Informal Learning in Vietnam: Status quo, Circumstances of existence and the demand to be acknowledged

Abstract

Since 1986, Economical innovation ‘Đổi mới’ happened in Vietnam. In the beginning, Vietnam had only demand of workforce for light industries such as clothing, footwear or construction, which are characterized as labour-intensive, low-skilled, simple work. Thus, firms did not want to recruit highly skilled workers. Now, three decades later, Vietnam is on shift away from agglomeration (stage of initial Foreign Direct Investment absorption) and to technology absorption (internalising parts and components) (Ohno 2010). Therefore, it brought a new demand of highly skilled workforce; complex work such as operating CNC Machining Centres, assembling agricultural machines, designing and assembling printed circuit, etc., emerges in line with the development of the Vietnamese economics. However, Vietnamese Technical and Vocational Education and Training (TVET) institutions only provide training merely based on their own perceptions, not paying sufficient attention to employers’ skill demands. Thus, many firms struggle to find decent, qualified workers, most of them have to retrain their staff right after recruitment. This poses primarily as informal learning. Beside the formal sector of economics, an informal sector of Vietnamese economics exists as its dark downside. A research of the International Labour Organization (ILO) estimates the employment in the informal sector to amount 11.3 million jobs, which represents 48.1 per cent of the national total employment (Cling et al. 2010). Therefore, informal learning is vital in the informal sector from craft villages to enterprises. The author has conducted a field trip through four enterprises of various sizes within two months, last year. This paper is the result of the interviews and notes taking during these trips. By applying qualitative interview and case study, some factors of informal learning will be clarified in this paper. It will also make suggestions in terms of the development of professional profiles, the role of professional competence centres and solutions on how to bridge the gap between vocational schools and companies until the idea of clustering the vocational schools and firms in order to idealise vocational training. Other suggestions will be on advanced strategies of developing curriculums etc., in order to create a common base for qualifications and the improvement of the TVET quality in Vietnam.

Key words: informal learning, training-on-the-job, mentoring, skills, shortages, coaching
1 Informal learning in Vietnam from Mentoring to On-the-Job-Training (OJT); no future without a past.

1.1 Definition and depiction of informal learning in Vietnam

According to definition of the European Centre for the Development of Vocational Training (CEDEFOP), informal learning is actually a kind of learning, which is almost conducted in “daily activities relate to work, family and leisure” (CEDEFOP 2011, 85). In the past, informal learning in Vietnam occurred normally, in daily activities of agriculture. Mentoring is probably the most popular form of informal learning, which “is not organized or structured in terms of objectives, time or learning support” (CEDEFOP 2011, 85), happened during handicrafts in craft villages within circle of family.

There are many villages, specialising on different kinds of handicraft works in Vietnam such as bamboo-weaving, bronze casting, carpentry, drum making, embroidery, forging, lacquer work, horn sculpture-Oyster-encrusting, paint making, papermaking, pottery, rock capturing, weaving, etc., where this form of learning to training the workforce is used since generations until now. For example, at a village of bronze casting in Ho Chi Minh City, artisan Tran-Van-Thang was taught bronze-casting by his father Tran-Van-Kinh, one of the founders of An-Hoi-Bronze casting village, who learned those skills from another artisan, who went from Hue and settled down in Saigon. Then Tran-Van-Thang taught his sons and his daughters these skills in order to obtain the art of their ancestor. Teaching a person that is not a family member, such as an interested friend, is mostly only possible for some parts of the occupation, the easier ones such as making a wax model, making and assembling mould. More difficult tasks or skills, such as bronze soldering, mixing and melting brass with the right copper and zinc ratio, which are crucial to the quality of the finished product, could only be taught inside of family. Until now, this form of teaching and learning still remains as it went on in the past time (Dang Khoa 2012; Thanhniennews 2013).

The most relevant impulse for that sort of On-the-Job-Training (OJT) is the shortage of vocational and skilled workers. Handicraft firms, firms at the second wave of demand for highly skilled workforce, have to struggle with difficulties of finding a decent workforce, who possesses the ability to retraining by himself and be ready for work immediately. Some firms even recruit absolutely unskilled candidates and train them for the job themselves.

