

Implementing the Credit-Based Education Model in Vietnamese Universities

Bau V. Le*, Hien M. Le & Giang P.A.

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Summary

The Vietnamese ministry of education and training (MOET) has instructed universities to implement a credit-based education model that includes the training of skills. This paper discusses three issues in implementing the model; namely: (i) difficulty to provide skills training, (ii) lack of staff, quality lecturers and facilities such as library and laboratories and (iii) mismatched habits and skills of students with those required by the new model. To fully benefit from this model, the authors give five recommendations for MOET and concerned universities to consider: (i) strengthen the competence education of this new model; (ii) enact policies to improve lecturers' qualifications and practical experience; (iii) use facilities from outside groups or other universities; (iv) improve soft skills of students by assigning them appropriate tasks and encouraging them to finish their tasks; and (v) implement the model on a step by step approach based on the specific conditions of each university.

Résumé

Mise en place d'un système d'éducation basé sur les crédits dans les Universités Vietnamiennes

Au Vietnam, depuis près de dix ans, le Ministère d'Éducation et de l'Apprentissage (MOET) a donné des directives aux universités de mettre en place un système éducatif basé sur les crédits, incluant l'enseignement de compétences. Cet article discute trois contraintes majeures de l'introduction de ce modèle: (i) la complexité de la formation des aptitudes et des attitudes, (ii) la qualité insuffisante aussi bien des professeurs que des infrastructures telles que les bibliothèques et les laboratoires, et (iii) la non-compatibilité des attitudes et des aptitudes des étudiants avec celles nécessaires pour le nouveau système d'éducation. Afin de bénéficier pleinement de ce système, les auteurs recommandent au MOET et aux universités de considérer: (i) à renforcer les aspects de l'apprentissage des aptitudes et des attitudes liées à ce nouveau système; (ii) de mettre en œuvre de nouvelles politiques pour améliorer les qualifications et les expériences pratiques des professeurs; (iii) de partager des infrastructures avec d'autres instituts, départements ou universités; (iv) d'améliorer les aptitudes sociales des étudiants en les assignant à des tâches appropriées et en les encourageant à compléter ces tâches; et (v) de mettre en œuvre le système en étapes adapté aux conditions spécifiques de chaque université.

*Hong Duc University Dep. Engineering & Technology, Thanh Hoa, Vietnam

Corresponding author: EMail: levietbau@hdu.edu.vn

Introduction

Education is one of the most important elements affecting the development of any nation. State government acknowledged this by making it as a top national policy in enhancing intellectual human resources and talents (40, p.13), and by primarily investing on this sector (38, p.1). In 2013, for example, the Vietnamese government invested 20 percent of its finance in the education sector (18, p.13).

Since 1993, some universities in Vietnam have already implemented the credit-based education model. This model was first applied in 1886 in Harvard and then spread all over the world. In this model, the curricula are flexible. Although students have to enroll in some compulsory courses, they can choose several elective courses that they are interested in.

Moreover, they could decide when to enroll in a course. The credit-based training system is applied to meet multiple objectives, including a change of the education concept. Traditionally, this concept is based on education authority under which students learn by obedience and unconditional acceptance of both program and content that universities and lecturers fix and communicate.

However, in recent years, from a more authoritarian system, education has gradually shifted to a more democratic system (2). Democratization is thus exhibited through two main ideas: (i) create and focus on the most appropriate learning environment for students and (ii) pay attention to the needs and interests of students in relation to the competencies required for their future professional career. Not only do they have the right to choose professions, but also to a certain extent, they have the right to design their own training schedule, to partly choose their own training content, and to participate in the construction of the curricula and course schedule. The concept of learner-centered education is the most concentrated expression of the democratic right to learn more and better (1).

Along this line, MOET had published the decision, No 43/2007/QĐ-BGDĐT, to promote the training of skills in credit-based training curricula. However, the

conversion from the annual course model to a credit system faces some challenges. In particular, new and local universities are facing issues related to their resources, as well as to the quality and quantity of students (30). They are confused about the application of this model (30, 32); thus the decision of MOET may be not satisfactorily implemented.

