The development of geography teacher training curriculum at Thai Nguyen university of education in Vietnam to meet the requirements in the new context

Nguyen Thanh Mai* and Pham Huong Giang

Department of Geography, Thai Nguyen University of Education, 20 Luong Ngoc Quyen Street, Thai Nguyen City, Vietnam

Corresponding author’s e-mail: nguyenthanhmai.1812@gmail.com

Abstract. The development of higher education curriculum plays an important role in ensuring the quality of human resource training to meet the requirements of socio-economic development. Curriculum development at Thai Nguyen University of Education in Vietnam, especially the Geography teacher training curriculum, which is regularly reviewed and changed to respond the needs of the labor market and fit in the new context nowadays.

1. Introduction

In recent years, the development of curriculum in Vietnamese universities has been of great interest in improving the content, modification and adaptation to suit the country's needs and circumstances, the trend of international and regional integration. Renovation of training curriculum plays an important role in improving the quality of human resources. Thai Nguyen University of Education is a focal point in the higher education system of the midland and mountainous provinces of northern Vietnam and is one of the leading universities in the country in developing the curriculum. In particular, the geography teacher training curriculum is a prime example of developing a curriculum that is positive in response to new circumstances.

2. Content

2.1. The concepts of curriculum and curriculum development

Based on the study of domestic and foreign documents of curriculum development, the author finds that there are many different approaches to the terminology of the curriculum. However, in general, a curriculum is the set of modules offered by the institution depending on fields of the trainees. Training curriculum is a total package of learning activities designed to achieve the objectives of the training program. In a competency-based system, the objective, or desired end, is that trainees will acquire the specific knowledge and skills (competencies) they need to do their jobs. (Judith S.Rycis, 1994). Referring to domestic documents, foreign documents and from the current practice, according to the author, the higher education curriculum should be understood as all the modules and activities built by the school to equip for students the knowledge, skills and attitudes appropriate to the chosen majors.

Similarly, the terms of curriculum development have different perspectives among authors in many countries around the world. In general, the concept of developing curriculum is defined as to be a continuous process of refining a curriculum that involves compiling, developing a new curriculum, or
improving a current curriculum. In addition, we use the term development of curriculum instead of "building", "designing" or "compiling" the curriculum, since "development" involves the change, continuous replenishment. Development is a cycle where the end will be the starting point, resulting in a new and better curriculum. Other concepts mean only one process and the result stops when we have a new curriculum.

2.2. Overview of Teacher Training Curriculum in Geography at Thai Nguyen University of Education

The teacher training curriculum in geography to train learners have the ability to teach geography in high schools, secondary schools. In addition, trainees can work in research institutes, ministries, committees ... related to the field of Geography or teach at the Universities and Colleges.

The goal of the Teacher Training Curriculum in Geography:

- Moral qualities. To be loyal to the Fatherland and with the people, to love the job, to have the qualities of teachers. Generally, seeing clearly the responsibility to the nation in education and particularly in building the socio-economic development of the country.
- Knowledge. Understand and be able to analyze, explain phenomena, natural and socio-economic processes. Knowledge of science, methods of research in the field of geography. Understanding basic knowledge of science education, teaching theory, teaching methodology geography.
- Skills. Have teaching and learning skills. Organizing educational activities, teaching geography in school. Have research skills, the ability to organize activities in the field of geography.

Training time and amount of knowledge accumulated: Training time: 4 years; Total amount of accumulated knowledge 135 Credits, not including the content of Physical Education and Defense Education.

Graduation requirements: accumulate sufficient amounts of knowledge including compulsory modules and elective modules; have a physical education certificate; have national defense education certificate; Certificate of English A2 (European Framework).

| Knowledge                                           | Number of credits |
|------------------------------------------------------|-------------------|
| General education, in which:                         | 24                |
| - Compulsory units                                   | 22                |
| - Elective units                                     | 2                 |
| Professional education, in which:                   | 69                |
| - Basic knowledge                                    | 16                |
| + Compulsory units                                   | 12                |
| + Elective units                                     | 4                 |
| - Specialized knowledge                              | 53                |
| + Compulsory units                                   | 49                |
| + Elective units                                     | 4                 |
| Pedagogy                                             | 35                |
| - Compulsory units                                   | 33                |
| - Elective units                                     | 2                 |
| Thesis/Equivalent unit                               | 7                 |
| TOTAL                                                | 135               |

Table 1. shows the curriculum has a clear, concrete, logical structure that is systematically designed to meet the standards of knowledge, skills, attitudes, and human resources. quality force for practical
and academic ability to improve; designed to meet the needs of students. The curriculum consists of modules that are designed from the general knowledge block, the sectoral knowledge base to the subject area. Prerequisites are the foundation for the next module. The parallel modules in the sectoral knowledge and industry disciplines are designed to be integrated. Each module has a decisive role in meeting the standards of the program, regularly adjusting the curriculum to reflect the country's educational reform, learner and human resources requirements of the labor market.

