

The Fact of Training at Associate Level in Meeting Human Resource Requirements of Enterprises in Vietnam

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Abstract: *The purpose of this research is to find out the fact of education and training at associate level in meeting the human resource requirements of enterprises in Vietnam. Questionnaire survey method was applied for 3 groups of respondents, including the quantitative (390 questionnaires) and the qualitative (18 interviews) in the northern, central and southern regions. Gathered data were processed using SPSS 22.0 software with tools: Cronbach's alpha to assess the reliability; EFA to measure the (convergence or discriminant) validity; Descriptive Statistics to rank the level of vocational training at associate level so as to meet the human resource needs of enterprises. The study provided a status picture of training in four aspects, including: input, process, outcome and context factors. The survey results reveal the limitations of associate-level training to meet the needs of enterprises' human resources in all stages from enrolling, training and graduating, then determine feasible solutions in the following research.*

Keywords: Training, Associate, Meeting the needs, Human resources of enterprises

Acronyms

ENT: Enterprises LM: Labor market STU: Students LEC: Lecturers

MGR&LEC: Managers and Lecturers MGR&TR: Managers and Trainers FAC: Facilities

EE: Employees HS: High school

1. Introduction

The cooperation between colleges and the enterprises is the key to training in order to meet the enterprises' human resources needs. Training in schools shifted from "supply" to "demand" direction, linked into the needs of human resources of the enterprises, employers and job demand of the labor market, especially the enterprises. However, in order for the quality and effectiveness of associate-level training to secure an improvement, it is necessary to clarify the training in all four aspects: input, process, outcome and context factors.

The article analyzes the current situation of associate-level training for meeting the human resource requirements of enterprises in Vietnam. The results of the study are the basis for the development of measures to further improve the quality of training at the moment as well as in the future.

1.1 Research Content

1.1.1 Research purpose

With an aim of interpreting the fact of associate-level training as well as being a practical basis for proposing training solutions to meet the human resource requirements of the enterprises.

1.2 Methodology

The study used the questionnaire method

The questionnaire was anonymized in order to reach objectivity, sent to the three groups of respondents, as shown in Table 2.1.

Table 2.1: Sample

No.	Subject	Quantitative (questionnaires)	Qualitative (interviews)	Expert's comments
1	Managers & Lecturers in colleges	90	9	
2	Managers & Trainers in enterprises	150	9	
3	Employees (Volunteer students)	150		
4	Experts			
	Total	390	18	

- 1) 90 lecturers and managers at colleges, including school boards, heads/deputy heads of Training departments, Student affairs, Employment service center; lecturers (who are responsible for theory, practice and integrating modules) at 9 colleges (2 private and 7 public schools) in 3 the northern, central and southern regions; The survey assesses the current status of associate-level training activities in order to meet the needs of human resources in enterprises;
- 2) 150 managers and trainers in the enterprises
- 3) 150 employees in 30 enterprises (10 in each region) with a scale of more than 100 employees or more graduated from colleges. The enterprises currently employ associate-degree workers. The survey only focuses and evaluates the training activities of colleges.

Data collected are processed and validated using SPSS 22.0 software. The study determines the ranges at each level based on the questionnaire criteria: 1,0 – 1,8 : Poor; 1,81 – 2,6: Below average; 2,61 – 3,4: Average; 3,41 – 4,20: Good/Strong; 4,21 – 5,0: Very good/strong. Thus, the study chooses the score of 3.4 to be the acceptable level of meeting the requirements.

2. Result and discussion

2.1 The fact of associate-level training for meeting the human resources needs of enterprises

2.1.1 Input factors

a) Enrollment

In-depth interviews with the colleges show that all schools build a detailed enrollment strategy or plan and adjust it every year. As regulations, they are admitted regularly during a year and the candidates are diverse. However, their main input is high-school-graduates. Some candidates used to be workers and decide to study at college for changing careers or starting a business. The status of enrollment activities at colleges is shown in Table 2.2.

Table 2.2: Fact of enrolling activities

Factors	Subject	Evaluation levels										Average score
		Very good		Good		Average		Below average		Poor		
		N	%	N	%	N	%	N	%	N	%	
Enrollment strategy	MGR&LEC:	9	10	65	72.2	15	16.67	1	1.11			3.9
	Managers & Trainers	11	7.33	31	20.7	75	50	33	22			3.1
	EE:	27	18	68	45.3	51	34	4	2.67			3.8
Collaboration with enterprises in enrollment	MGR&LEC:	3	3.33	15	16.7	67	74.44	5	5.56			3.2
	Managers & Trainers			13	8.67	112	74.67	25	16.7			2.9
Average			7.7		32.7		50		9.6		0	3.4

(Source: results of investigation and survey)

The evaluation results of the enrollment strategy in Table 2.2 show that the average score is at the acceptable level and the number of managers & lecturers mainly rated good and very good. The employees had the same opinion of the enrollment strategy as the managers & lecturers. However, the managers & trainers assessed at an average level and the enterprises considered that the coordination was not good and rate average (2.9) as well.