Thus, Vietnamese firms can be divided into two groups with different tendencies concerning their style of training:

**Group 1: Recruiting unskilled workers, divides work into several simple tasks according to the mentality of Taylorism.** In this group, the employer is ready to hire an unskilled-person and train it at workplace in short time (one-week max.) to adapt the task. It is located at enterprises in the domain of textile, construction and even mechanical engineering, in which occupation is divided into many simple tasks and involved with assembling and manufacturing in line. This kind of training can be called initiative training. Here training is
conducted without the supporting of basic technical theory. It will not lead to the individual’s motivation, development and productivity later on.

**Group 2: Recruiting novices or graduates from vocational schools or colleges, which still might be not work-ready.** This group wants workforces, who can handle independently complex tasks such as operating CNC or other conventional machines, assembling the electrical board of fly cams, etc. The firms usually look for novices or graduates from vocational schools or colleges, that are not work-ready and have inadequate-skilled so they could not start their work immediately after recruiting. These the new workers will acquire from the firms’ training, usually in form of mentoring, of the duration from several weeks until three months, depending on the level of complexity of work. In that time the novices will work under the guidance of an experienced person who acts as a role coach or mentor. The training would be conducted one by one at the workplace and in daily tasks during adapting time. New employees here can have an official employment’s contract and be accepted as a skilled-worker after the time of retraining, called probation period, if they can prove their progress and can fulfil all tasks at workplace on their own. This kind of training can be called *adapted training*. It happens at the beginning of occupational life of a worker and can be considered as an extension of the formal learning. In this group, informal learning reinforces acquired knowledge and former skills through application and experimentation at workplace. Therefore, it can help individuals to bridge the gap between knowledge and skill.

Apart from that, the workers can still be trained during the working process in case the firm changes its products, upgrades its devices or similar changes within occur. In the case of a company, which makes moulds when manufacturing plastic articles, when they upgrade from 3-axis-CNC-system to 4 or 5-axis-CNC-system, they mostly either order the firms, which provide the system, to train their workers how to operate these machines or they can send their worker to company of their clients in order to adapt new tasks. This kind of training could be called *advanced training*. It could be done along professional life of a worker. This form of informal learning seems to be productive for both, the company and its workers but only when the company’s culture and practices fully support it.

However, not all of them can lead to certification. In most cases only *advanced training* may be validated and certified by the company itself, but even that, and certainly the other types of training might not be accepted in other companies.

It is obviously that informal learning plays a very important role in circumstances of skills mismatch and skills gap nowadays in Vietnam, where lack of linkages between TVET-institutions and industrial sectors. Because some of relevant skills (problem-solving, coping with stress, creativity, negotiation, ideas expression, cooperating as well as sharing skills and information with other employees, cultural awareness) are only developed in certain environment such as at workplace, where demand of using a complex “mixture” of knowledge, skills and behaviour is always required.
1.2 The reasons why informal learning is an important part of the Vietnamese TVET

According to the newest edition of Law on Vocational Training (2014) Vietnam’s TVET system can be compromised into (see Figure 1). The lowest one is the Elementary – Vocational education training center (VET center – Trung tâm dạy nghề) which is both representative and responsible for primary training in terms that last at least three months or such that are equal to 300 training hours a year. The middle level is Secondary – on which are vocational secondary schools (VET school – trường trung cấp nghề) as representatives that provide training courses in one to two years. The highest one is vocational colleges (trường Cao đẳng nghề), which takes on as a training institution of the third level of Vietnam’s TVET. This level offers training courses taking two to three years. All of those institutions are under the supervision of the MoLISA. In accordance with Law on Vocational Training (MoLISA, 2014), completing secondary school or LSE is a gateway to vocational schools.

