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Undergraduate Training Programs Meeting the Expected Learning Outcomes of the National Quality Framework: Status and Challenges

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Abstract. This study utilized the secondary data of recent accreditation results of undergraduate training programs, and in-depth interviews with five peer reviewers to assess the status of and the challenges facing those programs to meet the learning outcomes required by the Vietnamese Quality Framework (VQF). The results reveal that 605 training programs at university undergraduate level were accredited according to the Circular No. 04/2016-TT-BGDĐT that had been promulgated by the Vietnam Ministry of Education and Training. Of these programs, two made up the bulk, namely Business and Management, and Education Science and Teacher Training. In terms of expected learning outcomes, the study showed a large number of the training programs in the fields of business and management, and education science and teacher training failed to meet criteria. The research results also identified limitations and challenges of the training programs relating to meeting the demands of expected learning outcomes regulated in the VQF. In addition, suggestions are made for ways higher education institutions and the authorities can contribute to improving the quality of training programs at higher education institutions.

Keywords: Expected learning outcome; quality framework; training program

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1. Introduction

In the context of international integration and the development of science and technology, Vietnam has been undergoing a comprehensive renovation of education and training. Resolution No. 29/NQ-TW of the Vietnamese Central Committee of the Communist Party prescribes that the education process must be transformed, from one providing mainly knowledge, to one promoting the comprehensive development of students' abilities and qualities. This direction is also present in the goal of Vietnamese higher education, regulated in the Law on Education of 2019, that training of students should be oriented to comprehensive development and should develop the the ability to do self-study and be creative and adaptable to the working environment (National Assembly of Vietnam, 2019). In 2016, the prime minister had issued Decision No. 1982/QD-TTg, which appointed the Vietnamese Qualifications Framework (VQF) to classify and standardize qualifications, workload minimums and certification according to different levels of vocational education and higher education in Vietnam (Government of Vietnam, 2016). VQF sets expected learning outcomes in different sectors and establishes linkages with national qualification frameworks (NQF) of other countries through regional and international reference frameworks. Meanwhile, expected learning outcomes (ELO) are the minimum requirements for knowledge, skills, autonomy and personal responsibility that learners have to have achieved after completing a training program (MOET, 2017). The ELOs in the VQF include standards on knowledge, skills and the degree of autonomy and personal responsibility related to applying knowledge and skills to perform professional tasks.

Many higher education training programs have been accredited, based on the national regulations of quality accreditation standards. However, these programs should be reviewed and adjusted to meet the requirements of VQF in the new context of education, especially to ensure they respond to the learning outcomes stated in the VQF. Programs should be assessed in terms of structure, formulation and development of steps, and output competences. Therefore, this article will present the facts and discuss whether undergraduate training programs meet the standards prescribed for learning outcomes by the VQF framework, and provide policy suggestions for stakeholders. The paper will seek to answer two questions:

1) What accreditation levels do undergraduate training programs achieve?

2) What are the limitations and challenges of those programs regarding meeting the requirements of the ELOs in VQF?

2. Literature review

2.1 National Qualifications Framework

The NQF is a national policy that indicates the knowledge and skills (learning outcomes) learners need to acquire for a specific qualification level, and reflects the permeability between qualifications. NQF levels do not belong to any institution, but are 'national assets'. An NQF may be comprehensive, covering all the training levels and methods, including academic and vocational training, or it may be confined to one sector of education and/or industry. The majority of NQFs cover between eight and ten qualification levels. Each country has its own objectives when developing an NQF, though the following objectives are present

in almost all countries: (i) Make the training levels easier to understand and strengthen the coherence of qualification systems and the permeability of education; (ii) Support lifelong learning; (iii) Aid recognition and transfer of credit and prior learning; (iv) Strengthen the link between training and the labor market, and (v) Facilitate the international recognition of national qualifications (EC, 2008). The learning-outcomes-based levels of NQFs have played a role in making visible the existence and importance of directed education and training (Cedefop & European Training Foundation, 2018).

2.2 Vietnamese Qualifications Framework

The VQF was promulgated on October 18, 2016, under Decision No. 1982/QD-TTg, with the goal of classifying and standardizing qualifications, workload minimums, and certification, to accommodate different levels of vocational education and higher education in Vietnam (Government of Vietnam, 2016). The VQF also provides an effective mechanism for linking employer requirements with training qualifications. It is used to establish training output standards in various sectors and to develop quality assurance policies. It is also critical for establishing links with NQFs of other countries via regional and international reference frameworks that serve as a foundation for mutual recognition, quality improvement, and human resource competitiveness.