Also through the interviews, the study found that the school is mainly aimed at middle schools and high schools and barely pay attention to the enterprises and the employees while building and implementing enrollment plans. This shows that the schools are unlikely interested in the role of the enterprises in enrolling.

b) Lecturers, managers and trainers in enterprises

The facts of the lecturers and managers at colleges in table 2.3 reveal that:

- Regarding the capacity: Managers and teachers at the school and employees evaluated the capacity of lecturers for associate-level training to be adequate so as to meet the human resource requirements of the enterprises. Specifically, the administrators and lecturers rated nearly very good. However, managers and trainers in the

enterprises only assessed at the average level (2.99) which means unacceptable. This difference shows that the administrators and lectures at the schools are confident in their abilities, while the enterprises seem not.

- Regarding the vocational skills of the lecturers: Similar to the capacity factor, lecturers and managers at the school themselves are confident in their vocational skills and able to teach at a college in order to meet the needs of the enterprises. The employees have the same opinion. However, the enterprises only assess the vocational skills of the lecturers at an average level.
- Regarding the coordination with the enterprises, all 3 groups of respondents assessed at an average level, which means this coordination has not met the needs.
- Regarding the management skills of the administrators at the schools, the survey reveals that is rated average or not acceptable to the requirements.

The results from Table 2.3 show that 2 factors “coordination with enterprises to attract and develop careers for lecturers and trainers in enterprises” and “management skills of the administrators” need to be improved for requirements. The vocational skills of the trainers also need to be enriched.

Table 2.3: Evaluation of lecturers and managers at colleges

Factors	Subject	Evaluation levels										Average score
		Very good		Good		Average		Below average		Poor		
		N	%	N	%	N	%	N	%	N	%	
Capacity of lecturers for associate-level training to meet the human resource requirements of the enterprises.	MGR&LEC:	15	16.7	64	71.11	11	12.22					4.04
	Managers & Trainers			34	22.67	81	54	35	23.33			2.99
	EE:	11	7.33	64	42.7	70	46.67	5	3.33			3.54
Vocational skills of lecturers for	MGR&LEC:	10	11.1	55	61.1	21	23.33	4	4.44			3.79

associate-level training to meet the human resource requirements of the enterprises.	Managers & Trainers in enterprises			28	18.67	97	64.67	25	16.67			3.02
	EE:	10	6.67	67	44.67	73	48.67					3.58
Coordination with enterprises to attract and develop career for lecturers and trainers in enterprises	MGR&LEC:			31	34.4	56	62.22	3	3.33			3.31
	Managers & Trainers in enterprises			16	10.67	97	64.67	37	24.67			2.86
Management skills of the administrators at schools	MGR&LEC:			37	41.11	43	47.78	10	11.11			3.30
	Managers & Trainers in enterprises			14	9.33	111	74	25	16.67			2.93
Total			4.2		35.6		49.8		10.4		0	3.34

(Source: results of investigation and survey)

Table 2.4: Evaluation of trainers in enterprises

Factors	Subject	Evaluation levels										Average score
		Very good		Good		Average		Below average		Poor		
		N	%	N	%	N	%	N	%	N	%	
Vocational skills of “trainers in enterprises” for participating in associate-level training	MGR&LEC:	41	45.6	45	50	4	4.44					4.41
	Managers & Trainers in enterprises	89	59.3	61	40.7							4.59
	EE:	73	48.7	57	38	20	13.33					4.35
Pedagogical skills of “trainers in enterprises” for participating in associate-level training	MGR&LEC:			10	11.1	35	38.89	45	50			2.61
	Managers & Trainers in enterprises			26	17.3	80	53.33	44	29.3			2.88
	EE:			23	15.3	79	52.67	48	32			2.83
Average			26		28.7		27.1		18.6			3.61

(Source: results of investigation and survey)

The real situation of the trainers in the enterprises is shown in table 2.4. It demonstrates that all respondents rated very good for the vocational skills of trainers in enterprises. In contrast, their pedagogical skills are just average. Thus, trainers in enterprises need to improve their pedagogical

skills for participating in associate-level training so as to meet the needs of enterprises’ human resources.

c) Training programs

Table 2.5: Evaluation of training programs

Factors	Subject	Evaluation levels										Average score
		Very good		Good		Average		Below average		Poor		
		N	%	N	%	N	%	N	%	N	%	
Training programs for enterprises’ requirements	MGR&LEC:			35	38.9	51	56.67	4	4.44			3.34
	Managers & Trainers in enterprises			12	8	85	56.67	53	35.3			2.73
	EE:			51	34	63	42	36	24			3.10
Collaboration between colleges and enterprises in building training programs	MGR&LEC:			21	23.3	55	61.11	14	15.6			3.08
	Managers & Trainers in enterprises			15	10	97	64.67	38	25.3			2.85
Average					22.8		56.2		20.9			3.02

(Source: results of investigation and survey)

The results in Table 2.5 reveal that the training program and the cooperation with the enterprises in developing the program were evaluated at the average level and not yet meet the needs. In particular, the enterprises assessed nearly at the below average. This shows that the training programs of the schools are still far from the reality in enterprises. Moreover, the enterprises are not satisfied with the collaboration to develop the program implemented by the schools.

Training programs are a decisive factor in associate-level training to meet the human resource needs of the enterprises. Therefore, it is necessary to have a solution for the training program to be close to the requirements of reality and increase the effectiveness of collaboration with the enterprises, enhancing the role of the enterprises in developing the training program.

d) Facilities and training equipment

The assessment results of the current situation of facilities and training equipment in Table 2.6 demonstrates that: All respondents agreed that the school's facilities and training equipment were only at an average level and did not meet the requirements for associate-level training to meet the human resource needs of the enterprises. At the same time, both the school and the enterprises highly appreciated the participation of the enterprises in building the list of training equipment as well as providing facilities, training equipment and scholarships for students. This fact shows that the facilities and the training equipment at the schools do not meet the requirements despite the support from the enterprises. Therefore, it is necessary to have solutions or new investment so as to more effectively exploit the facilities of the schools and the enterprises in the training process.