On the shift away from agriculture and impact of urbanization which occurred on the countryside of Vietnam, land for cultivating reduced and was replaced by many industrial zones. Farmers and their children had to leave their home town to go to city in hope of
finding a new occupation. Therefore, high rate of school dropouts followed. The area marked most significantly is Mekong delta, where only about 17 to 20 per cent of the workforce are trained. The report about Vietnam Population and Housing Census demonstrates that of the total number of people aged 15 years and above, 5.5 per cent had no schooling at all and 14.5 per cent had not even completed primary school. As many as 25.7 per cent had completed primary school, but not lower secondary school. Thus, 40 per cent of persons aged 15 or above who started school had dropped out before completing LSE (a few remained in LSE after turning 15), the gateway, as stated above, to proper vocational schooling. Among people living in rural areas, the corresponding figure was even higher, pending at 45 per cent (Thuc Duc Ngo & Minh Tam Tran 2013). Thus, young people are pushed into labour market without training.

On the other side, novices, graduated from vocational schools or even colleges, are not ready for working when they are employed either. Because there is a “gap of vocational training in Vietnam, between vocational institutions, mostly are executive by government and companies in private sector of economics” as Mr. Jean Jacques Diverchy, an expert from France that now works as trainer at Dung-Quat-College in Quang-Ngai-Province, has recognized. “There is no linking between the firms and vocational schools in Vietnam. It results high rate of unemployment in Vietnam. If a firm recruits a worker, they have to retrain him in order to adapt to circumstances of manufacturing system in the firm”, he says, “Even though, there are many engineers, graduated from universities, have very good basic theories. But when we offered them to assembly a certain device, they could not do it. Therefore, domestic or foreign firms waste time and money to retrain their new workers after recruiting.” Expert Jean Jacques Diverchy pointed out (Mai, 2017).

In fact, through results of the interviews with technicians, experienced workers and also managers, it shows that vocational schools or colleges can provide a good foundation of theories but their novices still do not bring enough ability to confidently manage the tasks in real situations at the workplace. “They are not simply ready for working because of lacking necessary skills of their jobs” said the manager of the firm that produces fly cams, “they did not learn these skills at vocational school or have not yet mastered them. […] For example, soldering, the important skill of electrician, but they could not. We have to train them again and again from the beginning of employment”, he added. And to the question what he expected from his engineers, the manager considered that it is not important how an engineer can master the software, like Eagles to design a printed circuit, but that he considers it very important how this engineer uses this software to design a printed circuit, which is small enough in order to be suitable for small drone, which the company intends to produce.

In case of the plastic moulding manufacturing firm, it, too, was a story of improperly skilled-workers. The training course for mechanical engineering job in state vocational schools for example, only focused on building skills of operating conventional machines such as lathe machines, milling machines. In curriculum of mechanical engineering job, there is obviously a small portion for learning operating CNC-machine/system but this length of time is not enough for the cause it is intended for: forming skills to fully operate a CNC-machine/system.
This results out of a lack of equipment at the vocational schools in terms of CNC-machines, but also in terms of experienced trainers that could teach the novices the usage of the complex devices, which leaves the novices unequipped, even when they enter the job market for they’ve probably only ever seen somebody use the devices but never practices on them themselves.

Thus, the lack of job-relevant skills (Fig. 2), especially job-specific technical skills, is another reason of informal learning in Vietnam. In the context of skills’ shortage, informal learning may be considered as an extension of formal learning as formal learning at vocational schools or technical colleges is just first step on the way to become a professional worker. During the last field trip, which was conducted in two months in Ho Chi Minh City, all workers who were asked, had the same answer: they had learned theories through the time when they were at vocational school but competencies of profession they could only truly master through daily working duties. Though the second part is the most important, like an iceberg, most of part is underwater. Informal learning in this circumstance is the important manner, which just starts only when formal learning ends. This means it has just happened when the worker comes into real world of working. Day by day, his competencies must get better otherwise he will never adapt to the needs of the company and will lose his jobs. In addition, conditions of working places have vital effects on this process of learning. Such as at company of designing and manufacturing plastic moulds, in which daily working duties of worker are complex because properties of manufacturing work parts are not repeatable and always alternative, the worker can learn more than in a company, in which the worker works in a production line, repeating the same tasks over again.