The VQF was designed to be compatible with the ASEAN Qualifications Reference Framework (AQRF), thereby laying a foundation for higher education institutions to prepare appropriate training programs and provide Vietnamese workers with greater opportunities to obtain employment in the Association of Southeast Asian Nations (ASEAN) block. Through the VQF, education quality is standardized, to enable the national qualifications system to guide credit transfer between institutions, and to ensure the systematic improvement of aspects of knowledge, skills and attitudes.

The VQF has eight levels, and university undergraduate is on the sixth level. This level confirms that students who graduate must possess solid practical knowledge; comprehensive and intensive theoretical knowledge for the profession they trained for; basic knowledge of social sciences, politics and law; perceptual skills relating to critical thinking, analysis and synthesis; and skills of occupational practice; and be able to communicate to perform complicated tasks, to work independently or in groups to change working conditions; to take individual and group responsibility for guiding and disseminating knowledge; and to supervise others' implementation of tasks. A qualification on level 6 requires a minimum study load of 120 academic credits; students must complete the training program and meet the output requirements, after which they are awarded a Bachelor certificate.

2.3 Expected Learning Outcome and National Qualification Framework

According to Bohlinger (2012), qualification frameworks and learning outcomes are often viewed as a panacea. She argues that it is possible that an effective analysis of the links between three things – qualifications frameworks, learning outcomes, and improving education and training systems – requires new concepts and methods for characterizing national education and training systems, further development of statistics, and indicators for lifelong learning, in order to obtain

more ongoing and systematic, more reliable and internationally comparable data (Bohlinger, 2012). Meanwhile, ABET (2018) describes ELO as what students are expected to know and be able to do by the time they graduate. These requirements relate to the knowledge, skills, and behaviors that students acquire as they progress through a program. It may be the "glue binding together a wide range of tools and initiatives emerging from these policy initiatives and cooperation processes," with the aim of improving transparency, comparability and recognition of competences and/or qualifications (Cedefop, 2016). According to a UNESCO study on level setting, recognition of learning outcomes, and the use of level descriptors as an international inventory of frameworks, the behaviorist approach that Bloom's taxonomy is based on has dominated the discourse, particularly regarding qualifications frameworks (Keevy & Chakroun, 2015).

According to AUN (2020), ELOs should be formulated according to stakeholders' needs, and should receive thorough consideration when training programs are developed. ELOs are concerned with the achievements of the learner, rather than the intention of the teacher, and are often written as aims, goals, or objectives of the program. Learning outcomes should be written in a way that translates learning into observable and measurable results that can be demonstrated and assessed (AUN, 2020). On the policy level, qualification transparency refers to the focus of attention, whereas, on the pedagogical level, "learning outcomes support learner-centered approaches, including formative assessment of learner understanding and individualization to better meet learner needs," thereby providing an important shift to a learner-centered view. "In complex systems, collaboration and opportunities for mutual learning are critical at both the policy and practitioner levels"(Cedefop, 2016).

In Vietnam, ELOs specify the requirements of personal quality and competence that students need to achieve after completing a training program, including the minimum requirements for knowledge, skills, autonomy and responsibilities (MOET, 2021a). Moreover, the regulation on undergraduate education accreditation specifies ELO as the minimum requirement for knowledge, skills, autonomy and personal responsibility that students have achieved after completing the training program provided by the education institution to their students and society. ELOs must be openly announced to the public, with its implementation conditions (MOET, 2017). Meanwhile, in the VQF, ELOs include information on required practical and theoretical knowledge, cognitive skills, professional practice skills, communication and behavioral skills, and the degree of autonomy and personal responsibility involved in applying knowledge and skills to perform professional tasks (Government of Vietnam, 2016). Basically, an ELO is a statement by the education institution of what a student is expected to be able to do at the end of a training course/program, including minimum requirements regarding the knowledge, skills, competencies, and attitudes that students acquire.

Accredited training programs should align with an NQF level regarding both units of competence and qualifications. In Vietnam, program accreditation is known as an activity for assessing and ensuring that training programs meet the quality assessment standards. A higher education institution could be allowed to implement a training program at a specific level of a discipline, including the

training objectives, outcomes, content, methods and activities that meet VQF regulations (MOET, 2017). As it is regulated by legislation on higher education, accreditation is mandatory for higher education programs in Vietnam (Nguyen et al., 2017). Furthermore, ELOs are a component of the training program and must be developed in accordance with the VQF. The training program is a system of educational and training activities that are designed and organized to achieve training objectives, with the end result of a higher education degree being granted to students. It includes objectives, knowledge volume, structure, content, methods and assessment forms for subjects and majors, training levels, and ELOs in accordance with the VQF (MOET, 2021b). Accordingly, the requirements of the criteria for the training programs are as listed in Table 1.