The teacher training curriculum in geography is based on the knowledge of class 10, 11 and 12, and is divided into specialized knowledge units:

- Some Common Issues (Geography with Career Orientation for Students and Using Maps)
- General geography (General natural geography and general socio-economic geography)
- World Geography (Some socio-economic issues in the world and regional and national geography)
- Vietnamese geography (Natural geography, population geography, economic geography, economic geography, and local geography).

2.3. Developing teacher training curriculum in geography at Thai Nguyen University of Education in the new context

Based on the draft general education curriculum of the Ministry of Education and Training issued in January 2018 and based on the reference of construction materials of some pedagogical universities in other countries: Taiwan, Korea, China, the United States, the Philippines, etc. The development of the curriculum has been carried out in two main ideas.

2.3.1. Changes in the curriculum. About process and development: Firstly, survey managers (recruiters), organizing seminars for geography teachers of some high schools in Thai Nguyen province. Then, building capacity profiles of students in the social sciences and geography. After that, develop the knowledge module and set up the subject matrix to determine the credit for each subject and compares coursework with competencies that need to be formed to identify required subjects, elective subjects ... Develop framework curriculum and curriculum details. Hence, experts have been appraised and corrected according to comments or saved opinions of appraisal experts. Finally, develop syllabus.

Implementation steps
- Step 1. Survey social needs and labor market.
- Step 2. Develop the learning outcomes of the training curriculum.
- Step 3. Determine the structure, modules of knowledge, the amount of knowledge of the training curriculum and the suitability of the graduates.
- Step 4. Comparison with other curriculum at the same level at other training institutions.
- Step 5. Design the syllabus.
- Step 6. Get feedback.
- Step 7. Finalize the program on the basis of feedback.
- Step 8. Review the program, update regularly.

Result: Elimination of some modules: Population and reproductive health, Methodology for research and Geography, History of geography science, Thematic map, Feng shui geography, Practice teaching... Reason: These subjects are no longer relevant due to the heavy content.

Put some new modules into the curriculum such as
- General course of the World’s History
- General course of the Vietnam’s History; World Civilizations
- Sea Islands of Vietnam
- Vietnam in the process of globalization
- Pedagogical communication, Geography curriculum development
Teaching methods in social sciences; teaching local geography 
Practice geography pedagogy 123 
Assessment in geography teaching; Creative activity 
Teaching skills in school 
Climate and life 
Water resources and life on Earth 
Teaching methods by topic.

Table 2. Topics in the general education curriculum corresponding to new modules in the curriculum

| Topics in the general education curriculum | New modules in the curriculum | Number of credits |
|-------------------------------------------|------------------------------|------------------|
| Climate Change                            | Global Climate Change        | 2                |
| Urbanization                              | Urban Geography              | 2                |
| Some issues of world tourism              | Tourism Geography            | 3                |
| Some issues in Southeast Asia             | Geography of East Sea        | 2                |
| Mekong River Commission                   | Sea Islands of Vietnam       | 2                |
| Peaceful Co-operation in the East Sea     | Water resources and life on Earth | 2        |
| Natural disasters and preventive measures | Natural Disaster             | 2                |
| Regional development                      | Regional development         | 3                |
| Industrial Revolution 4.0                |                              |                  |
| Sustainable development and green growth  | Environment and Sustainable Development | 2        |

Table 2 shows new modules are associated with academic subjects in the curriculum of geography in the new context. Reason: The new subjects included subjects with useful content to meet the requirements of developing the capacity of Geography teachers.

The curriculum is designed in the form of credit training including a system of general knowledge subjects, specialized knowledge subjects, and specialized subject areas. Each module has a larger number of subjects than the required number of courses or credits; Students may refer to the teacher or academic counselor to select the ones that suit them, to fulfill the requirements for a degree and to serve their future careers. Students can actively choose the required subjects in a semester, while selecting the elective subjects that students find necessary for the accumulation of knowledge as well as interest in the subject. In addition, students can choose and enroll with qualified instructors and teaching methods.