This paper examines whether or not the conditions in Vietnamese universities meet the requirements for a credit-based training model, and whether the credit training model is appropriate or not for all types of universities: public, private and local. It compares the standard conditions that a university "ideally" needs in implementing this credit training model with the actual conditions of the respondent-universities. This paper discusses other relevant issues, such as education program, resources and students; the last section presents recommendations for an effective application of this model in Vietnamese universities.

Methodology

This study used mainly a quantitative method to examine whether goals of shifting from the old model to the new one reaches the main goal: to improve quality of training data on the core factors affecting the quality of training, curriculum, resources, syllabi and students.

The reality of these factors were collected by using reports from three universities and MOET. The reality was compared to MOET's decision, No 43/2007/QĐ-BGDĐT, from 15th August 2007 which ruled out the regular training in university and colleges under the Credit System to assess whether there was a mismatch between requirements and reality. The results of comparisons were analyzed and discussed in this paper.

Analysis and Discussion

Education program

Most of the curricula satisfied the requirements of MOET (24). However, some universities such as Vinh University, Engineering and Technology University of Danang and Hanoi National University of Education did not indicate the outcomes of the training.

This led to misinformation among students and difficulty for them to define their assignments, as well as to get oriented with their activities. Eight studied curricula satisfied the regulation in quantity of credits (Table 1). However, data show that students have to pass between 122 and 150 credits to gain a Bachelor's degree. These curricula required students to attend classes for about 1200 hours for listening (theory), leaving about 800 hours for discussion and self-study; students thus needed to spend approximately 2000 hours to get a Bachelor's degree (19). Although the number of credits is lesser than that of the University of New South Wales (144 and 192 credits for the 3-year and 4-year courses, respectively) (35), this is higher compared with the time that students studied theory in Australia. If Vietnamese universities would reduce time for theory, students would gain more time to acquire specific knowledge and skills, e.g., reading reference materials; visiting laboratory; and observing, experiencing and analyzing business processes (Table 1).

In contrast, the proportion of elective courses is about 25% higher in UNSW (35) than that in Vietnamese universities. This shows that Vietnamese students have limited possibilities to choose courses, which is not characteristic of the new model. Elective courses are very important for students to expand their knowledge beyond their own disciplines; these courses would enable them to do collaborative interdisciplinary research and to analyze problems in a broader context (3). As for flexibility, the difference between curricula in quantity of credits and courses across universities (Table 1) implies that it is difficult for students to transfer their credits between and among Vietnamese universities. Most of the curricula have already a fixed schedule of the program which prevents students from shortening their study time. Thus the flexibility of the new model, from choosing their elective courses to setting their own schedule, is not fully taken advantage of.

As for quality, the audit report of training programs and syllabi in the academic year 2013-2014 at Hong Duc University, a typical local university, states that 12.5% of the syllabi did not satisfy the requirements completely (Table 2).

This self-assessment covered 100% of the training programs and shows that the new curricula and syllabi scored better compared with the old ones (Table 2).

A survey on former students of Hong Duc university (9) showed that the education program mainly focused on theory only, instead of professional skills. This is similar to findings contained in several recent speeches (26). Soft skills such as communication, working in groups, and foreign language are important, but students are not trained in these. This observation is also recognized in the Conference on the relation between universities and businesses which was organized on 19th September 2009 (25). Thus, changing the curricula to include training students to learn soft skills, for example, can create not only a positive image for universities, but it also can eliminate negative reports about them.