Table 1: Standards and criteria responding to the ELOs in Circular No. 4/2016

No.	Standards and criteria	Description in Circular 04/2016
1	**S1**	**Objectives and expected learning outcomes of the training program**
	C1.2	The ELOs of the training program are clearly defined, covering both general requirements and specific requirements that students need to have achieved after completing the training program.
	C1.3	The ELOs of the training program reflect the requirements of the stakeholders, and are periodically reviewed, adjusted and publicly announced.
2	**S2**	**Training program description**
	C2.1	The training program description covers all information fully, and is up to date.
	C2.2	Course outlines are informative and up to date.
3	**S3**	**Structure and content of the curriculum**
	C3.1	The curriculum is designed according to the ELOs.
	C3.2	The contribution of each module in achieving the output standard is clear.
	C3.3	The curriculum has a logical structure and sequence; is up to date and integrates content.
4	**S4**	**Approaches to teaching and learning**
	C4.2	Teaching and learning activities are designed to be aligned with ELOs.
	C4.3	Teaching and learning activities promote the practice of skills and must enhance students' lifelong learning.
5	**S5**	**Assessment of student learning outcomes**
	C5.1	The assessment of students' learning outcomes is designed in accordance with the levels of achievement of the ELOs.
	C5.3	Methods of assessing learning outcomes are diverse, thereby ensuring validity, reliability and fairness.
6	**S10**	**Quality enhancement**
	C10.3	The teaching and learning process, and assessment of students' learning outcomes are reviewed and evaluated regularly to ensure compatibility and conformity with the ELOs.

Note: S= Standard; C= Criterion

In terms of evaluation scale, seven levels have been applied for criteria: Level 1: Does not meet the criteria requirements at all, must provide solutions to remedy

immediately; Level 2: Does not meet the criteria requirements, needs to present remedial solutions; Level 3: Does not fully meet the criteria requirements, but only a few small improvements are required; Level 4: Meets the criteria requirements; Level 5: Meets the criteria requirements well; Level 6: Satisfies the criteria requirements very well; Level 7: Excellent in meeting criteria requirements. Levels 1 to 3 are defined as unsatisfactory, Levels 4 to 7 are evaluated as satisfactory. A program will be granted an accreditation certificate if at least 80 percent of all criteria are met (MOET, 2016).

3. Methodology

Both quantitative and qualitative methods were applied in the study. Secondary data analysis using SPSS 26.0 software was done to assess the accreditation results of accredited training programs. In addition, semi-structured interviews with five external peer reviewers were conducted to determine the causes, limitations and challenges of meeting the requirement of ELOs in the VQF. Based on the analysis results, relevant suggestions for various stakeholders are proposed.

The study comprised the following main stages:

Data collection and screening. This stage aimed to gather secondary data for a literature review and quantitative analysis. In this step, scientific articles and related research results on ELOs and the VQF were screened and selected. Then, the descriptive statistics were analyzed to assess the accredited training programs. Interviews were conducted with external peer reviewers to determine the limitations and challenges involved in meeting the requirements of ELOs in the VQF. Based on the analysis results, relevant suggestions are proposed by this study.

Data analysis, interpretation and reflection. In this stage, the concepts of learning outcomes in accordance with the NQF were interpreted. At the same time, suggestions to develop learning outcomes at higher education institutions were also proposed in this step. The output covers research findings, a discussion and recommendations. SPSS version 26.0 was used for data analysis.

4. Findings and Discussion

4.1 Levels of Achievement of the Accredited Undergraduate Training Programs

At present, seven Vietnamese centers for higher education accreditation are allowed to review and recognize training programs and education institutions. By December 30, 2022, 605 undergraduate training programs had been assessed by those agencies. The numbers of accredited training programs are shown in Table 2.