![Figure 2: typical job-relevant skills according to the report of the World Bank (World Bank 2014, 16)](image-url)
It was not a surprise when serial reports about Vietnamese human resources not only of the European Chamber of Commerce in Vietnam (EuroCham) and the Organization for Economic Co-operation and Development (OECD) as well as World Bank’s Development Report with titles like “Skilling up Vietnam: Preparing the workforce for a modern market economy”, “Within ASEAN, Vietnam ranks in the lower half of human resources development” or “improving and upgrading the skills of its workforce is one of Vietnam’s key tasks to meet the needs of a rapidly changing labour market” (EuroCham 2014, 31) hit the news. Those reports warned Vietnamese TVET from the lack of job-relevant skills, which every worker (blue and white collar) must possess. In accordance with ‘Training Policies for Workers’ of the World Bank, job-relevant skills are also indicated a set of competencies or abilities valued by employers and useful for self-employment. They include technical skills relevant to the specific job of the worker, as well as other cognitive and non-cognitive skills that enhance his or her productivity more generally. These skills include:

Problem-solving skills or the capacity to think critically and analyse. In the interview with the manager of the company producing fly cams, he considered this skill as vital. He recognizes that students, who had made some projects in the time when they studied, can overcome challenges at working place very effectively, too, and already bring habits to solve problems.

Learning skills or the ability to acquire new knowledge (‘learning to learn’), to distil lessons from experience and apply these in search for innovations. Not only by adapted training but also by advanced training, which come along during the professional life of a worker, this skill is a universal tool to help workers to move on and approach higher levels of qualification through informal learning, too.

Communication skills, including writing skills, collecting and using information to communicate with others, fluency in foreign languages, and the proper utilisation of information and communications technology (ICT). All interviewees considered that communication is crucial for learning at work place.

Personal skills for self-management as making sound judgments and risk management. Those skills are essential when the worker plays a managing role in the firm.

Social skills to collaborate with and motivate others in a team, managing client relations, exercising leadership, resolving conflicts, and developing social networks. This skill has a vital role in exchanging experiences between people within the firm and also in creating an environment of Know-how for enriching knowledge of the firms’ workers.

1.3 Characters of informal learning and critics

Informal learning is very subjective. It depends almost entirely on capacity and motivation of the learners, their enthusiasm, occupational qualifications and also the educative skills of the mentor. Moreover, the complexity of the work and conditions at the workplace also have a
large impact on informal learning. In firms following the idea of Taylorism, the worker doesn’t have good conditions and only a small chance to learn a whole job instead of specific, simple and repeated tasks. On another side, at the firms like that making moulds for plastic injection, the employees were trained to master a very complex work. In this firm, the mentor has a check list of required skills for training. After the trial time, the novice has to prove abilities to handle all tasks in this check list. It can be concluded that informal learning is totally up to the views of employer. Thus, informal learning is also authority.