Table 2.6: Evaluation of facilities and training equipment

Factors	Subject	Evaluation levels										Average score
		Very good		Good		Average		Below average		Poor		
		N	%	N	%	N	%	N	%	N	%	
Facilities and training equipment of colleges for training requirements	MGR&LEC:			30	33.33	51	56.67	9	10			3.23
	Managers & Trainers in enterprises			27	18.00	93	62	30	20.00			2.98
	EE:			45	30	70	46.67	35	23.3			3.07
Enterprises to participate in building training equipment list	MGR&LEC:	25	27.8	45	50	16	17.78	4	4.44			4.01
	Managers & Trainers in enterprises	22	14.7	46	30.67	67	44.67	15	10.00			3.50
Enterprises to provide facilities, training equipment and scholarships	MGR&LEC:	33	36.7	47	52.2	10	11.11					4.26
	Managers & Trainers in enterprises	40	26.7	67	44.67	43	28.67					3.98
Total			15		37		38.2		9.68			3.58

(Source: results of investigation and survey)

e) Finance

Managers & lecturers believe that finance is not adequate for associate-level training to meet the enterprises' human resource needs (table 2.7). Namely, "the level of cost sharing in the enterprises' training activities" is only

assessed at average and below average level. That means the schools are not satisfied with the financial sharing of the enterprises, in other words, the schools expect the enterprises to share more finance for training.

Table 2.7: Evaluation of finance for training

Factors	Subject	Evaluation levels										Average score
		Very good		Good		Average		Below average		Poor		
		N	%	N	%	N	%	N	%	N	%	
Colleges' ability to mobilize financial resources	MGR & LE C:			15	16.67	64	71.11	11	12.2			3.04
Appropriateness of the costs for the training activities of the school	MGR & LE C:			5	5.56	69	76.67	16	17.8			2.88
The level of cost sharing in the enterprises' training activities	MGR & LE C:					78	86.67	12	13.3			2.87
Total			0		7.41		78.1		14.4		0	2.93

(Source: results of investigation and survey)

2.1.2 Process factors

a) Training goals

The results in Table 2.8 indicate that the reality of training goals is assessed at the average level with average score of 2.87. Especially, managers and trainers in the enterprises rated weak (2.59). The others evaluated mainly at the

average level, namely, 19.3% of the employees rated below average. Thus, in order to meet the needs, the colleges need to more comprehensively coordinate with the enterprises, increase gathering information from employers and employees to promptly adjust training plans as well as activities.

Table 2.8: Evaluation of training goals

Factors	Subject	Evaluation levels										Average score
		Very good		Good		Average		Below average		Poor		
		N	%	N	%	N	%	N	%	N	%	
Training programs for enterprises' requirements	MGR&LEC:			9	10	81	90.00		0		0	3.10
	Managers & Trainers in enterprises					97	64.67	45	30	8	5.3	2.59
	EE:			17	11.3	104	69.33	29	19.3		0	2.92
Average			0		7.11		74.7		16.4		1.8	2.87

(Source: results of investigation and survey)

b) Training programs

A high rate of managers & lecturers in the colleges evaluated "coordination with the enterprises to organize practice for students" and "training program to be close to the needs of reality" at the good level with corresponding

rates to be 45.6% and 67.8%. However, 34.4% of managers & lecturers rated the collaboration with the enterprises to organize practice only poor. This shows that the schools found the training programs unreasonable.

Table 2.9: Evaluation of training programs

Factors	Subject	Evaluation levels										Average score
		Very good		Good		Average		Below average		Poor		
		N	%	N	%	N	%	N	%	N	%	
Coordination with the enterprises to organize practice for students	MGR&LEC:			41	45.6	18	20	31	34.4			3.11
	Managers & Trainers in enterprises			20	13.3	79	52.67	51	34			2.79
	EE:			23	15.3	83	55.33	44	29.3			2.86
Training program to be close to the needs of reality	MGR&LEC:			61	67.8	29	32.22		0			3.68
	Managers & Trainers in enterprises			26	17.3	79	52.67	45	30			2.87
	EE:			25	16.7	82	54.67	43	28.7			2.88
Average			0		29.3		44.6		26.1		0	3.03

(Source: results of investigation and survey)

Different from managers & lecturers at the colleges, around 80% of managers & trainers in the enterprises and employees rated average and below average for coordination with the enterprises to organize practice for students and training programs to be close to the needs of reality. In particular, about 50% rated average and about 30% rated below average (table 2.9). The difference shows that the enterprises and students are not satisfied in spite of the

schools.

c) Training plan implementation

The survey results demonstrate that the enterprises' business and training plans are not appropriate. The rate by managers & lecturers at the weak level is very high (61.1%), followed by the assessment of managers & trainers in the enterprises (44.75) (Table 2.10).