Table 2: Number of training programs accredited by Vietnamese accreditation organizations

No.	Vietnamese accreditation organizations	Number of programs accredited	
		Number	Percent
1	VNU-CEA	225	37.2
2	VNU-HCMCEA	82	13.6

No.	Vietnamese accreditation organizations	Number of programs accredited	
		Number	Percent
3	CEA-AVU&C	106	17.5
4	CEA-UD	41	6.8
5	VU-CEA	117	19.3
6	CEA-THANGLONG	12	2.0
7	CEA-SAIGON	22	3.6
Total		605	100

Over the years, 605 training programs have been accredited. These programs were assessed according to 11 standards and 50 criteria regulated by the Vietnam Ministry of Education and Training. Most of the programs are in the fields of business and management, and education science and teacher training, which make up 22.3% and 17% of the total respectively. Table 3 provides more information on training majors.

Table 3: Accredited undergraduate training programs by training majors

No.	Field	Number of programs accredited	Percent of total programs accredited
1	Business and management	135	22.3
2	Education science and teacher training	103	17.0
3	Engineering technology	46	7.6
4	Humanities	45	7.4
5	Health	41	6.8
6	Computer and information technology	36	6.0
7	Social and behavioral sciences	28	4.6
8	Tourism, hospitality, sports and personal services	27	4.5
9	Law	27	4.5
10	Architecture and construction	26	4.3
11	Engineering	17	2.8
12	Manufacturing and processing	17	2.8
13	Environment and environmental protection	12	2.0

No.	Field	Number of programs accredited	Percent of total programs accredited
14	Social services	8	1.3
15	Life sciences	8	1.3
16	Press and information	7	1.2
17	Agriculture, forestry and fisheries	7	1.2
18	The Arts	5	0.8
19	Transportation services	3	0.5
20	Natural sciences	3	0.5
21	Veterinary sciences	3	0.5
22	Math and statistics	1	0.2
Total		605	100

The assessment results of the two biggest fields are presented in detail in Table 4.

Table 4: Number of unqualified programs in the fields of business and management, and education science and teacher training

Training field		Business and Management			Education Science and Teacher Training		
No.	Criteria	Number of programs (N1)	Unqualified programs		Number of programs (N2)	Unqualified programs	
			Number	Percent		Number	Percent
1	C1.2	135	57	42.2	103	46	**44.7**
2	C1.3	135	10	7.4	103	11	**10.7**
3	C2.1	135	7	5.2	103	13	**12.6**
4	C2.2	135	65	**48.1**	103	37	35.9
5	C3.1	135	2	1.5	103	2	1.9
6	C3.2	135	94	69.6	103	81	**78.6**
7	C3.3	135	15	**11.1**	103	3	2.9
8	C4.2	135	14	**10.4**	103	2	1.9
9	C4.3	135	2	1.5	103	0	0.0

Training field		Business and Management			Education Science and Teacher Training		
No.	Criteria	Number of programs (N1)	Unqualified programs		Number of programs (N2)	Unqualified programs	
			Number	Percent		Number	Percent
10	C5.1	135	30	22.2	103	25	**24.3**
11	C5.3	135	89	**65.9**	103	53	51.5
12	C10.3	135	37	27.4	103	26	25.2

A large number of the training programs in the fields of business and management, and education science and teacher training failed to meet criteria C1.2, C2.2, C3.2 and C5.3 (all over 35% on each criterion). In addition, for some criteria, the rates of unsatisfactory training programs in these two fields is higher than the average rate of the overall results of 605 training programs that have been accredited in the whole country (results are bolded in Table 4). Training programs in the field of business and management have a higher non-compliance rate for some criteria than the average results of all training programs in the whole country, specifically C2.2, C3.3, C4.2 and C5.3. Training programs in the field of education science and teacher training have a higher non-compliance rate for some criteria than the average results of 605 training programs that have been accredited by education quality accreditation institutions nationwide, specifically C1.2 , C1.3, C2.1, C3.2 and C5.1.

Table 5 presents an analysis of the criteria relating to ELOs. Criteria 1.2, 1.3, 2.1, 2.2, 3.1, 3.2, 3.3, 4.2, 4.3, 5.1, 5.3, 10.3 specifically assess the quality of the training programs with reference to ELOs.

