of the companies. In JT, the enterprises share facilities with the schools in training (teaching equipment), to overcome the lack or obsolete, outdated teaching equipment.

- Training curriculum: Management of the development and adjustment of training objectives according to the needs of businesses is actually analyzing the needs of businesses, the training capacity of schools and businesses in fact which is to ensure training objectives are on track, feasible and meet the market. Therefore, the participation of enterprises in setting objectives, curriculum's content of the schools help schools better understand and meet the need of labor market.

#### *1.5.3.2 Process Management*

- *Management of teaching activities:* Based on properties, time conditions, positions, may request the school's teachers to participate in teaching professional theory as a theory teacher, guide basic practices, support to monitor students when they practice in enterprises. In the TS, teachers are the manager and take full responsibility about his teaching. The members from the businesses will be coordinators supporting the teachers when students take internships in companies.

For businesses, technical team engaged in teaching must ensure criteria: owing highly professional qualification, having moral qualities, enthusiasm, being responsible for the work assigned. Highly skilled technical staff join vocational teaching, guide practice as practice teachers, participate in assessing students' vocational skills guide to familiarize teachers with chain production, modern equipment and technology in enterprises. When practicing at businesses, technical staff are not only manager who is responsible for the practical guidance of student's internships but also teachers who support and coordinate to monitor students.

- Management of students' learning activities: Both practice and internship of students at businesses require tight combination from businesses to ensure the content, internship program and industrial safety and hygiene for learners. Therefore, it is crucial to arrange and assign specific tasks to teachers and technical staff of enterprises when monitoring, operating practice, internships in enterprises.

Management of innovation activities in teaching and learning: In JT between TS with enterprises, innovation in the teaching process is the change in teachers' perception, in which they must understand and master the lesson objectives, focus on developing for students' practice capability, self-learning, studying and perfecting vocational skills for themselves, updating scientific-technological progress. Objects are technical staff of enterprises participating in teaching practice, guiding student internships should be

fostered in manner, pedagogical skill, raised their awareness about human training. Last but not least, they should also consider teaching and practice guidance are a must-complete main task.

#### *1.5.3.3 Outcomes management*

Management of testing-assessing training results: testing and assessing is not only to evaluate the quality of JT but also to test the relevance between the training process and training purposes, to evaluate advantages, disadvantages and reasons for timely adjustments.

Graduation evaluation board consists of the participation of schools and businesses. Content for evaluation will include both specialized knowledge and vocational skill. About assessment's organization: The school is responsible for assessment of specialized knowledge; the enterprise is responsible for assessment of vocational skill.

Post-graduation result is determined through quantity and quality of graduates evaluated according to standards of knowledge, skills, attitudes after being trained. Post-graduation result is considered through criteria such as the time students have jobs, the relevance between jobs and qualifications, trained majors, job development capabilities. Work's result after graduation will assess the JT's effectiveness.

TS tightly collaborate with businesses to train qualified technical school-level manpower as well as complement and upgrade skills for students. The enterprises receive most of interns and graduates, and also reduced the probation period because they assessed student competency.

#### *1.5.3.4 Regulate impact of context*

In JT, the TS and businesses negotiate and establish working mechanism, regulation and work mode for parties clearly, specifically which aims to avoid conflicts or reduce the effectiveness of JT.

The impact of market mechanisms has significant effects to JT so regulating impact of the context helps the schools and businesses be active to operate JT. If not, the schools and businesses will be affected and struggle to implement JT.

The content of regulating impact of the context requires schools and businesses to analyze and forecast the trend of social-economic development. The development of science-technology and fluctuations of the economic, political, social, global trends, the policy and guidelines of the Communist Party as well as the government on vocational education.

Regulating impact of the context in management of JT between TS and enterprises requires ability and enthusiasm of schools' management team and business owners with training and development of human resources.

### **1.6. The factors affect joint training's management between technical schools and enterprises**

#### *1.6.1. Impact of the market mechanism*

#### *1.6.2. Policies, legal documents of State and management agencies*

#### *1.6.3. Labor – employment market*

#### *1.6.4. The subjective elements of the school and enterprises*

### **Conclusion of chapter 1**

## **CHAPTER 2: STATUS OF JOINT TRAINING MANAGEMENT BETWEEN TECHNICAL SCHOOLS WITH ENTERPRISES**

### **2.1 . General introduction of technical education in Bac Ninh Province**

#### *2.1.1. Overview of natural and social conditions in Bac Ninh province*

#### *2.1.2. General introduction of technical schools training electrical technology, electric major*

##### *2.1.2.1. Organization of technical schools*

##### *2.1.2.2 Management staff and teachers*

##### *2.1.2.3 Students*

##### *2.1.2.4 Facilities of the schools*

#### *2.1.3. General introduction of enterprises producing electromechanical, electrical equipment in Bac*

### *Ninh province*

##### *2.1.3.1. Enterprise network in Bac Ninh*

##### *2.1.3.2 Human resource of the enterprises*

### **2.2. Organization of surveying status**

#### *2.2.1. Description of process and survey method*

#### *2.2.2. Objectives of the survey*

### **2.2.3. Content of the survey**

### **2.2.4. Time and scope of the survey**

## **2.3. Joint training management status between technical schools with enterprises**

### **2.3.1. Status of joint training's input between technical schools with enterprises**

**The fact of schools' enrollment:** Currently, admission in schools is a problem which is different from previous time when students looked for enroll applicants. To face risk of non-student risk, the schools changed their enrollment strategy, some enrollment campaigns conducted to attach society's awareness such as: delivering leaflets, advertising in mass media, Website... Many schools chose enterprises as their enrollment environment.. According to survey's statistics in 6 schools and 40 enterprises, they all confirmed that there was joint training activity, but not often, mostly serving seasonal manpower needs of enterprises.

**Status of implementing training programs:** the joint training between schools and enterprises in establishing aims, curricular is not currently attached special attention by schools. 46,67% surveyed staff said that this activity was not implemented. Technical schools actively build their targets, curriculum's content. The enterprises almost do not participate, or sometimes, they only generally comments or give some subjective comments.

**Status of using resources:** definition of duties and rights of using resources is rather difficult between two parties. Training resources include: financial, material and human resource. Enterprises are afraid to allow students to practise manufacturing on modern technological chain because students may break their machines affecting their working process. The utmost important is to keep their technological secret. Enterprises' duty is to produce goods. Financial support is a small part of producing internship activities..

### **2.3.2. Status of joint training's input management between technical schools and enterprises.**

The fact of managing joint training's enrollment: both schools and enterprises are confused with enrollment management. Enrollment activities are often carried out by schools after the enterprises send notice of temporary manpower need to schools. Then, schools announce to their students and make a list back to the enterprises. Enrollment activity mainly uses the available student resource of the schools. Students will join the actual experience in the enterprises when they are in need. The enterprises do not appoint an admission staff to participate in enrollment management so this activity has not been really effective.