Table 2.10: Evaluation of training plan implementation

Factors	Subject	Evaluation levels										Average score
		Very good		Good		Average		Below average		Poor		
		N	%	N	%	N	%	N	%	N	%	
Appropriateness of enterprises' training and business plans	MGR&LE C:					35	38.89	55	61.1			2.39
	Managers & Trainers in enterprises					83	55.33	67	44.7			2.55
	EE:					124	82.67	26	17.3			2.83
Average			0		0		59		41		0	2.59

(Source: results of investigation and survey)

During in-depth interviews, the managers and lecturers at the schools said that the student's internship plan was not consistent with the plan of the enterprises, mainly including schedule, skills need to perform; while managers and trainers in the enterprises said that the schools' training plan was not flexible to change in accordance with the business plan, which had to follow the change of the market and the orders of the "demand" side.

d) Training methodology

The factors of the current status of the training method were mainly rated good and very good (about 70%). In particular, about 50% of managers & lecturers and managers & trainers at the enterprises assessed inviting the enterprises to participate in testing and evaluating during the training process at a very good level. It demonstrates that the schools and enterprises focused on and coordinated well in testing and evaluating learning results of students (table 2.11).

Table 2.11: Evaluation of training methodology

Factors	Subject	Evaluation levels										Average score
		Very good		Good		Average		Below average		Poor		
		N	%	N	%	N	%	N	%	N	%	
Appropriateness of inviting enterprises to participate in training	MGR&LE C:	28	31.1	37	41.1	25	27.78					4.03
	Managers & Trainers in enterprises	61	40.7	54	36	35	23.33					4.17
	EE:	70	46.7	63	42	17	11.33					4.35
Appropriateness of inviting enterprises to participate in testing and evaluating during the training process	MGR&LE C:	45	50	31	34.4	14	15.56					4.34
	Managers & Trainers in enterprises	67	44.7	72	48	11	7.33					4.37
	EE:	55	36.7	83	55.3	12	8					4.29
Coordination of training with colleges	MGR&LE C:	8	8.89	47	52.2	35	38.89					3.70
	Managers & Trainers in enterprises			45	30	72	48	33	22			3.08
	EE:			33	22	75	50	42	28			2.94
Average			29		40.1		25.6		5.56			3.92

(Source: results of investigation and survey)

In particular, "coordination of training with colleges" was evaluated mainly at a good level by the schools but a below average level by the enterprises and employees. It shows that the enterprises themselves recognized limitations to collaborate with the colleges in training.

2.1.3 Outcome factors

a) Learning results

The survey results in Table 2.12 reveal that both the coordination with the enterprises in assessing at the graduation exam are mostly rated good and very good. This shows that the status of evaluating the learning results of students worked effectively, but needed to improve to increase the satisfaction of employees (who largely rated average)

Table 2.12: Fact of evaluation of learning results

Factors	Subject	Evaluation levels										Average score
		Very good		Good		Average		Below average		Poor		
		N	%	N	%	N	%	N	%	N	%	
Coordination with the enterprises to organize graduation exams	MGR&LE C:	19	21.1	53	58.9	18	20					4.01
	Managers & Trainers in enterprises	34	22.7	67	44.7	49	32.67					3.90
	EE:	29	19.3	57	38	64	42.67					3.77
Appropriateness of inviting enterprises to participate in evaluating at graduation exams	MGR&LE C:	18	20	54	60	18	20					4.00
	Managers & Trainers in enterprises	31	20.7	64	42.7	55	36.67					3.84
	EE:	30	20	59	39.3	61	40.67					3.79
Average			21		47.3		32.1					3.89

(Source: results of investigation and survey)

b) Satisfaction of learners

The survey indicates that schools really tried to provide information about labor markets, jobs, human resource needs... to students in many forms, such as coordinating with the enterprises, job service centers... Some colleges

annually collect information from alumni and employers' evaluation (mainly enterprises). The results in Table 2.13 also show that the subjects are relatively satisfied with learning at schools. The assessment is mainly rated good and very good (about 60%)

Table 2.13: Facts of training program satisfaction of alumni

Factors	Subject	Evaluation levels										Average score
		Very good		Good		Average		Below average		Poor		
		N	%	N	%	N	%	N	%	N	%	
Colleges provide channels/forms of sending feedback and jobs to students	MGR&LEC:	21	23.3	55	61.1	14	15.56					4.08
	Managers & Trainers in enterprises	15	10	76	50.7	59	39.33					3.71
	EE:	23	15.3	71	47.3	56	37.33					3.78
Enterprises provide information about their training and recruitment needs	MGR&LEC:		0	63	70	18	20	9				3.60
	Managers & Trainers in enterprises	33	22	62	41.3	55	36.67					3.85
	EE:	28	18.7	62	41.3	60	40					3.79
Average			15		52		31.5		1.67		0	3.80

(Source: results of investigation and survey)

c) Meeting the human resource needs

The study examined eleven common competencies that the enterprise often requires employees to have. The results demonstrate that nine capacities of employees are rated by the enterprises at the level of over 3.4, which is the acceptable level. Foreign language and informatics

competencies reaching lower than 3.4 is not met (chart 2.5). However, the results also show that the enterprises' requirements were higher employees' ability at the moment in all eleven capacities. That means enterprises' expectations are not fully met, even though they are acceptable.