However, it is easy to see that informal learning is very practical. It can be seen as a form of work integrated learning (WIL) and supports work-readiness very effectively. Informal learning starts at the beginning of the occupational life and may draw through it until the end of it. It’s called lifelong learning (CEDEFOP 2011, ILO 2003). But there is a big question, which remains unanswered, which is whether worker is on risk to fall into the trap of elementary training, meaning he obtains just enough skills for the specific tasks he is assigned with instead of general skills. As an interview with a manager in steel construction and shipping company in Vung-tau Province, a city is located about 120 kilometres far from Ho Chi Minh City, shows, employers sometimes even use this authority, the ability of choosing any informal learning methods they wish, to their advantage. The manager’s company has extremely high demand of workforce in the field of welding and is eager to recruit even unskilled people, offering them free training with only one condition: they have to work for company in certain time after finishing the training course. He is afraid of high a turnover, so he gave many politics to prevent them quit the job, for example by teaching them skills for specific jobs, or reimbursing money, the worker had paid for training course himself, as an reward when the worker protract his contract, etc. This situation occurs also in other fields such as textile, construction engineering or household utensil (such as repairing conditioners). The most remarkable character trait of this informal training is its length, as it only takes place in a time between several weeks to a maximum of three months at the lowest level of TVET according to law of vocational, established in 2014. There are many reasons, which make companies don’t want to invest more in TVET in Vietnam. German companies in Vietnam, as an example, dislike facts such as poaching, lack financing, high turnover, lack of knowledge, no need for training, scepticism. They intend to train their employees just enough skills for specific jobs. Therefore, workers have to face the risk of unemployment when aged 35 to 40 or older. A research of the Institute of Vietnamese Trade Unions has indicated that average age of workforce, working in firms is only 31.2 and duration, of work at a firm is only an average of six to seven years. That means the firms have the tendency to employ younger workers and dismiss old ones.
2 Informal learning: Circumstances of existence and shift away from the traditional system of seven levels of qualification to system of NVQs (National Vocational Qualifications)

2.1 The level of qualification: definition and classification

Since 1958, Vietnam’s ministry of labour has already established occupational skill standards, which can be considered as the earliest NQFs of Vietnam and instrument for supporting in skills’ measurement at workplaces, in form of a seven levelled system, giving a set of skill standards for workers in the mechanical engineering domain, covering standards of twelve popular careers within mechanical engineering such as lathe machinist, milling machinist, metal planer operators, Blacksmiths, metal former, solder, welder, wood patternmakers, foundry worker, casting worker, vehicles mechanic, vehicles electrician, etc. It functions as a base to set payments, way of employment and other things considered in a labour contract. Its structure contains two elements: knowledge (what workers should know) and abilities (what he should do best) and is divided into seven levels. Though only level 2/7 or 3/7 and above are acknowledged when novices graduated formal training course at a vocational school (1). It can be expressed in another way that level 2/7 or 3/7 function as departure of a long professional way of a worker. Another higher level of qualification (4/7 to 7/7) could be achieved through the process of working and collection of experiences by the worker, which is considered informal. Afterwards he can approach a higher level when he passes an examination, normally held at workplace. A formal training course in Vietnam is considered only when examinees pass the entrance examination or get the acceptance of examination board. A formal training course takes normally at least one year. Novice will get a degree of vocation when he graduated. All training courses are hold in firms and not over 3 months, are considered as informal training. For his studies, the author took part as inspector in such an examination. This examination, according to the recognition of the author, is very subjective but has a vital role for grading wages and salaries because the occupations are always changing and do not stay the same as the occupational skill standards, that are only established once and were not updated since. It lacks of up-to-date foundation information about the occupations as it had been only once and for all issued and is looked like desire for a single occupation, not holding any connection with industrial sector. In addition, many careers that appeared just recently, like the operator for injection moulding machine, as a typical example in Vietnam an occupation, not trained in vocational school. It is only trained in firms and certainly in informal way the system of skill standards could not be monitored towards as an empty cover (original word in German: eine leere Hülle) (Frommberger 2015, 27). So firms often don’t feel comfortable to recruit and classify their workers based on this system. Therefore, they are not formally trained in a governmental vocational school and not acknowledged. Thus, this former set of occupational skill standards does not have impact on not only state firms but also private companies anymore and can no longer be considered up-to-date.

The term level of qualification could be defined in two ways:
It can be considered as the level of attainment in education and training recognized in a qualification system or in a qualification framework; 

Or as the learning outcomes acquired through education and training, work experience or in informal/non-formal settings. (CEDEFOP 2011, 104)

The level of qualification is often determined in comparison to a standard in a qualification system or a level descriptor in a qualification framework. In case of Vietnam, the Ministry of Labour, Invalid and Social Affairs (MoLISA) plays as dominant role of state managing institution but its monopoly has not covered and caught up on development of the economics. The level of qualification has obviously a big impact on vocational training because it determines “the learning outcomes acquired through education and training, work experience or in informal/non-formal settings” (ibid.).