**Management of joint training's resources:** Resources of joint training between technical schools and enterprises include three components: Human, material and financial resource. Human resource of joint training between technical schools and enterprises consists of schools' assistants at the schools' side and technical staff at the enterprises' side. Finance is financial support to the production internship. Schools' infrastructure is not fully equipped, synchronous and modern. In fact, human resource's management in joint training between technical schools and enterprises is rather difficult.

**Management of establishing target, curriculum:** Management of coordinating to build a target, curriculum is to support the expected target. As mentioned above in the status of joint training between technical schools and enterprises, establishing the curriculum's target, content is mainly responsible of the technical schools yet these schools are not really aware, 60% schools' managers, 68.89% teachers and 57% enterprises' managers confirmed that they did not coordinate to establish and also to manage activities relating to the target, curriculum building.

## **2.4 Management status of joint training's progress between technical schools and enterprises**

**2.4.1. Status of joint training process between technical schools and enterprises:** Participation of enterprises in training at schools is very limited. 37% company's manager staff said that they attended workshops, conferences on developing local human resource where schools and enterprises were located, meetings on developing annual enrollment plan, hold career day, workshops on developing curricular... 50% manager staff did not participate. They do not appreciate the cooperation of the parties, through direct exchange, all opinions in surveyed areas stated that: they have encountered many difficulties in inviting experts from companies to participate in the training process as they are the pillars of the company so they should very busy time. Moreover, the schools do not have much expense for these activities ... This led to a situation that experts of enterprises attend conferences but the schools cannot use them in an effective way.

**In innovating teaching and learning methods in technical Schools:** This is a concerned content of TS, innovating teaching and learning method is seen as a key to training quality. In reality, according to surveyed teachers' opinions, implementing innovation of teaching methods requires positive support in terms of teaching equipment; ability of diagram analysis; competence in practising of teachers meanwhile, current teaching equipment is not enough and backward; competence of teachers is limited, hence, it is really necessary for schools to have technical practical training of skillful staff from enterprises. Therefore, 40% management staff of schools and 50% teachers suppose that they have not implemented innovation of teaching methods to meet the enterprises' requirement.

#### ***2.4.2. Management status of joint training's progress between technical schools and enterprises***

The internship program was implemented largely according to a agreed plan made by schools and businesses. Students receive wages for products they made based on regulations of the company. However, students' practice and internship in enterprises are not guaranteed. At the end of practical experience course, enterprises grant a certification to student who participated fully and strictly implement the regulations of businesses and schools. This certificate will be a priority when students apply jobs in those enterprises and students do not have to take a probationary period.

Management activities relating to innovate teaching methods of joint training between technical schools and enterprises face many difficulties. In fact, these activities also struggles because enterprises consider this as obvious duty of schools whereas theirs is to produce. In addition, policies to facilitate skillful technical staff in practically teaching are not designed yet. Teachers were sent to businesses just to manage and check students' attendance and to settle the student-related affairs. Teachers are not involved in manufacturing process, so they cannot update scientific and technological innovation.

The division of responsibilities and obligations between the parties is not clear so it cannot attract technical personnel engaged in practice teaching. The majority of schools' managers and enterprises' managers are not aware of their true position and role in JT. Therefore, the cooperation between parties is not tight, companies mainly need manpower to meet the need of production time. Hence, these businesses only send technical staff to guide students in certain stages of the production process. There is no cooperation between school teachers and technical staff.

#### ***2.5. Status of joint training's outcomes management between technical schools with enterprises.***

##### ***2.5.1. Status of joint training's outcomes between technical schools with enterprises.***

**Testing and assessing training's results:** Testing and assessing training's results are considered as a main activity to measure training quality. In reality, joint training activities have not been specially valued. Testing and assessing are implicitly considered as schools' duty. The role of enterprises in testing and assessing is significantly poor. The enterprises are not insistent on non-benefit activities. Their managers all confirmed that they did not participate in testing and assessing learning's outcomes, only commented for enough components.

##### ***2.5.2 The impact of context on joint training between technical schools and enterprises***

Due to the impact of a market mechanism, SUPPLYING and DEMANDING for labour force always fluctuate which continuously increase or decrease depending on the market. Policy mechanism also significantly influences joint training between technical schools and enterprises, esp relations of participants' benefits. Operating in the market mechanism, the training facility must adhere to a general rule which is a product of the school must meet the need of the various and fluctuated labor market. The test for compliance with the principle is that the market reception with graduating students (market needs are not only considered in the short term, but also associated with the long-term development strategy of the economy).

##### ***2.5.3. Status of managing joint training's outcomes between technical schools and enterprises***

**Status of testing and assessing management.** Testing and assessing student's learning outcomes are not attached special attention and considered as schools' main duty. Therefore, management activities to testing and assessing students' outcomes of joint training between technical schools and enterprises are not sufficient.

*Management status of career consultant and student's acceptance after graduation:*

Many managers, teachers at the technical schools confirmed that career guiding for students before and during training is one of the extremely important tasks. In fact, the TS did not fully realize that the impact of career counseling on improving the quality and effectiveness of school's education.

Besides, through communicating to post-graduate students, these students practically experienced in a company and received a certificate of practical experience during their training. They had their own advantages when applying to the company yet very few students who decided to work in the company. 6,29% students explained that the company has many requirements, many technical schools sent their students to practically experienced.

Managing career counseling and student reception after graduation requires the parties really invest time, effort and manpower. Actually, there have been many technical schools implementing programs such as: "Following students' traces"; "Connecting students" ..., but the programs were not done regularly, due to obstacles such as graduates changed their address, phone number, without noticing the schools. This interrupted informative communication. These programs are relatively new to the students so they are not highly aware of their rights and responsibilities. According to statistics, there are 58.8% of students have a job right after graduation, 32.3% of students have a job after 3 to 6 months. Therefore, post-graduation reception has performed well but managing JT's career counseling and post-graduation reception between TS and enterprises have not achieved desired effects..

## **2.6. Assessing the survey's results**

### **2.6.1. Strengths**

### **2.6.2. Weaknesses**

### **2.6.3. Reasons**

## **2.7. Experiences of some countries in managing joint training with enterprises**

Through some typical examples, we can see one common between countries which is hands-on learning, connection between training institutions with enterprises in various methods, legal guarantee of the Government. The students can learn both academic and vocational knowledge, the farmers learn theory, combining learning on the fields, farms and having a certificate to work. This explains why supply-demand issues are tackled in some countries, training institutions well meet the social and labour market's demand; after graduating, students quickly have a job in enterprises and adapt the real production environment.

## **Conclusion of Chapter 2**

# **CHAPTER 3: MANAGEMENT METHODS OF JOINT TRAINING BETWEEN TECHNICAL SCHOOLS WITH ENTERPRISES**

## **3.1. Orientation of technical education development**

## **3.2. Principles of proposing methods.**

Ensuring necessity, realization; Ensuring supply - demand principles; Ensuring practicality; Ensuring inheritance and development.

## **3.3. Management methods of joint training between technical schools with enterprises.**

### **3.3.1. *Establishing joint training mechanism to encourage fulfilling responsibilities of enterprises and technical schools***

JT between TS and businesses is currently a trend in vocational training of the market mechanism. Many countries in the world are applying this. Therefore, to encourage the implementation of responsibility from businesses and schools, creating a JT mechanism between schools and businesses in accordance with their actual conditions is a prerequisite.