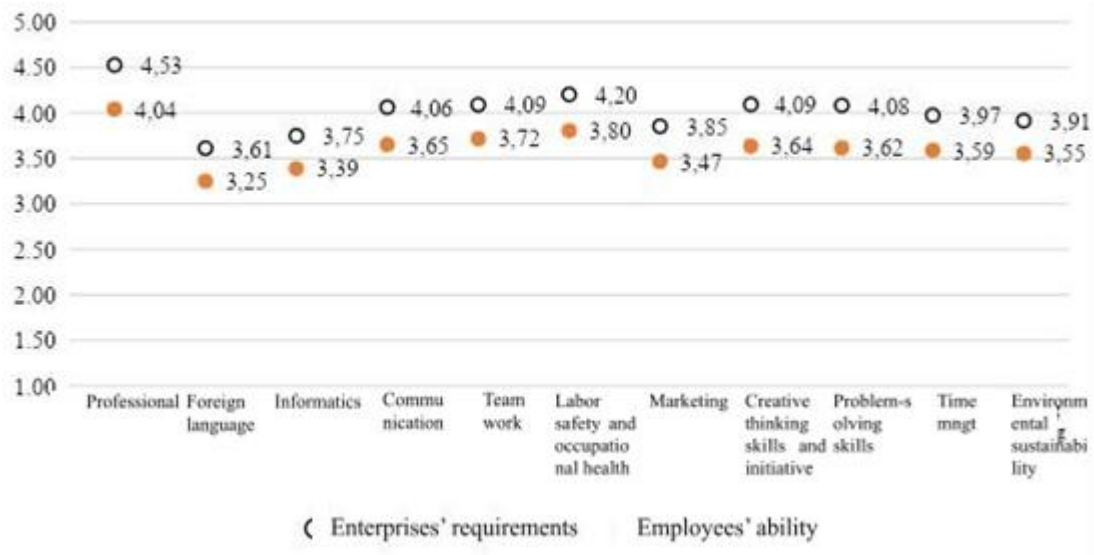


Chart 2.5: The level of meeting the human resource needs of enterprises

(Source: results of investigation and survey)

Some competencies have a big difference between the requirements of employers and employees. This implies that the employees need to improve for meeting the requirements of the enterprises. It includes: professional, communication, creative thinking and problem-solving skills and initiative.

2.1.4 Context factors

a) High-quality human resource needs of the enterprises

According to the Vocational Education Report in 2019, until June 30, 2019, the total number of employees working in various types of enterprises nationwide was about 15 million (accounting for 27.3% of the total number of employed workers). In terms of technical expertise level of employees working in enterprises, the proportion of labor without technical qualifications was highest (28.8%); followed by workers with bachelor degrees or higher (21.1%) and 50.1% of vocational-trained workers. (Chart 2.6)

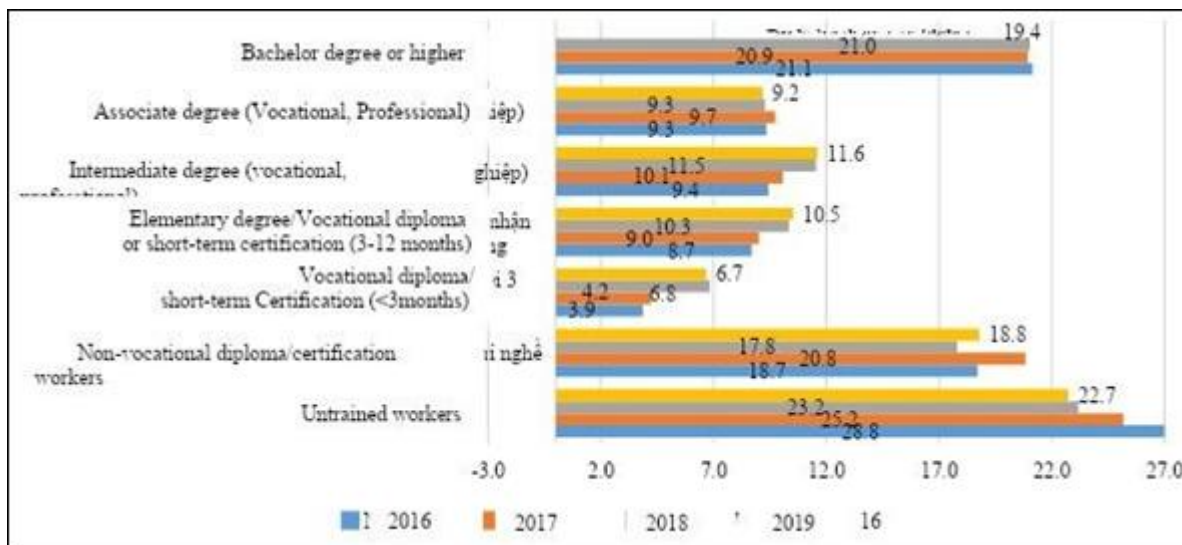


Chart 2.6: Labor in enterprises classified according to technical expertise Unit %

(Source: Calculated from the results of the survey on labor use demand in different firm types in 2017, 2018, 2019, Department of Labor, Ministry of Labor, Invalids and Social Affairs)

Until June 30, 2021, it is expected that the additional recruitment demand of enterprises is about 1,777 million workers; until June 30, 2022, it is about 1,940 million workers. Namely, the demand for new recruitment classified according to the vocational education training levels in 2021 and 2022 is 815 thousand and 817 thousand respectively. Among the total demand for new recruits, workers with associate degrees have the highest needs, followed by intermediate and elementary diploma workers (chart 2.7).