Human resources

According to MOET (22), the number of universities has increased in the last six years. The number of staff having a Bachelor's degree accounts for a high proportion (Figure 1). In universities, this number should be lower because these staff can only teach general disciplines in the first semesters. In order to teach specific knowledge, the lecturers have to own at least a specialized Master's degree (39, article 54). Though the number of PhDs has improved, this was mainly in alpha sciences, especially Literature. The low number of technical PhDs poses serious constraints (22) with regard to the increasing number of students (Figure 1). In general, the qualification of lecturers has shown much improvement in the last six years, but the number of BScs has increased along with those having PhDs and MScs. Although the number of staff has increased relatively fast, and the student/staff ratio has become lower than the maximum standard set by MOET (20), the ratio of student/lecturer should be lower than 25, 20, 15 or even 10 for some technical education programs (Figure 1).

At Hong Duc University, there are highly qualified staff for some courses, such as English, Information technology, Finance Banking, Sociology, Forestry and Civil construction.

Table 1

Number of credits in some typical universities (Adapted from 5, 6,13, 16, 34, 36, 41 & 42).

Universities	VNUH	LUHCM	EUHCM	EUVNUH	HNUE	UPVNUH	VNUH	UCCW
Subjects	Law	Law	Economics	Economics	Pedagogy of Math.	Pedagogy of Math.	Mechanic Electronic	Architecture
General knowledge	27	32	37	27	34	30	29	34
Inter-disc. Knowledge	6	21	12	10	16	25	4	49
Disciplinary knowledge	19		15	16		39	22	
General prof. knowledge	53	59	30	20	63	9	43	57
Professional knowledge	16	12	22	39		27	11	
Practice and graduate	9	7	10	11	17	7	13	10
Total	130	131	126	123	130	137	122	150
Compulsory credits	112	119	111	102	108	133	118	129
Elective credits	18	12	15	21	22	4	4	21

Table 2

Quality assessment of syllabi used in the academic year 2013-2014 at HDU (11).

	Total	Good		Accepted		Unsatisfactory*	
		n	%	n	%	n	%
New constructed syllabuses	135	51	37.8	74*	54.8	10	7.4
Old constructed syllabuses	99	17	17.5	73*	73.7	9	9.1

* These syllabi should be reviewed

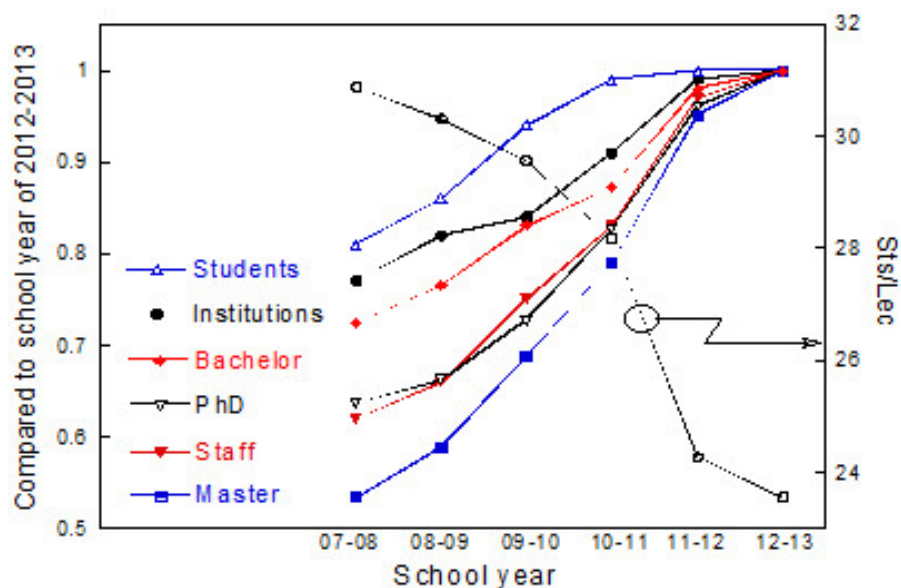


Figure 1: The trends in number of students and qualified lecturers (left panel) and the ratio of students and lecturers (right panel) at Vietnamese universities in last six years [Extracted from MOET (22)].