Principles to develop the mechanism to encourage the implementation of responsibility from the schools and businesses: subjects of JT's implementation process; JT between the TS and businesses must be built on the principle of balance interests, on the spirit of volunteerism, communal responsibility from both sides and mutual benefit; JT between TS and DN is the shared responsibility, flexible to plan their JT plan not affecting each other; JT between the TC and businesses must ensure the quality and progress of the work plan as well as JT's implemented conditions so that the implementation process of JT is qualified and sufficient.

JT between TS and enterprises is considered as an incentive to attract students to the school. Students after graduation immediately have jobs matching with their specialized training.

### *3.3.1.1. Purpose and meaning of the method.*

- To well fulfil duties and ensure benefits of technical schools and enterprises.
- To change notion of the enterprises which consider trained labours as free and public source.
- Developing joint training activities and encouraging requirement-based training to facilitate students doing major which they are trained at schools.
- To have a reasonable joint training mechanism between schools and enterprises which are in accordance with current socio conditions in Vietnam to sufficiently implement technical training.
- To enhance resources and conditions to ensure training quality of technical schools to meet the enterprises' requirement.

### *3.3.1.2. The content of the method*

Founding technical schools in the enterprises; forming production units, directly under the technical schools;

- Signing new training contract, training and retraining staff working at the enterprises;
- Signing cooperation documents between the technical schools and enterprises;
- Organizing joint training in the enterprises;
- Through job consulting and introducing department of technical schools and enterprises to create a relationship between technical schools and enterprises;
- Relationship between training and using manpower in a profession or some profession's fields is coordinated through school's councils or sub-committee of school's relationships with representatives from technical schools and enterprises;
- Technical schools and enterprises actively invite experts of two parties to joint training programs, research to serve training and innovate technics, technology, design product's models.... (outside the scope of grouping agreement);
- During the training's process, students learn basic theory and specialized theory at schools whereas they learn basic practices and specialized practices are carried out in the school's workshops. The production intern part has combination of the schools and production units which are carried out in the enterprises;
- Theory part of the graduation exam is conducted by the schools, practical part with combination of two parties can be held at the school's workshops. Graduates who meet the requirement of the enterprises will be selected to work at the enterprises;

### *3.3.1.3. Implementing methods*

**a/ Planning:** Making a plan of JT between TS and enterprises, allocating officers to manage and participate in the program.

#### **b/ Implementing**

- Signing new training contract, training and retraining staff working at the enterprises;
- Exchanging information between schools, structure of professions, and quality of technical staff in enterprises about the need for additional training and upgrading of expertise and professional ... to have associated plans to solve promptly and effectively.
- Establishing the subcommittees "School – Sector Relation" for the sectors on the basis of cooperation between the two sides of training and using employees, operating by agreement measures with the mission of selecting the contents, methods, associated mechanisms between the two parties, organizing and coordinating relationships to achieve intended targets.
- Implementing the content of JT between TS and enterprises: Cooperating in preparing training's inputs (building target, curriculum content, career consulting and enrollment); Cooperating in the implementation joint training process; Cooperating in assessing graduated students, consulting and introducing jobs to students.

#### **c/ Directing the implementation**

- Directing to implement the cooperation plan between schools and enterprises to carry out the contents of the joint training contracts
- Organizing conferences, courses on training and developing human resources, on JT with schools, on the responsibility of enterprises when using trained labor ... for enterprise's managers.
- Reviewing the entire policies system relating to train and develop human resources, complement and concretize the State's regulations promulgated.

#### **d/ Testing and monitoring**

Checking the criteria on level of performance about JT between schools and enterprises: Receiving feedbacks from schools and enterprises; reckoning, analyzing and proposing solutions.

3.3.1.4. *Conditions for implementing methods*

- The concern of the up-line management authorities about JT between the TS and enterprises
- The documents define the responsibilities of enterprises for training activities and manpower development.
- Policies for the technical staff, high-skilled workers participating in teaching, practices, apprenticeship.

**3.3.2. *Seperation of right and duty in managing joint training between technical schools and enterprises***

Ensuring equal responsibilities, obligations and rights of the parties involved in JT (entreprises, TS, learners), ensuring effective and sustainable joint training between TS and enterprises.

3.3.2.1 *Purpose and meaning of the method*

- Sepratio of right and duty enhances connection, promotes strength, advantages of schools and enterprises, as well as clearly orients work to do of each party.
- Make enterprises realize benefits of joint training in human developement.

3.3.2.2 *Content of the method*

- Choose the content and form of joint training between techtechnical schools and enterprises
- Establish principles of delimiting right and duty of parties in managing
- Seperate of right and duty depending on the content of joint training (different levels of right and duty depending on association level) whereby the delimitation of responsibility, benefit and resources are shown as below:

**Table 3.1. *Seperation of responsibility between technical schools and entreprises in joint training***

<b>Content</b>	<b>Technical schools</b>	<b>Enterprises</b>
Management of enrollment	<ul style="list-style-type: none"> <li>- Founding division which is responsible for enrollment and training counsultant</li> <li>- Implementing enrollment activities according to the company' requirement.</li> </ul>	<ul style="list-style-type: none"> <li>- Sending information on human resource to schools</li> <li>- Designating staff who coordinate with scholls in enrollment and training counsultant</li> </ul>
Management of establishing target and content of the curriculum	<ul style="list-style-type: none"> <li>- Founding a committee in charge of building the curriculum</li> <li>- Assigning members the task of creating target and training curriculum based on the company's requirements</li> <li>- Holding workshops on building target, training curriculum based on the company's requirements</li> <li>- Sending the curriculum's target to take reference comments of the company</li> </ul>	<ul style="list-style-type: none"> <li>- Giving training requirements of manpower by profession</li> <li>- Designating staff to join the committee in charge of building the curriculum</li> <li>- Attending workshops on building target, training curriculum based on the company's requirements</li> <li>- Giving feedbacks to the curriculum</li> </ul>
Mangement of implementing the curriculum: Teaching activities of teachers; Learning activities of students; Assessing learning outcomes	<ul style="list-style-type: none"> <li>- Assigning and observing theory and practical instruction of teachers</li> <li>- Testing and assessing students' learning outcomes at the end of a theory course</li> </ul>	<ul style="list-style-type: none"> <li>- Assigning and observing practical instruction of teachers and internnship at the company</li> <li>- eTesting and assessing skills of students at the end of their intenship and practice period.</li> </ul>
Management of career consultant and post-graduate students	<ul style="list-style-type: none"> <li>- Frequently updating changes of the labour and job market to consult students</li> <li>- Providing the school's training ability to the company</li> <li>- Creating a channel to connect to</li> </ul>	<ul style="list-style-type: none"> <li>- Assigning contact person to communicate with schools to timely get infomation about manpower, training quality and ability to solve job issues.</li> <li>- Providing development plan and</li> </ul>

	students via Website and social network to exchange and collect information - Directly reach to alumna to get information.	manpower's demand of the company to the school - Assigning staff to participate in career guidance along with the school
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**Table 3.2. Separation of right between technical schools and enterprises in joint training**