Table 2.14: Demand for labor recruitment for vocational education training from 2020 to 2022

	2020	2021	2022
Total (thousand)	811	815	817
Where:			
Elementary (%)	20.6	19.9	20.6
Intermediate (%)	35.4	36.0	35.5
Associate (%)	44.0	44.1	43.9

(Source: Survey of vocational education training needs to

meet labor market 2019, National

Institute of Vocational Education and Training) In 2021, the most demand for new associate-degree recruits is in the fashion apparel (67,624); followed by the operating construction machines (29,948); the industrial electricity

(26,227); in 2022, the most demand for new associate-degree recruits is in the fashion apparel (69,653); followed by the industrial electricity (26,577); the sewing technology and fashion (24,878)...

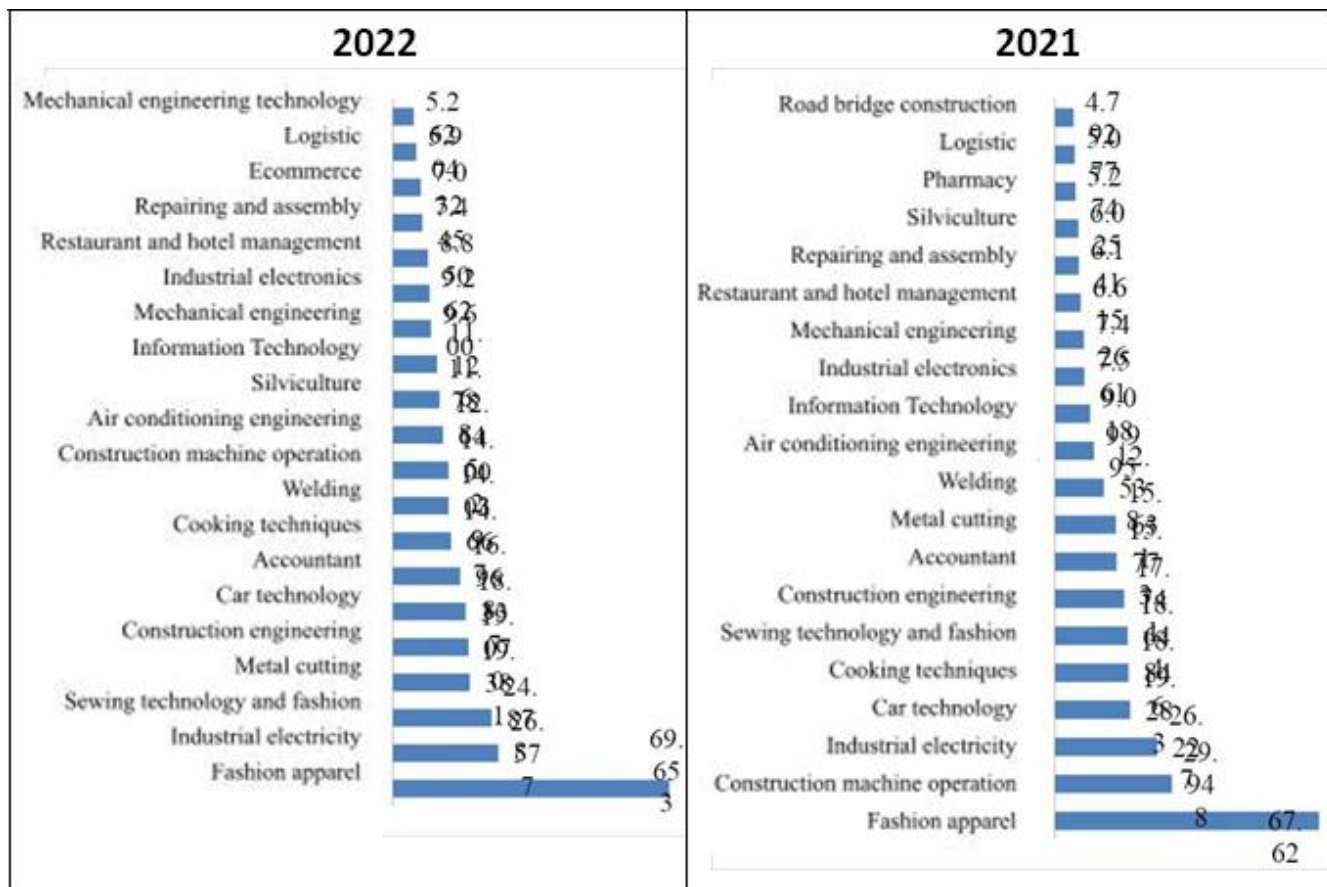


Chart 2.7: Twenty associate-degree jobs with the highest demand for new recruitment in 2022 and 2021.

(Source: Survey of vocational education training needs to meet labor market 2019, National Institute of Vocational Education and Training)

b) Policies affecting the training and training management at associate level

The Law on Vocational Education was issued at the 8th session of the 13th National Assembly and dated July 1, 2015. The Law solved many shortcomings in reality, creating a legal corridor and facilitating the Vocational Education and Training institutions and enterprises linked together in the associate-level training process to meet the human resource needs of enterprises. The Law includes 8 chapters, 79 articles and many new points that require vocational education and training to meet the requirements of labor markets and enterprises:

- *Reform the vocational education and training system.* The Law restructured the national education system of Vietnam, making a comprehensive change in the structure of the vocational education and training system. The new system includes: elementary, intermediate and associate level.
- *Rename the vocational education and training institutions.* As a result of restructuring the system, the vocational education and training institution include: The vocational education and training center (unifying the technical, general and vocational training center), the

school intermediate level (unifying professional and vocational education institutions) and colleges (unifying professional and vocational education colleges).