However, there are also other courses that are taught by teachers who only have a Bachelor's degree. This violates MOET's regulation (23). Moreover, 70% of the courses in forestry and civil construction could not be taught due to insufficient number and competency of available lecturers. The quality of lecturers was also assessed through their ability to do scientific research which is measured by the number of articles published in international journals. This criterion on scientific research is not included in the requirements of MOET. The number of articles published by Vietnamese scientists is lower than that of their counterparts in other countries. This may imply a more urgent need for Vietnamese lecturers to improve their skill and experience in conducting research (37), particularly at HDU. As a matter of strategy, HDU planners may need to look at how their lecturers can boost their capability on conducting research which may begin with learning the fundamentals of writing and speaking English that are at par with the standards of internationally refereed journals.

Facilities

MOET reports (21) that facilities of several universities have to be improved, in particular in the South of Vietnam. Most universities have acquired internet-connected computer rooms, and nearly two-thirds uses software in their training process, but on average, a computer serves 3.6 lecturers and 27.3 students (28). Some universities have built modern libraries comparable with those of developed countries; nevertheless, only 39% has an electronic library, 88% still operates with a traditional library, and 10 % does not have any library at all. This report also shows that most libraries have a narrow subject coverage, poor or outdated references, and/or insufficient materials (28). Modern facilities are therefore crucial for lecturers who are conducting research and for students who are pursuing competency-oriented studies.

Although many modern laboratories have been established, MOET states that only 22.5% is rated to have good quality equipment; 15.5% has met the needs of scientific research, while 0.8 is close to

liquidation (21). This is based on a survey of 5572 laboratories and practical rooms and 442 workshops. Additionally, the laboratory equipment being used in the training process is insufficient both in quantity and quality, and most universities have not developed regulations on the organization and operation of their laboratory. On a positive note, some universities have begun investing in new facilities recently; however, for others, they have not enough area for expansion (24).

Overall, in terms of available facilities, top universities have only partially met the requirements for the new model. Equipment and facilities need upgrading as libraries, laboratories and workshops can directly affect the quality of both the education process in these universities.

Student's capacity

University students are clients in educational service and, at the same time, the object of the educational process. In this model, students play a role themselves. Their motivation to learn is one of the key factors in the quality of the educational process because the acquisition of their skills depends on their active participation (7, 8). Thus in the credit-based system, the training of competencies, does not only require changes for the institution and the lecturers, but also requires changes on the part of students, especially on their active participation (8). Using a ranking survey with five scales, Hieu (12) found that the student's learning of 14 skills was moderate in the three Vietnamese universities applying the credit-based system. The standard deviation of the rankings was high; it showed that on the one hand some of the students are able to learn skills in a credit-based training model, but on the other hand, a number of them face challenges (12). The skills relating to information technology are asserted to be the best. This could help them to enroll faster and search for materials quicker. Although all students have been guided to enroll online (24), the high standard deviation (0.93) shows that several students found it difficult to enroll online. Not owning or not having their own computers could be the reason for this result.

Group discussion is one of the most popular skills in this credit-based model, but more than 15% of the students recognized that they are very bad at this skill, and even close to 40% struggled with organizing their self study (12). For writing skill, like writing a report or an essay, students scored low on this; but 35% of them asserted that they are very good at listening and taking notes (12). Students developed the latter skill early in their primary school, and "teachers read, students write" approach is still popular in most Vietnamese schools (31).

Hieu (12) reports that 49.6% of the students mentioned that they are inferior in skills and methods. Besides, nearly 40% of students stated that they do not have any specific motivation to study. This may be one of the main explanations why students are not enthusiastic and active in studying. Self-study is, among others, a typical feature of the credit model. However, students still scored low for the skills they need to be equipped with under the credit-based training setting. They lack the essential skills mentioned earlier, and their competencies "deviate from employers' needs" (2, p. 583). A bigger challenge in applying the credit-based model (14, 17), therefore, is for implementers to find ways and means to undo the students' habits formed through years of being exposed to the "teachers read, students write" approach at the lower levels (15). This approach has milled out students that are so used to listening, but lacking in self-confidence to express their opinion and thoughts in higher education. Hieu's (12) results show that the higher the students' capacity, the better skilled they are. While credit-based training reduces the amount of class time, it does not, however, diminish the students' academic requirements. Currently, a large number of students do not understand this so they do not always use their free time for self-study (15). Although reducing class time is theoretically beneficial, it has some drawbacks because majority of students in the local universities have low capacity (29). On the other hand, to reach their targets regarding success rates and revenues, universities pressure their lecturers to reduce the quality of requirements that students need to meet (15).