<b>Content</b>	<b>Technical schools</b>	<b>Enterprises</b>
Management of enrollment	<ul style="list-style-type: none"> <li>- Considering joint training with enterprises</li> <li>- Introducing ability to training trades according to the company's requirement.</li> <li>- Defining a number of enrolled students per year which is suitable with training ability based on consideration of the company's need..</li> <li>-..Reaching agreement on enrollment fee, learning fee, materials, textbooks...</li> </ul>	<ul style="list-style-type: none"> <li>- Consider training ability of training institutions</li> <li>- Consulting career, introducing career's prospect at the company</li> </ul>
Management of establishing target and content of the curriculum	<ul style="list-style-type: none"> <li>- Proposing changes in trades to meet fluctuated demand of the market on the basis of considering producing reality of the company</li> </ul>	<ul style="list-style-type: none"> <li>- Making a plan, content of technical internship, production internship at the copane</li> <li>- Providing information about needed skill, knowledge and attitude with each specific job.</li> </ul>
Management of implementing the curriculum: - Teaching activities of teachers; - Learning activities of students; - Assessing learning outcomes	<ul style="list-style-type: none"> <li>- Implementing market-oriented training activities following the company's requirements, agreement between participants.</li> <li>- Implementing all activities to ensure training quality according function and responsibility of training institutions.</li> <li>- Being legally responsible for degrees granting for learners.</li> </ul>	<ul style="list-style-type: none"> <li>- Implementing technical institutions meets the demand of enterprises and schools, following the agreement between participants.</li> </ul>
Management of career consultant and post-graduate students	<ul style="list-style-type: none"> <li>- Asking the company for expenditure on teachers' support, internship at the company.</li> </ul>	<ul style="list-style-type: none"> <li>- Choosing and recruiting students who meet the company's requirement.</li> <li>- Negotiating level of financial support to teachers, internship at the company.</li> </ul>

**Table 3.3. Sharing resources (human resource, furniture, equipment, financial support) between technical schools and enterprises**

<b>Content</b>	<b>Technical schools</b>	<b>Enterprises</b>
Management of enrollment	<ul style="list-style-type: none"> <li>- Assigning enrollment consultants</li> <li>- Equipment, furniture to support enrollment activities: offices, equipment....</li> </ul>	Assigning staff to participate in enrollment consulting activities.
Management of establishing target and content of the curriculum	Assign teachers to build the target, content and curriculum	Assigning staff to build the curriculum

<p>Mangement of implementing the curriculum:</p> <ul style="list-style-type: none"> <li>- Teaching activities of teachers;</li> <li>- Learning activities of students;</li> <li>- Assessing learning outcomes</li> </ul>	<p>Assigning staff to manage training process according to the company's requirement.</p> <p>Appointing teachers who teach theory, basic practices.</p> <p>Furniture serves learning and teaching theory, basic practices.</p>	<p>Appointing staff to manage training process.</p> <p>Appointing staff who teaches theory</p> <p>Agreeing to use machines, equipment for practices</p> <p>Appointing technical staff to join training results' assessment.</p>
<p>Management of career consultant and post-graduate students</p>	<p>Appointing staff to participate in career consulting after training</p>	<p>Appointing staff to participate in consulting and recruiting</p> <p>Finance: The company as a place to accept post-graduate students will contribute finance to schools in order to support teaching. On the other hand, materials used by the production unit will be a source from which students practise and make products.</p> <p>All above financial source from contributing to saving will be invested back to the schools, along with enhancing welfare, spiritual life, materials for teachers and students.</p>

### 3.3.2.3.. Organizing to implement the method

- TS and enterprises meet to negotiate and agree to separate right and duty in joint training.
- Founding a specialized division including representatives of technical schools and enterprises to actualize agreements signed by two parties.
- Managing joint training activities based on documents signed by two parties.
- Separation process of right and duty in joint training has combination of labour market's policies aiming to bring practical effect, benefit to technical schools and enterprises, to enhance social welfare, to create job chances to learners and community.

### 3.3.2.4 Conditions to implement the method

- Being aware and responsibility of enterprises for co-holder role in managing joint training.
- Updating documents, regulations of the Government of joint training between schools and enterprises and seriously implement them.

### 3.3.3. Adjust to change target, content and training method in technical schools in accordance with environment of joint training with enterprises

Objectives, curriculum content and teaching methods are determinants of training to meet the need of enterprises. Therefore, adjusting target, curriculum content and teaching methods are one of the essential measures.

Training programs should be developed on the basis of close cooperation between theory and basic skills training at schools and professional skills in the manufacturing units. There are policies to attract professionals, skilled craftsmen working at the manufacturing units to participate in designing training programs, teaching and evaluating the training program.

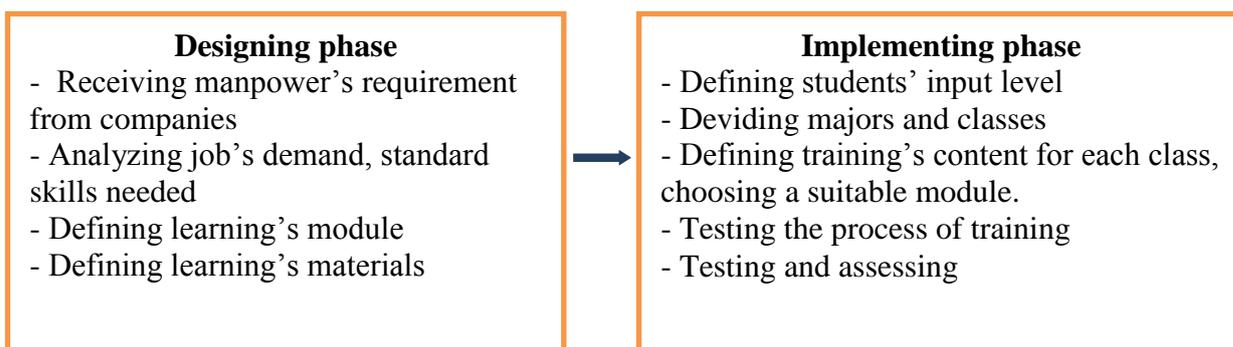
Training objectives are established based on facts, such as training need of the society and of the businesses. Therefore, training needs should pay attention to industrial factors, training duration, occupational characteristics, psychology, physiology and levels of learners, and consider the conditions to ensure quality such as physical facilities, teaching staff, financial resources .... For vocational training, especially in the engineering profession, based on job analysis methodology developed under the instructional program, combined with expert methods, the construction of the training program of each professional combine with modules, as such the training program can meet the requirements of enterprises and be practical with realities of modern production.

#### 3.3.3.1. Purpose and meaning of the method

- Updating information about technical skills in accordance with development of science and technology, meeting the demand of enterprises and the needs of learners
- Improving the training curriculum, teaching method to meet the enterprises' requirements, social requirements.
- Learners learn practical content, meet the need of production work of the enterprises promptly, suit personal ability.
- The enterprises recruit employees meeting the demand of producing promptly, save time and money.