- *Renovate management and training.* The Law allows training management organizations to have two new training forms: modular cumulative and credit-based training. Vocational education and training institutions have the right to choose the training method according to their conditions.
- *Renew policies to link the institutions with enterprises.* The enterprises participating in vocational education and training activities as an entity have the same rights and responsibilities in vocational education and training activities. All expenses for the activities are deducted to calculate taxable income. This content is stipulated in not only the Law but also the Law of Tax issued at the 8th session of the 13th National Assembly.
- *Renovate and improve independence of vocational education and training institutions.* They are autonomous in activities in the fields of organization and personnel, finance and assets, training and technology, international cooperation, and ensure the quality of training in accordance with the law. The public institutions

themselves ensure that all their expenses for their investment activities are fully autonomous and they are responsible according to the Government's regulations.

- *Renovate enrollment activities.* The Law allows the institutions to independently determine enrollment needs on the basis of the quantity and quality of teachers, facilities and equipment; be enrolled several times a year; organize an admission, enrollment, or a combination of admission and enrollment.
- *Renew intermediate training time for junior high school graduates.* The training period is only from 1 to 2 study years depending on the profession in case of an annual school year.
- *Renew training programs.* According to the Law, the institutions are assigned to build training programs. They base on the skill standards of each level in the national qualification framework to develop appropriate training programs.
- *Renew exams, tests, graduation recognition and diploma.* The Law specifies that if the trainees have accumulated enough modules and credits according to the training program regulations, they will be considered for graduation without the final graduation exam. Associate-degree graduates are granted an associate degree and recognized the title of practical engineer or bachelor depending on the training profession.
- *Renovate policies for learners.* Policies towards learners is strongly demonstrated in the Law. This is considered as one of the solutions to implement the streamline, attract learners, and create an interest for learners to participate in vocational education and training programs.
- *Renovate policies for teachers.* The Vocational Education and Training Law stipulates titles for teachers in the institutions and the salary scale relevant with titles; clearly stipulating the policy of honoring (National teachers, Honored teachers), extending working time with qualified and highly skilled teachers. Teachers who teach practice and practice-theory are entitled to a preferential allowance according to the Government's regulations.
- *Reform international cooperation in the field of vocational education and training.* Integration is determined as an inevitable trend. The Law has a separate section on international cooperation.

In addition, the Law on Vocational Education and Training provides many other contents such as reforming of objectives; vocational training quality accreditation; socialization policy... that requires standardization from vocational training to meet the human resource needs of enterprises.

Implementing the Law and the tasks assigned by the Government, the Prime Minister and the Ministry of Labor, Invalids and Social Affairs (MOLISA) submitted to competent authorities and promulgated under their relatively full authority with instructional documents.

Until April 1, 2019, 67 legal documents in the field of vocational education and training were issued (06 Decrees, 07 Decisions by the Prime Minister, 50 Circulars and 04 Joint Circulars).

Legal documents guiding the Law reduced and simplified 49/67 business investment conditions and abolished and simplified 71.6% of administrative procedures in the field, towards giving independence, self-responsibility and accountability to the head of the institutions, enhancing the responsibility of the institutions and their head; creating independent assessment mechanism, state control, social monitoring; creating conditions to attract social resources into the field.

It can be affirmed that the system of legal documents guiding the implementation of the Law on Vocational Education and Training is basically sufficient to create a legal corridor for colleges to strongly promote the link between enterprises and vocational training institutions in the associate-level training process for meeting the human resource needs of enterprises.

c) Science and technology affecting the training and training management at associate level

Industry 4.0 is forcing businesses to change their production methods and business operations. On the other hand, it and its upgraded versions 4.1, 4.2 will create fierce competition between businesses, economies and human capabilities rather than financial capital and they will become the decisive factor of production. Both the breadth and depth of Industry 4.0 heralded the transformation of the entire production system, management and governance of the society and accordingly, the changes of vocational education and training.

During this revolution, the labor market will be severely challenged between the quality of labor supply and demand as well as the labor structure. When automation replaces people in many sectors of the economy, workers will surely have to adapt quickly to the change of production or they will be redundant and unemployed.

Industry 4.0 affects all activities of social life, including vocational education and training, as shown in the following points:

- The scale and speed of technological innovation in terms of both aspects: the development and popularity of Industry 4.0 takes place faster than ever. Besides, it also integrates many different fields. This requires vocational education to change the vocational training structure in a regular and flexible manner.
- The rapid change of technology requires human resources to adapt quickly. The qualifications structure, the quality stratification will break the traditional and rigid training methods, form an open school system, apply a flexible training method with the highest goal of providing industrialization 4.0 a high-quality human resource to adapt to changing professional ethical standards. This requires school management activities to change from traditional management thinking and stereotypes to dynamic management thinking, continuously innovating.

Industry 4.0 poses many challenges for vocational education such as newly emerging occupations, interdisciplinary training programs, towards broad industry training so that learners have background knowledge, thereby forming creative skills and adapt to many different jobs.