Table 5: Means, medians, standard deviations, minimum, maximum of criteria related to training program ELOs

No.	Criteria	N	Mean	Median	Std. Deviation	Unqualified programs	
						Number	Percent
1	C1.2	605	**3.58**	4	0.507	**258**	**42.6**
2	C1.3	605	3.90	4	0.313	62	10.2
3	C2.1	605	3.95	4	0.337	49	8.1
4	C2.2	605	**3.58**	4	0.520	**262**	**43.3**
5	C3.1	604	3.98	4	0.198	19	3.1
6	C3.2	605	**3.28**	3	0.461	**436**	**72.1**
7	C3.3	605	3.96	4	0.328	46	7.6

No.	Criteria	N	Mean	Median	Std. Deviation	Unqualified programs	
						Number	Percent
8	C4.2	605	3.96	4	0.357	52	8.6
9	C4.3	605	3.96	4	0.338	47	7.8
10	C5.1	605	3.78	4	0.465	145	24.0
11	C5.3	605	**3.35**	3	0.488	**396**	**65.5**
12	C10.3	605	3.72	4	0.457	172	28.4

Note: C= Criterion.

Remarkably, as shown in Table 5, the mean scores of criteria related to ELOs (C1.2, C2.2, C3.2, C5.3) are all below 4.00, which means the programs do not meet the accreditation requirements in terms of ELOs. Among those, criterion C3.2 had the highest rate of noncompliance, of 72,1%, followed by C5.3, C2.2 and C1.2, at 65.5%, 43.3% and 42.6% respectively.

To explain this finding, five peer reviewers from VNU-CEA agreed that

> *the training program's ELOs have not been clearly defined. In addition, those ELOs do not really cover the general and specific requirements that students need to achieve after completing the training program in accordance with the provisions of the NQF and other relevant legal documents.*

Moreover, reviewers commented that the higher education institutions did not consult stakeholders when they developed the programs, therefore, stakeholders' requirements are not reflected in the programs. Reviewers also emphasized that the reason for the low assessment score is that the ELOs of the training programs have not been developed strictly, resulting in unqualified ELOs. According to the reviewers, education institutions did not properly consult the ELOs of VQF before they developed training programs, and did not strictly follow SMART principles (specific, measurable, attainable, relevant, time bound) in the development of ELOs, which explain the low mean scores for C1.2 and C2.2. Furthermore, according to the peer reviewer A, (i) the objectives of the curriculum are similar to the objectives of the training program; in various programs, ELOs of programs and curricula are duplicated; (ii) The curriculum does not refer to the connection among modules; (iii) There are different levels of measurement in the same ELOs affecting the assessment. Furthermore, some criteria do not meet the SMART requirements; (iv) ELOs of the training programs do not adapt to changes in the context of the industrial revolution 4.0 and the international economic integration. ELOs of the training programs do not satisfy the requests of VQF and the expected position in the labor market. In addition, some content in the curriculum was not specifically developed, such as the matrix linking the contents of the chapter, or the assessment method with the learning outcomes of the course. Moreover, there is no specific regulation on the assessment – only the proportion of each form of assessment regulated. This review is similar to the study by Bohlinger (2012),

which emphasizes the significance of the connection between qualifications frameworks and learning outcomes.

Furthermore, explaining why, on C3.2, only C5.3 obtained mean scores of 3.28 and 3.35, with a high percentage of 72.1% and 65.5% respectively, peer reviewers offered reasons for the assessment of C3.2: (i) The determination of the module contributions to achieving the ELOs is not really clear and accurate, for example, most of the modules only contribute to one ELO in knowledge and only 1–2 in skills; (ii) The contribution matrix of module and ELOs of the training program has not been reasonably determined; (iii) In the module outlines, the matrix linking the content of the chapter and the assessment method with the module ELOs is still a formality (each chapter and each assessment method contributes to all the modules' ELOs); (iv) The teaching curriculum has not been updated with new issues, or fails to respond to changes in the labor market, especially in the area of campus and in the context of industrial revolution 4.0 and globalization (international professional certificates) industry-related economics, etc.).

According to the peer reviewers, education institutions have not provided specific regulations or guidelines for assessment and evaluation relating to ELOs. Types of tests to assess students' learning outcomes are not designed to measure and accurately assess the ability of and extent to which students achieve the ELOs (C5.3). Additionally, quite a number of modules use essays for assessment. There are no criteria or adequate assessment forms for self-study or theses. A reviewer from VNU-CEA revealed that, in the assessment of the teaching and learning process, learners' learning outcomes (C10.3) are not regularly reviewed and evaluated to ensure compatibility with and suitability for ELOs. Regarding teaching and learning activities, the reviewer stated that the form for innovation of teaching methods and teaching organization was not well designed. The participation of employers, enterprises and other stakeholders in the training process is limited, and this affects support provided to students so that they can achieve the learning outcomes.