### 3.3.3.2. Content of the method

- Adjusting target and training curriculum to meet the demand of the enterprises;
- Managing teachers' teaching and students' learning in joint training (adjust content of the curriculum, innovate training method) to promote strength of each side, specifically:
- Managing the process of developing training programs in two phases: Designing phase and implementing phases.



**Figure 3.1. Developing training programs**

When deving training's major, it is necessary to define career's duties (working position which workers have to do), list of job tasks (through job's modules) and needed competence equivalent to each job.

In adjusting target, content and training method to meeth the need of enterprises, management of teaching and learning is a important mission of the management of training's process to meet the demand of the enterprises:

- Manage teaching activities of teachers: Prepare for the class; Teaching in class; Organizing and directly instructing students to practise in workshops (school), apprenticeship; Production intern; Assessing students' learning outcomes.
- Manage learning activities and practices of students: Schools' teachers are responsible for managing learning activities and practices of students when learning theory in class and practice activities in workshops; Teachers and technical staffs are responsible for learning activities and practices of students in practice lesson at production unit; SuperTSing and speeding up, assessing results of learning and practising activities of students; Supervising, searching to know positive and negative manifestation of doing learning, practising activities as well as changes in personality of students; Supervising, promoting and encouraging students to promote their strengthes, to make good their shortcoming so that they strive for better and better learning and practising results.

. To change the target, content of the program and training methods in technical schools in accordance with joint training's environment, perfoming subjects are technical schools and enterprises so the training method: Learning theory at schools taught by the schools' teachers, then practising in the enterprises instructed by technical staff. Learning materials: are designed and developed in accordance with upon - agreed training programs by two sides.

Testing –assessing is the last phase of teaching process. Testing and assessing are two activies which can be ordered or mixed to describe learning and practising results of students. Testing-assessing learners' learning outcomes in joint training is to determine if learners can do tasks with needed skills according the joint training signed between the school and enterprise.

### 3.3.3.3. Implementing the method

Implementation's process: Found a steering board; Planning the implementation plan; Implement; Check and monitor.

**a/ Planing:** making a plan to adjust the target, content of the training program and the training method in technical schools in accordance with environment of joint training with enterprises.

**b/ Implementing**

- Fouding a committee in charge of adjusting the target, content of the training program in technical schools in accordance with environment of joint training with enterprises.

- The enterprises and technical schools appoint staff to participate in adjusting the target, content of the training programs.

- Adjusting the target, content of the training programs is proceeded by steps: Determination of training' requirement; job analysis (specifying job's tasks, list of job task, steps of each task and conditions to do that task); requirement of job skills, needed competence equivalent to the job, tasks of training major.

- To built the target, content of the training programs which meet the demand of companies, parties have co-operate strongly in implementing:

+ On the enterprises' side, they provide requirements for joint training, standards and safety standards, regulations of instruments, equipment, materials, methods to fix frequent mistakes.

+ On the schools' side, they receive and synthesize information, analyzize the job, design specific lessons, build students' capacity to meet the job's requirement, form notions and skills associated with solving problem capability.

A process of adjusting to change the target, content of the training program in technical schools in accordance with environment of joint training.

**Table 3.4 Content of the process of adjusting to change the target, content of the training program**

No	Duties	Implementation unit	Content of duties	Legal foundation	Products
1	Determine target and content which are needed changing in accordance with the enterprises' requirements.	Training units: specialty faculty, teachers, training bureau.	- Receive manpower's requirement of the enterprises - Analyze the job's requirement, skills' standards which need achieving - Determine learning modules - Determine learning materials	Decision of forming the committee in charge of developing training program Detailed work plan	General report on the content of the program which needs adjusting, adding
2	Get comments and suggestions	Training units: specialized faculty, teachers, training bureau. Enterprise: technical staff	Seminars at subject-level Seminars with participation of the company	Decision of holding seminars	Proceedings of the seminars, reports presented at the seminars.
3	Receive comments and suggestion	Training units: specialized faculty, teachers, training bureau.	Adjust the target of the program based on members' comments.	Approved detailed working plan	Draff of the target, content of the training program.
4	Propose amendment	Training units: specialized faculty, teachers, training bureau.	A committee with full attendance of members to agree and approve adjusted and added contents.	Approved detailed working plan	Proceedings of the seminars
5	Complete the program	Training units: specialized faculty, teachers, training	Adjust the target of the program based on	Approved detailed working plan	A completed draft of the program

		bureau.	members' comments.		
6	Sign and promulgate	The principal	Sign, promulgate and implement	Decision of approving the program (Promulgated)	The training program

- Taking the training program into practical teaching: determine input's level of students; divide majors and classes; determine the training content for each major; implement the training process; test and assess students according to standards of knowledge, skills, attitude and soft skills

- Managing joint training, managing teaching activities of teachers and learning activities of students according to major's requirement to be achieved.

**c/ Directing the implementation:** Managing teaching activities includes: Manage teacher's lesson preparation and instruction. Forming criteria of assessing and ranking lesson plans, teaching time; Criteria of assessing teaching quality through student's learning outcomes.

+ Manage teacher's lesson preparation Preparing the lesson is studying the curium, content of the lesson in advance; planning new lesson. It is necessary for the lesson to meet achieved requirements: Ability to do tasks; Knowledge about the job; Job's skills are formed – (intellectual skills/manual labor skills.)

Preparing teaching equipment: fully preparing necessary conditions support teaching activities such as machines, equipment, practice and intern tools; Teaching plan and schedule...

+ Manage instruction activities

Managing to supervise, speed up and assess results of teachers' instruction activities

Managing instruction in guiding students to do practices, intern in the company

Observing classes, collecting feedbacks of students about teaching's quality, spirit, attitude and behavior of teachers.

- Manpower directly participating in teaching activities of joint training is the schools' teachers and the enterprises' technical staff.

- Suitable conditions for technical training are real production environment in which teachers and technical staff teach student together. Teachers will take on theory aspects while technical staff will take on practice training.

- Managing students' learning activities to meet the enterprises' requirements in joint training is controlling over completing learning, researching, tasks of students during training period, including:

+ During admission consulting process, students need guided to choose, enroll a major which is suitable with ability and capability of learners.

+ Manage learning activities of students through: Management of learning time and learning capability of learners. Therefore, students can learn and complete their learning process at different time.

+ Managing learning quality of students: Building a management software system which ensures that students will receive feedback on their learning process in the quickest and most exact way. Based on assessment's results, students adjust timely, improve their learning level;

+ Managing the content of learning activities such as: Learning activities in theory class, practice class at schools, practices and intern in the enterprises.

+ Organizing learning, self-studying and learner support services

Organizing learning and self-learning for students is implemented in the form of learning in classrooms, workshops, laboratories, organizing extracurricular activities and self-learning in dormitory. The faculties plan and convey to head teachers and subject teachers to perform in the most sufficient way.

Learner support service will advise students to learn and implement policies and law on vocational training and employment; guide students to working relationships within the school structure which relate to activities and interests of students; collect and provide job's information to students; counsel and orient students to vocational training sector; create ideal conditions for students to read books, documents or search information online for learning activities.