The enrollment boom for some universities has resulted in reduced quality of students' inputs, especially in new and local universities.

This poor quality of students' inputs does not match with the new model's requirements which call for students to be more active and to own several skills. Given this situation, it implies that students will face more difficulty in meeting the requirements of the credit-based training model. On the other hand, a small number of students in some specific professions would also make it difficult for universities to organize classes that would meet student's demands.

Implementation issues

Small class sizes might favor interaction between lecturer and students. For a qualified university, a larger number of students are enrolled in each course (Adapted from 5, 6, 13, 16, 34, 36, 41 & 42). These figures are between 33 and 219, and an average of 107 students in each course. Whether these figures are appropriate for a credit-based training model or not, depends on the number of assistants used by the lecturers. However, for other universities, the number of students is unbalanced. For Hoa Sen University, eleven of their courses attract less than 15 students, or even less than 10 students in each course of 8 professions. These courses could not generate profits (14). This situation is similar to that of Hong Duc University (10), but is worse than that in Dong Thap University (4).

In the new model, students can choose the subjects they prefer and decide their learning process (19). However, it will be very difficult for Vietnamese students to do so because if only a small number of them will choose the same subjects and/or process, they cannot enroll the courses they prefer due to the barrier of not meeting the imposed minimum number of 40 students before a class is officially permitted by the university (19). Consequently, they cannot take advantage of the new model.

Another challenge confronting universities

implementing the credit-based training model is the need to enrich the training of skills of the lecturers by modifying the didactics suited for this model, i.e. train them on how to use methods that make students actively engage in learning events.

For example, lecturers need to use methods that would encourage students to express their opinion, instead of just letting them listen or write notes. They could implement this by assigning them tasks with detailed guidelines (33). Each student has to finish his/her task and present the output in the class. Simultaneously, other students can be encouraged to contribute to the presentation. The first tasks must be easy enough to encourage students, but not too difficult for the students to deal with so as not to discourage them. The extent of difficulty of tasks should be increased depending on the capacity of students. Doing these could be only in the short-term.

Conclusion

In the long-term, however, developing skills for students requires a change in the mindset of parents, schools, MOET and individual students on answering the question "What do students hope to learn." Studying to explore knowledge and develop individual capacities/skills should therefore be recognized, instead of sticking to the traditional opinion that students enter universities mainly to pass exams, get a high mark (33) and/or gain a prize.

The competency-oriented, credit-based training system has improved the quality of education in many universities all over the world. Applying the credit-based training system is compulsory in Vietnam since 2007. Several Vietnamese institutions have successfully applied this model and the quality of students graduating from these universities has improved. However, some issues remain in applying the credit-based training model, particularly in new private and local universities.

In appearance, most curricula have satisfied the requirements of the regulation, but some have resulted in overload of time. Students thus have less time for reading, self-study, and engaging in activities to improve their soft skills. Moreover, these curricula focus too much on theory and hardly include practicing of skills relevant for their future profession. Part of the syllabi requirement which is essential for self-study does not match the students' habits and skills. Except for listening and taking

notes, the students rated very low their learning skills. Although the time for self-study was limited, some students struggled with doing this because they never learned how to do self-study and other skills needed to perform in the credit-based model. The new model requires students to be more active, while most Vietnamese students are generally passive. For this to change, the education methods at the primary and secondary schools need to change. In the meantime the universities may offer training or guidelines to the students. Moreover the lecturers need to include more and better skills training in their classes.