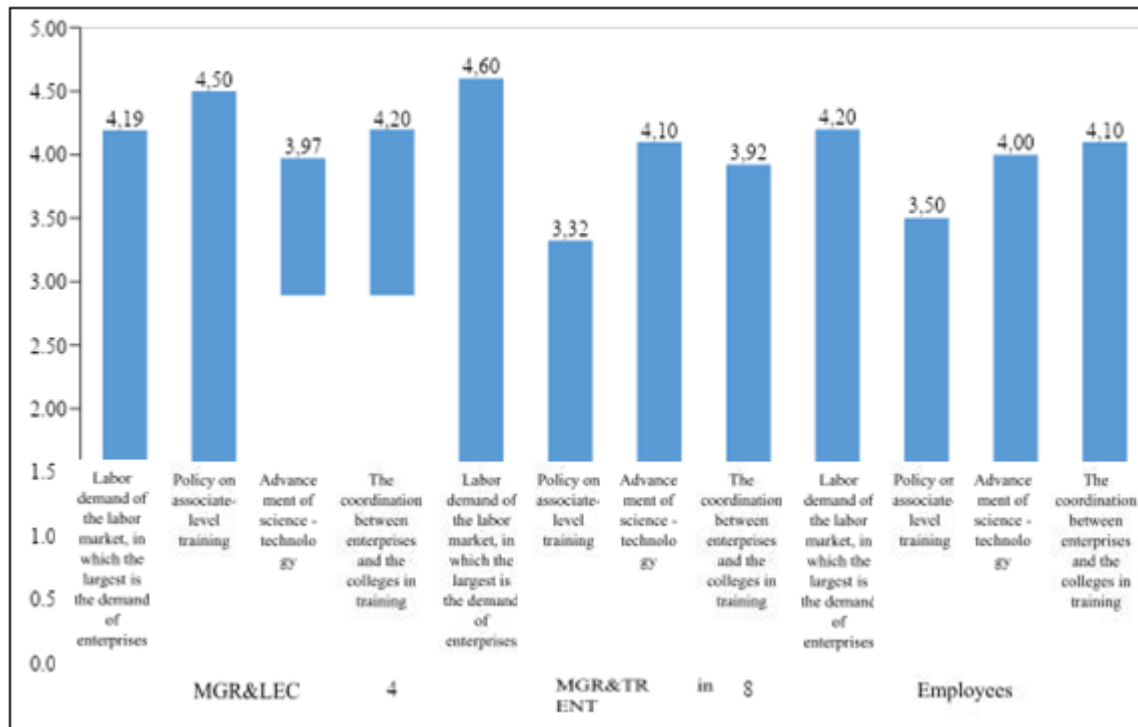


Chart 2.8: Evaluation of context factors
(Source: results of investigation and survey)

Chart 2.8 indicates that all three subjects are determined to have strong and very strong influence on the factors which affect the context: The labor demand of the labor market, in which the largest is the demand of enterprises; Policy on associate-level training; Advancement of science Technology; the coordination between enterprises and the colleges in training. However, the factor that has the strongest impact on each subject is different. Managers and lecturers at schools think that "Policy on associate-level training" has the strongest effect, while managers and trainers in the enterprises believe "Labor demand of labor market" is the most influential. At the same time, the employees have the same opinion as the enterprises. This shows that the schools still attach importance to the "supply" direction rather than the "demand" direction of labor.

3. Conclusion

Some issues need to be addressed, even though the colleges is aware of and seriously consider the enterprises in training; have a strategy to renew enrollment activities; enhancing teaching capacity for lecturers; reviewing and updating training programs, contents and textbooks; Identifying the essential skills to train students:

- The schools and businesses do not have a mechanism to support teachers to participate in learning, practicing in production and technology awareness in the enterprises; not coordinated in training of pedagogical skills for trainers at the enterprises; the managers at the enterprises have not participated in guiding lecturers to complete their learning tasks in enterprises.
- The training programs of the schools are still far from reality in enterprises.
- Finance is currently not meeting the requirements of associate-level training for meeting the human resource needs of the enterprises.

- The coordination with enterprises in training is not effective, especially for students to practice.

The school's training plan is not flexible enough to change in accordance with the business production plan of the business.

- The innovation having impact input - process - outcome factors has not been paid adequate attention and there is no effective process to apply in schools.
- The enterprises' needs are not well-defined. The collection of feedback from volunteer students and the assessment of the enterprises are not carried out regularly; methods and indicators are not updated for having timely, accurate information and keeping up with the changes in demand of the enterprises.
- The identification and analysis of context factors are not accurate and frequent. The survey results reveal the limitations of associate-level training to meet the needs of enterprises' human resources in all stages from enrolling, training and graduating, then determine feasible solutions in the following research.

References

- [1] Central Executive Committee (2013), Resolution No. 29-NQ/TW dated November 4, 2013 on fundamental and comprehensive renovation of education and training, meeting the requirements of industrialization and modernization in the socialist-oriented market economy and international integration conditions.
- [2] 13th National Assembly. The Law on Vocational Education, No. 18/2019/VBHN-VPQH.
- [3] Vietnam Chamber of Commerce and Industry, *Quality of human resources through vocational training and solutions to strengthen the connection between schools and businesses*, Proceedings of Vietnam Education

Conference 2019, Hanoi

- [4] Mac Van Tien (2019), State management, governance reform for vocational education institutions, Proceedings of Vietnam Education Conference 2019, Hanoi