- Monitoring testing-assessing students' learning outcomes.

Testing is determining target,content, teaching methods, data set, evidences to define achieved levels of students during learning, practising and developing process. Testing includes what needs

testing, test instrument and utilization of testing's results. Defining assessment's criteria and conditions for the training program according to analysis table and requirements of trained majors.

Forming methods and assessment instruments; Noticing students and teachers about principles of testing-assessing, forms of testing-assessing, coding and marking, announcing results known at the beginning of the course. Implementing and monitoring the implementation of steps in testing and assessing process.

Student's learning outcomes show quality of management and instructions of specialty faculties during the training process. Learning outcomes are assessed through testing and assessing knowledge, skills of learners with each subject, modules and the course's ending.

The content of assessment is developed based on analyzing jobs into specific tasks. These tasks are described, determined the target, formed criteria and specific analysis. Students' learning outcomes are assessed at the end of the course, modules and subject

**d/ Testing and assessing:** Testing the adjustment of the target, content, curriculum and method at technical schools is to determine if it is in accordance with joint training's environment in enterprises. Therefore, the schools has timely proposed changes and adjustment to be suitable with the enterprises' requirements.

The schools' administrators, training bureau, faculties regularly and periodically test the implementation of principles, training regulations, principles of organizing, managing individuals and organizations' learning at schools. After synthesizing to assess strengths and shortcomings, these factors will be sent to a head-teacher council (hold monthly) where the teachers discuss, agree, find reasons and solutions for the shortcomings;

The schools' administrators will attend weekly class meetings of head-teachers and class's self-governing board. Appraising well-performed students, timely commenting badly-performed classes. Holding meetings to draw lessons;

Checking suitability, reality, contemporary, accuracy of training programs as well as training teachers in terms of knowledge, teaching methods so that they are suitable with the content of training program.

#### *3.3.3.4. Conditions to implement the method.*

- Components who participate in building the curriculum must be experts in the job's field, skillful technical staff, experts who have knowledge about the professions and reach an agreement about competences to be achieved with three aspects: professional knowledge, skills and attitude.

- Supporting all necessary conditions and having stimulating policies, remuneration with participants.

- Teachers must have practical profession, be joint training class to improve their professional ability, field visited, trained in the enterprises.

- Awareness of the schools and enterprises in building the target, content of training methods in accordance with joint training's environment.

#### ***3.3.4. Building and using an information system of the management of joint training between technical schools and enterprises.***

School enrolment is always played a decisive role to the survival and development of the school. School-related information must be provided promptly and accurately to business, society and learners by different methods. Besides, it is necessary to collect information on the need of training from the society so that the schools have major expansion strategy and training methods in accordance with reality.

School enrolment plays an important role in the training process. It is the beginning of the training process. Therefore, ensuring the quality and quantity of enrollment is essential to the training quality. The quality of the work presented in recruiting a sufficient number as training requirement.

#### *3.3.4.1. Purpose and meaning of the method*

- Having the information system to determine education's needs of students and needs of the enterprises' manpower every year in terms of number of trades, quality and level of joint training in order to accept students into schools in accordance with the law of supply-demand in the market mechanism.

- Selecting students with real needs of learning, ensuring the schools' annual enrollment targets as well as improving the quality and effectiveness of training.

- In joint training with enterprises, building the information system is very necessary to meet the target of enrollment activities: The schools enhance quantity, quality of admission; Learners clearly

know where they will work – output, learners can negotiate with the schools and enterprises; the schools and enterprises can negotiate with students about every aspects (time, expense, quality, result...).

- Collecting information about training and meeting the training's needs from various sources: enterprises, post-graduated students, parents of students...

- Defining training's needs, from there building and implementing sufficiently admission plan.

#### *3.3.4.2. Content of the method*

- Building the admission information system: Based on admission's policies of the government, technical schools develop their own criteria, condition of admission but still follow the admission's regulations.

- The schools and enterprises join admission's activities together in admission's consulting programs, job recruitment, seminars, conferences on training manpower to meet the social needs...with the role of consultants.

- + The schools attract learners via information channels from mass media to every families and individuals.

- + The enterprises can directly recruit their manpower according to their real production's demands, then send students to training institutions.

- Establishing specialized departments in charge of cooperating, connecting with enterprises in vocational schools to collect information about manpower needs (quantity, quality and level) of the enterprises.

- Establishing the information system about supplying workers, jobs of the schools. Connecting to the enterprises, social organizations ready to give a hand to the schools in training and developing human resource.

- Maintaining and establishing new relationships with enterprises. Building network of practice institutions, interns for students.

#### *3.3.4.3. Implementing the method*

**a/ Planning:** Making a plan to build and use the admission information system and manpower supply.

#### **b/ Implementing**

- Founding an admission council, assigning specific duties to each member and cooperation mechanism to better implement.

- Building a contact department to contact the enterprises, building organizations such as: admission and business cooperation with enterprises bureau; centre of admission consulting, placement office and enterprises' cooperation...

- Clearly defining duties, functions, responsibilities and benefits of the specialized department. This department are responsible for fully updating guidelines, policies of the Party, government on training and joint training with enterprises;

- Massive admission's announcement

- Contacting to enterprises which use trained workers of schools to:

- + Collect information about manpower's requirement at different levels, professions from the enterprises' side.

- + Collect comments of the enterprises about trained workers of the schools.

- + Survey and predict quantity, quality, labours' skills, changes in profession's requirement in the production of the enterprises in the future

- Implementing investigation duty "following student's tracks; Directly announcing admission information of training major, training curriculum and job chances;

- Forming an admission council with the schools and enterprises' participation. Admission is conducted in forms: The enterprises actively enroll based on their requirement, send enrolled students to the training institutions; the enterprises order the schools training according their needs; the enterprises and schools hold admission consulting activities, job fair, support to visit production units; the schools actively hold and implement enrollment activities according to the agreed plan.

- Parties joining admission need to have a thorough grasp of admission procedures of technical schools' admission form. Admission must be conducted with right objects, right majors and right levels. Learners are only considered as selected candidates when they meet requirements of the training major and courses.

- Making the admission plan, searching admission support from the enterprises' side and social organizations. Cooperating with the enterprises to proceed admission activities in two phases:

+ Phase 1: Conducting before high school's graduation exam and secondary high schools includes: establishing relationships with high schools and secondary schools to carry career guidance activities; holding career guidance seminars; taking high schools' teachers and students to visit technical schools and production units of the enterprises, career consulting.

+ Phase 2: Conducting after the high schools' graduation exam includes: sending admission notice to each teacher, student, residents of wards, precinct, surrounding areas via: propaganda, advertisements on mass media....

- Collecting and synthesizing post-graduated students in training majors at graduation time, quantity and quality of graduated students.

- Making labour supply plan to the enterprises – Contacting with the enterprises – Inviting the enterprises to recruit at schools; or the schools will receive trained manpower recruitment information of the enterprises, and then announce to students; Receiving job registered form then sending back to the enterprises.