Students rated their motivation for skills training low. This may be due partly to three factors: (i) the limited proportion of elective objects, thus reducing the students' opportunity to take part in what they are interested in; (ii) for students' part, this may relate to their involuntary orientation and, perhaps, the most important factor inducing the students' low motivation is (iii) the didactical skill of the teachers. As for curricula and number of credits, these differed from university to university. This difference generates difficulties for students to transfer their credits between universities. These limitations affect one of the advantages that the credit model should generate.

As for the number of staff serving these universities, although this has increased, the staff per student ratio was still lower than that required by the credit-based training model for technical universities. Likewise, the qualifications of some staff do not satisfy the requirements of the model. As a result, lecturers have to teach subjects that are not in line with their expertise, and for which they do not meet the specific requirements. Because they handle more subjects and a higher number of students, they have little time to conduct research. This situation implies that they are not updated with the advances of science.

Recommendations

All of the above factors affect the quality of the training process in the credit-based model in some Vietnamese universities. To take full advantage of the credit-based system, universities may opt to apply the following recommendations:

1. Restructure education based on this new model by:
 - a. Focusing more on professional skills training and less on lecturing theory;
 - b. Increasing the proportion of the forms of discussion, group presentation, and doing experiments in laboratories and workshops;
 - c. Involving employers and companies in defining these skills because they know exactly what skills students need to serve their businesses
 - d. Implementing surveys regularly to identify the needs of business and society. The results of these surveys could be the bases for adjusting the curriculum. In addition, seminars with the participation of enterprises could be inserted in the curricula to familiarize the students with the requirements from their future employers.
2. Enact policies that will:
 - a. Improve lecturers' qualifications and practical experience;
 - b. Facilitate flexibility of students to change their program across universities, and/or to continue with a second degree;
 - c. Enable recognition between and among universities. This could be done by setting basic outcomes that students need to reach under the guidance of MOET, educational experts and employers;
 - d. Enable universities to encourage, even compel their staff to enhance their didactical capacities. Lecturers should not only improve their knowledge, but they also should learn skills by themselves like searching information, critical thinking, and exploring and addressing problems through research;
- e. Encourage universities to allow their lecturers to participate and practice in businesses and companies during sabbaticals. This could help them to learn and update the development of science and technology. This will enrich their knowledge, experience and their teaching activities; and then attract students and encourage the latter in studying. Moreover, approaching businesses and companies could help the lecturers to identify problems requiring research. The research addressing factual problems will enhance the capacities of lecturers, and, when reflected in their teaching activities, encourage students to conduct research.
3. Allow the use of facilities and related resources from outside groups or from other universities;
4. Improve soft skills of students by assigning them appropriate tasks and encouraging them to finish their tasks;
5. Implement the model on a step by step approach based on the specific conditions of each university. For new small and local universities, they can apply this model step by step or phase by phase, depending on the particular conditions of the university.

A step by step implementation of the credit-based training model would help universities do away with the too many constraints encountered in implementing this model in one single shot. The first steps would then begin with assessing the gaps; e.g., qualifications, knowledge and skills of lecturers who will be implementing this model correctly. This would then be followed by designing, implementing a training and evaluation program for leaders to address the gaps found in the assessment phase.

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Bau V. Le, Vietnamese; PhD; Assoc. Prof. Dep. Engineering & Technology, Hong Duc University, Thanh Hoa, Vietnam; levietbau@hdu.edu.vn

Hien M. Le, Vietnamese; MSc, Director of the Center of Continuous Education, and Lecturer Dep. Infomatics and Communication, Hong Duc University, Thanh Hoa, Vietnam; E-mail: leminhhien@hdu.edu.vn

Giang P.A., Vietnamese; MSc, Lecturer Dep. Natural Science, Hong Duc University, Thanh Hoa, Vietnam; E-mail: phamanhgiang@hdu.edu.vn