In addition, it can be determined in comparison to an occupational profile (for example, description of learning outcomes required to perform the tasks, attached to a job at a specific level of responsibility and autonomy) (ibid.). Therefore, it brings exchange value for the occupation between firms of the same industry.

2.2 Developing National occupational skill standards in Vietnam: structure, critics and strategies to guarantee exchange value and continuous development of a worker’s professional life

Since the beginning of 2016, the establishment of the ASEAN Economic Community (AEC) is a milestone in ASEAN with a very important point, which is the mobilization of labour between those countries part of the community. It puts Vietnam under the pressure of a TVET reform and raising informal to formal training. Because “only less than one fifth of Vietnam’s labor force have received technical training and the skills they gain from the education system often do not match those wanted by the labor market.” (ILO, 2014) Therefore, most of labours are mainly trained on the workplace and during their daily professional practice. From those reasons, Vietnam decides to develop National Occupational Skill Standards (NOSS) like the NOSS for CNC Operator in 2011 in order to set a foundation or reference for employees to orient their efforts and improve their levels in terms of knowledge and skills by studying or gathering experience in order to have a chance of promotion in their occupations; employers to have bases for selecting employees, arranging jobs and paying proper salaries for employees;

TVET institutions to have foundations for developing a TVET program approaching. (MoLISA, 2012)

The structure of NOSS consists of three contents:
description of occupation including scope, estimated working position, conditions and environment of occupation, context of task performance, machines, necessary tools and equipment or devices could be involved with this profession.

list of tasks which the worker must prospectively and professionally performed or fulfilled. These are arranged in form of table and classified by levels of occupational skills.

Table 1: Sample table for the list of tasks (own depiction)

<table>
<thead>
<tr>
<th>Nr.</th>
<th>Code of task</th>
<th>Tasks</th>
<th>Levels of occupational skills</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Level 1</td>
</tr>
<tr>
<td>A</td>
<td>Task 1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>A1</td>
<td>Activity 1.1</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>A2</td>
<td>Activity 1.2</td>
<td></td>
</tr>
<tr>
<td>...</td>
<td>...</td>
<td>...</td>
<td></td>
</tr>
<tr>
<td>B</td>
<td>Task 2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>...</td>
<td>B1</td>
<td>Activity 2.1</td>
<td></td>
</tr>
</tbody>
</table>

standards on task performance, which cover task description, performance criteria, essential skills and knowledge, performance conditions, criteria and evaluation methods.

The Vietnamese skill standards are developed based on methods of occupational analysis with targets on determining prospective, essential duties and tasks, which a worker has to perform in the occupation. This set of skill standards is a result of a theoretically cooperative process with the participation of experts from different sectors: specialists in the occupation, TVET teachers and researchers. Since 2008, Vietnam has issued decisions of NOSS, which consist of rules that members of the NOSS development board such as members from enterprises (inclusive representatives of employers, employees, professional associations) must make up approximately 50 per cent or all phases from occupation analysis, task analysis, and development of task list to the compilation of national standards on occupational skills, where suggestions of at least 30 experts who have practical experiences in the occupation are taken, in order to guarantee the popularity, objectivity and representative of NOSS (MoLISA, 2008).

The process of NOSS development, which is conducted by doing analysis of a group of constituent works, and led by only MoLISA without participation and references of professional associations, which are more decent representative from industrial sector, is currently liked as ‘black box’. Thus, it needs more transparency and may be more scholarly. Because skill standards of an occupation contains not only one element, technical skills, but also another two elements, cognitive skills and behavioural skills (or soft skills), as the comment of a manager in interview stated before “students, who had made some projects in the time when they studied. Then, they can overcome challenges at working place very effectively and they have habits to solve problems”. Moreover, “the development of the national standards on occupational skills has initially mobilized the participation of members
of enterprises. This is a necessary condition to ensure the quality of the national standards of occupational skills. However, at present the active participation is mostly by training institutions, whereas the role of enterprises is passive and dim.” (MoLISA 2012) In fact Vietnamese firms have a real demand to take part in the installation of skill standards but there is not a mechanism of this cooperation as the report of MoLISA about TVET expressed by saying that “in current context and conditions of Viet Nam, the development of the national standards on occupational skills is presided over and implemented by the state through respective responsible bodies. In the long-term, this activity should be undertaken by enterprises and employers through Councils of Occupational Skills” (ibid.).