**c/ Directing the implementation:** Directing the plan's implementation to cooperate with the enterprises in developing information system and manpower supplying.

#### **d/ Testing and assessing**

Testing and assessing the admission information system and utilization of this system must follow accurate regulations, guidances and purpose. The system needs updating regularly. Manpower supply effectively works. After the entrance exam, it is necessary to meet, assess and draw lessons.

##### *3.3.4.4. Conditions of the method's implementation*

- Establishing the specialized department in charge of admission, job consulting at schools.

- Specifying the function, duty, responsibility and right of the specialized department.

- Establishing a financial mechanism, investing on infrastructure and equipment serving activities

##### **3.3.5. Organizing to consult career and receive information about students after graduation.**

After graduation, the students' employment issue is very important. It is the anxiety of not only students, the parents, but also all levels, sectors and the entire society. In fact, the current supply and demand issue in training is inadequate. Moreover, if TS cannot resolve this issue, it will adversely affect school enrollment.

When conducting JT in career counseling, enterprises had preparatory plan for each graduate, students can have a job right after graduation which helps students feel secure, learn hard and have a proper learning purpose. Hence, dropout and repetition rate will be very low, in contrast, very high graduation rate.

Thanks to the close cooperation with businesses, students are received valuable career advice at very young age (about 20 years), basically, with 12/12 educational level. With their good health condition, they can easily grasp advanced technology and soon become a positive factor and promising seed to be promoted, fostered and developed. They will succeed even in private business or their own start-up enterprise.

Foreseeing the training requirements and order of production units, the schools have planned to invest in teaching facilities: laboratories, workshops in accordance with the objectives and content of planned training programmes, so gaining effectiveness in investment.

##### *3.3.5.1 Purpose and meaning of the method*

- To keep students' mind on their chosen work and trained major.

- To define position of the schools in the training sector through feedback of the labour market with trained workers.

- To catch the enterprises' real demand relating to manpower in order to adjust, add and change the plan and training program which meet the requirement of the enterprises.

##### *3.3.5.2. The content of the method*

- Organizing to conduct career consultancy is a part of career guidance education which is conducted at three points: career guidance before training, career guidance during training and career guidance after training.

+ Career guidance before training: Conditions of the training program; Target and the content of the course; the methods of conducting courses (theory lesson, practices, practical guide, field trips,

self-studying, exercises, designs...); Options support learning and resources available at the schools (teachers, teaching assistants, classrooms, workshops, library, computer system and other resources); Learning fee of students; requirements of assessing the course and criteria of the professions; Degrees, certificates grant graduates; Policies for priority subjects.

+ Career guidance during training: the course's schedule and curriculum; Tests and exercises in class, competence-based assessment...; Criteria of teachers and learners' morals; forms of disciplines; Effective learning methods; Welfare services and extra curriculum activities which the schools can offer.

+ Career guidance after training: Information of places, work positions, recruitment's requirements, remuneration, working environment, promotion capability...

- Information of alumna is the most realistic answer for quality, training sufficiency of the schools. The schools need specific methods (Directly planning to contact to students periodically; or through communication network in which the monitor, group leaders of alumna act as contact persons), approach to the enterprises where alumna are working at... to collect information about them.

- Necessary information to collect: time to find the first job; Working environment; Working conditions in the company; Suitability between position in the company and qualification and trained major...

#### 3.3.5.3. *Implementation of the method*

**a/ Planning:** Making a plan to cooperate with the enterprises in consulting career, receiving information of post graduates.

##### **b/ Implementing**

- Asking the specialized department to develop a career guidance plan, manage information of graduates

- Through the schools' websites, creating a communication channel with students and alumna.

- Collecting information about students: Directly approach to alumna who are working at the enterprises; Directly contact to each student, Exchange information via the contact person-the monitor, group leader of alumna's class; Approach to the enterprises to collect information.

- Processing collected information...

- Summarizing and assessing results, proposing development approachment.

##### **c/Directing the implementation**

- Directing the implementation of cooperation plan between the schools and enterprises to carry out mixed content of consulting activities and receiving graduates' information.

- The schools actively approach to the enterprises, propose cooperating methods, prepare basic content to sign Cooperation Agreement with the enterprises.

- Holding meetings, workshops to consult career.

**d/ Testing and assessing:** Implementing career consultancy and receiving information about students after graduating are regular and continuous activities. Therefore, testing and assessing also ensure to be regular and continuous with detailed reports on both quantity and quality of the assessment's results as well as factors affected the implementation of each phase, object, input resource..to have timely adjustments.

#### 3.3.5.4. *Conditions of the method*

- Forming the communication channel among: technical schools – alumna – enterprises.

- Developing the webpage: "Students and work"...

- Forming relationships with the enterprises, cooperation with them to conduct career guidance.

### **3.4. Relationship between methods**

The measures given *in this thesis has a* close relationship. The thesis gives 5 methods: **Method 1:** " Establishing joint training mechanism to encourage fulfilling responsibilities of enterprises and technical schools ", is an important *one which decide the impact of context*. **Method 2:** Separation of right and duty in managing joint training between technical schools and enterprises", this *method is base for implementing joint training between technical schools and enterprises*; **Method 3:** " Adjust to change target, content and training method in technical schools in accordance with environment of joint training with enterprises" *is a method of input* and training process; **Method 4:** " Building and using an information system of the management of joint training between technical schools and enterprises" is a method of JT's input. **Method 5:** " Organizing to consult career and receive information about students after

graduation” is the *method of output*; The measures *are meet the demand of* businesses. The proposed measures have a close relationship, with *mutual support, sticking together* to make the power of *manpower* training *at TS*. Effective manpower training is sufficiently done by a combination of all methods, not any single one. Depending on perspectives and application of solution in accordance with general relation, implemented conditions will be place at different priority level.

### **3.5. Test the urgency and feasibility of methods**

*3.5.1. Test’s objectives*

*3.5.2 The test’s content*

*3.5.3 The test’s object*

*3.5.4. Assessment’s instruments and criteria*

*3.5.5 Test’s results*

The degree of urgency of the methods: Results of the urgency’s assessment of the proposed methods are shown in Table 3.5. This reconfirms that these measures are absolutely imperative. People agree about the urgency of the measures at a relatively high level. In which, audiences appreciating the urgency of the proposed methods are groups of student and employer because the purpose of human resources joining technical training generally are to get right jobs with satisfactory salary in positive working environment.

**The feasibility of the methods:** The assessment’s result of the proposed methods’ feasibility, the target population all agreed that the proposed measures are feasible

### **3.6. Field trial of the method 4 and a part of method 3**

This thesis proposes five methods in managing JT between TS and enterprises according to the CIPO model. However, due to practical differences in the enterprises in Bac Ninh province, the author chooses two proposed methods to implement the field trial within the scope and condition of the thesis: Method 4.: Building and using an information system of the management of joint training between technical schools and enterprises”; and a part of Method 3: Adjust to change target, content and training method in technical schools in accordance with environment of joint training with enterprises – *Managing intern activities in enterprises.*

*3.6.1. Purpose of the field trial*

*3.6.2. Time and place of the field trial*

*3.6.3. Content of the field trial*

*3.6.4. Progress of the field trial*

**Method 4:** Building and using an information system of the management of joint training between technical schools and enterprises”

**Results:** In 2013, the board of enrollment information, consulting and job introducing approached 30 enterprises and introduced about 300 students working in 22 enterprises with salary from 2.7 million to 4.5 million per person per month. It helped to extend relationships with enterprises in the industrial zones in the province and to make a plan of labor supplying in 2014. In 2015, this board had a higher specializatio, accessing to 80 businesses and signed labor supply contracts with more than 50 businesses and introduced nearly 550 students to work at the companies, signed many short-term training contracts for enterprises’ personnel in industrial zones.