4.2 Strengths, shortcomings and challenges

After interviewing five external assessors, the following conclusions were drawn about the strengths and shortcomings of and challenges facing higher education institutions in meeting the requirements of the VQF.

Strengths

All the reviewers agreed that the curricula of most training programs had been developed according to the processes and guidance of the education institution, and covered the knowledge, skills, autonomy and responsibility required by the VQF. This compliance may be the result of mandatory regulation by education laws, as referred to by Nguyen et al. (2017). The foreign language qualifications of most training programs have to comply with requirements equivalent to level 3/6 of the Vietnam Foreign Language Competency Framework, in accordance with the provisions of the VQF. The outcomes of these training programs are also periodically reviewed and revised, with the participation of stakeholders, through opinion surveys. The ELOs of training programs are benchmarked to domestic and foreign universities. The results achieved are due to university leaders' good understanding of the roles of ELOs in VQF, as stated by Cedefop and European

Training Foundation (2018). Additionally, the training programs clearly define teaching and learning activities, and specify assessment methods that are to be provided in detailed course outlines. Universities have issued regulations related to the assessment of learners' learning outcomes. In particular, some universities have issued guidelines on developing learning outcomes. These guidelines are developed in accordance with VQF. The processes and implementation methods are also quite specific (3/5 reviewers commented).

Shortcomings

Five experts stated that the universities do not have specific regulations and guidelines compatible with VQF. The limitations in design and development of the training programs have lead to the processes of reviewing and adjusting training programs over the years failing to meet the requirements or fully complying with VQF. For example, the standards of knowledge and skills are mainly focused on the level of understanding, knowing and applying, and not the higher levels of competence required by university training level (level 6 regulated by VQF). In addition, training programs do not fully demonstrate the required competencies for groups of job positions as defined in the ELOs. Therefore, some competencies and skills do not yet meet the needs of employers and former students (practice skills are not focused; students have not been exposed to or equipped with advanced technology; there is limited cooperation with enterprises during training; and students are not well oriented when they select majors).

Challenges

Four of the experts commented that, although guiding documents have been promulgated for VQF implementation, the facts show that the desired results at higher education institutions have not yet been achieved. Among the reasons is that leaders of education institutions still have limited awareness of how to construct and develop training programs. The guidance has not been updated at all levels in the implementation of the VQF. Moreover, the capacity of teaching staff, program development staff, and training quality assurance staff at universities need to be improved. Furthermore, funding sources and communication for implementation of the programs at institution level are still limited.

5. Conclusion and Recommendations

This article focused on analyzing the accreditation of training programs by the standards of the Circular No. 4/2016 of Vietnam's Ministry of Education and Training. Some recommendations are provided, based on the statistical analysis and information provided in interviews.

The research results show that many undergraduate training programs have been reviewed and recognized in accordance with Circular No. 4/2016. On some criteria – C1.2, 2.2, 3.2, 5.3, which are related to ELOs – some training programs received unsatisfactory scores, indicating that the programs fail to sufficiently meet the accreditation requirements. Statements by reviewers explained these findings, by clarifying that the implementation of ELOs still faces limitations and inadequacies, for instance, at the level of consultation with stakeholders. Additionally, the institutions do not always use the results of surveys to improve

the curriculum. When the programs are compared against the provisions of the VQF, the current implementation of training programs by education institutions does not fully meet the requirements. Specifically, few accredited training programs have really collected and fully assessed stakeholders' needs, especially that of employers. Furthermore, there was criticism that the ELOs had not been designed according to SMART principles, therefore, ELOs cannot be measured and evaluated. Moreover, the institutions do not strictly follow the principles of developing training programs in accordance with ELOs. This result indicates that there are still many shortcomings in the design and development of training programs that need improving to meet the ELOs required by the VQF.

Recommendations for improvement

Higher education institutions should actively improve their capacity in curriculum development and quality assurance, to strengthen their staff's communication skills, and update legal documents and directive documents at all levels for all staff, lecturers and students, as well as stakeholders, in order to maximize the effectiveness of the VQF. In particular, leaders of education institutions need to enrich their understanding on the development of training programs. Higher education institutions should have plans to balance their financial resources and the investment required to facilitate the development of staff capacity.

The government, as well as relevant ministries and sectors, especially state management agencies in charge of higher education, need to issue specific and more frequent guiding documents, so that all levels of the education system can implement the VQF effectively. In addition, there should be a mechanism to encourage higher education institutions to actively monitor and update and closely follow the implementation of the guiding documents and instructions in the implementation of the VQF.

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