3 Recommendations

3.1 Clustering between state vocational schools and enterprises with the target to ‘wipe out’ mismatch between the TVET in Vietnam and utilisation of labour force

During the field trip, the author met a group of students, who spent their time in a plastic moulding company, doing their apprenticeship. During this trip, maximal three months before the graduation, the schools will send their students to companies to make apprenticeship in order to form their specific professional skills such as CNC-machine operation. But still through all of their apprenticeship, students are not once allowed to operate the machine. They are only ordered to do simple tasks such as cleaning machine, picking up work parts or even to watch what happens. The manager of this firm explained that school had only sent students to firm. He did not know what he should do with these students. He also assumes students might sometimes even just wait for a proof of time spent in the company, without being interested in serious achievement of skills. It is fact that it still lacks of agreement between vocational schools and companies, to which they send their trainees, on clear learning outcomes of the training, otherwise their trainees have to or should attend such apprenticeships again, the first one being more or less a waste. In addition, they should come up with a solution for insurances in order to share the risk of breaking down machines and protect their trainees from potentials of accident at the working site during the duration of apprenticeship. Like that, the companies must not be afraid to let the trainees operate the machines themselves.
The clustering should not only be under form of cooperation about apprenticeship but also in curriculum development and agreement, maybe in accordance with a model of quality apprenticeship, like it is done in the United States of America, such as Siemens Quality high skills apprenticeship programme, which was conducted by coordination between the Siemens Energy plant in Charlotte and Central Piedmont Community College under the supervision of the State of North Carolina (Aring, 2014).

![Clustering diagram]

In this way of this clustering, enterprises are just considered as places, where offer Apprenticeship for trainees, but without agreement of content's the apprenticeship (skills needed)

 Enterprises are initiative in clustering with schools, closer in training cooperation, somehow with agreement of content's the apprenticeship (skills needed) by giving offers or advices about needed skills but not yet go further in process of curriculum development

Figure 3. Clustering between vocational schools and Enterprises in Vietnam

This form of cooperation in TVET in Vietnam has already existed in the last couple of years, especially in the domain of textile industry, tourism, banking, law and Information Technology (IT). Then enterprises and vocational schools normally sign memorandum for the cooperation in TVET. Learners would learn theories in schools and trainees would achieve their professional skills by doing their apprenticeship in enterprises. In this situation, enterprises often received offers from schools to give advice in processing of curriculum development. And they can also share information and responsibility with each other during training times. This also occurred in the industrial zone, for example the Dong-An industrial zone (in Binh-duong province) or in High-tech industrial zone (in Ho-Chi-Minh-City). In these zones, a school or centre for TVET is established with the main purpose of training trainees for all firms in this industrial zone. Clustering could help us to ‘wipe out’ the adapting training and labour would actually be work-ready when novices graduate. But “a concept for demand-driven training has not materialized yet” (JICA 2014).
3.2 Innovation in process of issuing NOSS

It is necessary to make the process of establishing a NOSS more transparent by answering the question, who members from enterprises are, if they are qualified enough to be representative for an occupation and how they are asked, if questionnaires for occupational analysis are enough qualitative or quantitative to sketch the outline of occupation. It is crucial to the popularity, objectivity and representative of NOSS. Councils of Occupational Skills should be representative for professional associations and the responsible institute for establishing NOSS and keeping it updated. This is also an advice of Mr. Sziraczki, Director of ILO Country Office of Vietnam: “to make skills development more demand-driven, Vietnam needs to enhance co-operation with private sector and promote the participation of business and industry in the education and training system” (ILO 2014).