**Partial method 3: Adjusting changes in the target, content and training method in technical schools in accordance with environment of JT between technical schools and enterprises - Managing intern activities in the enterprises**

The results showed that the school’s training quality has improved particularly technical skills and professional attitude. In 2013, student rate reached 35%.

In 2014, the quality of the students began to satisfy the requirements of enterprises with the assessment proportion of 60%. Teamwork skill has changed, 11% higher compared to 2013. Foreign languages skill is still limited and there is no improvement. The remaining criteria are evaluated with positive changes.

### **Conclusion of Chapter 3**

## CONCLUSIONS AND RECOMENDATIONS

### 1. Conclusion

Joint training activities between TS and enterprises is an activity that affects directly quality and efficiency of human resource. The thesis has clarified the concepts, essences and characteristics of managing JT between technical schools and enterprises, principles of joint training and managing JT between TSTS and enterprises.

Survey's result of management status of JT between TS and enterprises in Bac Ninh province clarified constraints TS in managing JT between TS and enterprises such as: The awareness of school staff and business owners about JT is not correct; forms, document system on JT and managing JT between TS and enterprises were not promulgated, *the* management's content of JT between TS and enterprises are simple, poor, passive and spontaneous from both sides.

The thesis proposed 5 management methods of JT between TS and enterprises as follows: Developing the JT mechanism to encourage enterprises and school fulfilling responsibilities; Defining the right T S and responsibilities for managing JT between TS and enterprises; Adjusting targets, contents and training methods in TS to meet the training environment of enterprises; Forming and using the managing information system of JT between TS and enterprises; Organizing career counseling and accepting students after graduating; The methods were implemented as field trial (2 measures) in Economic Technical Industry and Trade Technical School CCI and Ban Mai company on a credible quantity. After the field trial, the results have shown the feasibility of the methods and confirmed the validity of mentioned scientific theories. The methods impacted effectively on technical training for students and the development of enterprises and technical schools.

### 2. Recommendations

**2.1 To state management agencies:** Building a legal document system which is sufficient to promote JT activities between technical school and enterprises; Having written regulations on the responsibility of enterprises in using trained workers, the responsibility of enterprises in manpower's training, sharing and contributing resources to technical schools; Promulgating document on compensation for experts and highly skilled technical staff to participate in technical training; Organizing training courses to train and update job skills, technical training trends for teachers of technical schools so as to catch up manufacturing practices in the enterprises.

**2.2. To Bac Ninh province:** It is necessary to promulgate detailed instruction documents on JT with enterprises in accordance with local socioeconomic development status; Well predicting manpower's need and building manpower's development programs in the province through 5-year or 10-year plan; Strengthening steering, checking, supervising, proposing and implementing mechanisms which encourage JT activities with the enterprises in order to promptly bring authentic effectiveness; On the basis of the province's socioeconomic development's conditions, the province should have manpower's prediction for professions in specific stages in order to orient to develop short-term vocational training associated with industrial zones, enterprises investing in Bac Ninh, esp enterprises with famous brand, various products; Steering to well implementing career guidance programs and ramificating students after secondary education; Forming policies on rights and duties of enterprises when accepting and using trained labour; Encouraging Bac Ninh Young Entrepreneur Association in human resource development's activities; Participating in JT to develop manpower is one of the assessment's criteria on enterprises' performance as well as be considered as a priority point in approving the province's special offers to the enterprises.

Constructing documents providing appropriate remuneration to experts, technical staff who join training process. Constructing forms of objects' emulation who are concurrent teachers; Constructing criteria of encouraging enterprises' responsibility in accordance with local status and features with each enterprise group in the province; For enterprises which are yet or do not implement JT activities with schools in terms of developing human resource, there should be a framework of specific financial responsibility following a certain proportion based on the anual total wage-fund; the enterprises using labour must be responsible for joining in manpower development activities . This is consider as a compulsory factor when registering manufacturing operations; Implementing a unified management across the province which encourages JT between schools and enterprises. When promulgating manpower's development, the enterprises's responsibility will be attached with supportive policies for the enterprises joining JT; Reviewing the entire policy system relating to

training and developing the manpower. Adding, embodying promulgated regulations of the Government.

**2.3. To technical schools** Actively building relationships with enterprises to implement manpower's JT associated with the enterprises' requirement; Constructing the training curriculum to satisfy the enterprises' requirement should clearly determine the target: Considering the manpower's need as a guide, Implementing learner-centered approach, use innovation of the teaching method as a tool. Actively cooperating with enterprises in building the target, content of the training program, sharing resources in terms of facilities and high-skilled technical staff in technical training, and testing after learning to solve job's issues for graduates; Building and implementing a admission project by diversification of channels, massive introduction of the schools' training in the society, mobilizing many materials and financial resources to participate in enrollment activities. Building a network of admission collaborators in large scale.

Regularly investigating the demands of enterprises in short-term, building relationship with graduates to investigate jobs and training sufficiency; Strongly cooperating with the enterprises to consult and guide student's job. Constructing the specialized department in charge of establishing relationships with the enterprises. Regularly holding consulting workshops, job introduction's seminars with the enterprises' attendance; Building a policy mechanism about encouraging individuals, units in building the JT relationship with the enterprises; Constructing the specialized department in building relationships with the business to solve work's issues, to find apprenticeship for students, to sign training contracts; Attaching special importance to the form of training used by address; Having mechanisms which encourage technical teachers to have field trips and practise in enterprises so that teachers have chances to approach new equipment, to understand practical production to improve their skills; Diversification of technical teachers such as inviting the enterprises' technical staff to teach practices and guide apprenticeship.

**2.4. To the enterprises:**

Creating good conditions for students to practise on the enterprises's modern production chain; Making favourable conditions for technical teachers to visit, practise in the enterprises; Actively cooperating with technical schools to consult career for high schools' students so that they can choose their major as well as implementing admission consulting's activities. Receiving and introducing trained students to work at the enterprises; Cooperating with the schools to investigate the need of manpower, provide information of this need through training and students' ability to meet the job's requirement after being trained; Actively cooperating with technical schools in building the curriculum's target and content, adjusting the current curriculum; Appointing skillful staff to participate in teaching practices and apprenticeship.

## LIST OF PUBLIC SCIENTIFIC RESEARCH OF THE AUTHOR RELATING TO THIS THESIS

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3. Thi Le Dao (2014),”Roles of enterprises in joint training”, *Education Magazine*, special issue in October 2014, page 32
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