3.3 Supporting informal learning to be formal

Since 2015, the Vietnamese government has issued decree No. 31/2015ND/CP to acknowledge skills, which workers gain by informal learning. Thus, vocational schools or training centres are permitted to hold examinations to upgrade the occupational level of workers. Throughout this, the workers have the chance to prove their qualifications by joining and passing tests, which are held by the TVET or training centre for this exact matter. However, due to the lack of NOSS as a foundation, detailed information on specific skills’ needs at the occupation level are made for sketching up a general outline of the profession and fair and productive examination. So those examinations are not to define exactly and properly proficiency of workers. Though it lacks of accuracy in evaluation. Moreover, this acting is done by only monopoly and dominant role of TVET institutions, private sector or professional association has not yet played any role in this acting. It may be more efficient when this acting is conducted by tripartite coordination firms, professional associations and the state, in which firms and professional association would define as well as establish NOSS and also specific skills needs at every occupation level of a certain job. While vocational schools, as Representative of the State, would be host of occupational examinations under the supervision of the MoLISA.

Table 2: Conditions to attendance an examination for higher occupational level acknowledgement

<table>
<thead>
<tr>
<th>Upgrading level</th>
<th>Certificate of vocational competency</th>
<th>Graduation</th>
<th>Years of experience</th>
</tr>
</thead>
<tbody>
<tr>
<td>Level 2</td>
<td>Level 1 or Certificate of elementary</td>
<td>VET school</td>
<td>3</td>
</tr>
<tr>
<td>Level 3</td>
<td>Level 2 or Graduation VET school</td>
<td>VET college</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>Level 1 (Certificate of elementary)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>and 5 years of experience</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Level 4</td>
<td>Level 3 (Graduation VET college)</td>
<td>Diploma</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>and 3 years of experience</td>
<td>/University</td>
<td></td>
</tr>
<tr>
<td>Level 2</td>
<td>Level 4 or Diploma/University and 5 years of experience</td>
<td></td>
<td></td>
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<tr>
<td>--------</td>
<td>------------------------------------------------------</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Level 3</td>
<td>Level 3 or Graduation of VET college and 9 years of experience</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Level 2</td>
<td>Level 2 or Graduation of VET school and 12 years of experience</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Level 1</td>
<td>Level 1 or Certificate of elementary and 14 years of experience</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

| Level 5 | Diploma /University And 3 years of experience |

4 Conclusion

Skill shortage and skill mismatch in Vietnam are a big barrier, which Vietnam has to overcome on the way to industrialisation. It leads to the existence of informal learning in Vietnamese companies, which thus are struggling on their search for and recruitment of workers, who have sufficient professional qualifications. It is time to change this and let industrial and private sectors contribute much more and more intensively to TVET, as they are ready to do this. Though clustering firms and TVET schools is not enough to reduce the skill shortage and mismatch. It is necessary to build up a model of social tripartite partnership between stakeholders consisting of TVET institutions, industrial partners and the government, in order to not only better determining the skills’ needs of industry, which play a role as information resource for improving training programs based on industry skills demands, but also to develop a sufficient skill evaluation system, in which the state and industry will share the role as supervisors. This system will effectively support the process of acknowledging professional skills of workers.

Establishing NOSS for all of occupations is very urgent in Vietnam but it should be done in context of interaction between TVET institutions and enterprises who should be enhanced, to assure their contribution as important representative for the private sector and vital information source to figure out more accurate descriptions of required skills and knowledge, but also as provider of occupation.

And after all, the TVET should be a subsystem in the whole system of economy. It needs to link or communicate more effectively with other subsystems in the whole, enterprises as a subsystem, for example, should keep communication channels with TVET institutions as another subsystem open to explore future or latent skill needs of industry in order to promote development of the dynamic training program to grasp the demands of industry. The economy does not stand still, thus the TVET system should not stand still.

TVET should be a truly alive system, made for a truly alive economy and its truly alive participants’ needs.
References


CITATION:

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