At the same time, the formation of knowledge, professional skills, soft skills and ethical training to meet the challenges of professional development, to improve the quality and effectiveness of training. The improvement and renewal of the curriculum is based on the determination of the content and level of knowledge, skills and moral integrity for students.

Course syllabus for innovation has met the requirements and orientation of curriculum change from content approach to capacity approach, help students develop competencies: scientific research, lifelong learning capacity, problem solving capacity, creative capacity; Enhancing Discussion and Group Exercises.

Especially for the detailed objectives of the subject, students have the autonomy in preparing the lesson, self-assessment of their ability to determine the goal to reach the 3 levels.

In the syllabus of innovation, the content of the subject is very clear from the content, the form of teaching methods, the self-study time test, the place of study, so students can plan learning personal. Therefore, in addition to being equipped with specialized knowledge needed to apply in teaching,
while explaining the natural phenomena, socio-economic happening every day, students can also expand their knowledge. Further develop and promote the ability of creative thinking, cooperation capacity in solving practical problems.

The new curriculum helps shape and develop student competencies, including general competencies and specific competencies.

General competencies:

- Communicative competence helps learners to use the appropriate communication in all situations, especially in the process of teaching a broad communication environment.
- The self-learning ability of professional fostering helps learners to develop self-study and fostering plans for each period, seeking for scientific research and training, and effectively implementing programs and learning resources (books, newspapers, magazines, equipment) for learning and career development.
- The capacity for scientific research increases the probability of identifying problems or research questions that need to be answered, expressing the research problem as a topic.
- Collaborative capacity is the capacity for teamwork, collaborative work that requires learners to leverage the power of teamwork, sharing, and collective collaboration, despite the critical opinions.

Specific competencies such as

- The ability to apply theoretical knowledge to explain natural geographic phenomena. For example: Recognize and explain the scientific basis for natural phenomena that occur in reality: seasonal phenomena, climatic and weather phenomena, the development of terrestrial, the rules of natural phenomena.
- The ability to apply theoretical knowledge to explain socio-economic geographic issues: Recognize and explain the scientific basis for socio-economic geographic issues that occur in reality.
- The capacity to establish charts and maps: Draw charts and maps according to criteria (depending on the nature and requirements of each article or topic): Science (accuracy); Visual (clear, easy to read); Beauty (Fine, beautiful).
- The ability to analyze spatial attributes and spatial relationships between things, territorial phenomena and integrative and differential teaching in the field of geoscience: Recognize and explain natural and socio-economic phenomena in a scientifically sound manner within certain spatial territories. Form the concept and derive the rules that give rise to the basic development of natural phenomena.

Compared with the old program, the new program has made fundamental changes, moving from the development of the curriculum towards the content approach to the capacity approach. As a result, many subjects have been built closer to practical needs in high school.

In the era of the industrial revolution 4.0, which took place strongly not only in developed countries but also in developing countries, the application of the achievements of this revolution was also significant in the development of the curriculum through E-learning and the use of information technology in teaching.

2.3.2. To develop and develop new training curriculum in the integrated and inter-disciplinary manner. In the trend of international integration, besides reviewing, modifying, supplementing and updating the teacher training curriculum in geography at Thai Nguyen University of Education, the development of new training curricula also play an urgent role in the current situation. In developed countries and in some countries in Southeast Asia, teachers not only teach one subject, but also teach many subjects in the natural sciences or social sciences. Therefore, the development of this curricula in the direction of integration, inter-disciplines are increasingly focused.
Specifically, Thai Nguyen University of Education has developed a curriculum of training social science teachers (130 credits) to train high school teachers who teach all three subjects: Geography, History and Education citizen; The Teacher Training Curriculum in Geography and History (130 credits) teachers can teach Geography and History. Expected, the school will enroll students in school year 2018 - 2019 to help students have more employment opportunities, meet the needs of the labor market.

For these curricula, employment opportunities are expanding, for example: Professional staff of Education, Education and Training Departments; Researcher at the Institute of Social Sciences and Humanities; Officials of state management agencies, mass organizations and social organizations: Department of Propaganda and Education, Committee for Ethnic Minority Affairs, Party Committee for Historical Research, Department of Culture - Sports - Tourism, Department of Information and Communications Communications, Districts, Provincial Youth Union, Labor Confederation, Fatherland Front from central to local; Reporters and radio and television news editors from local to central; Museums and interpreters at historical and cultural museums, historic monuments, traditional houses; tour guide.

3. Conclusion
Developing the teacher training curriculum in geography at Thai Nguyen University of Education has met the objectives of the curriculum in the learning outcomes of each subject and each block of knowledge; Ensure that the subjects are complementary, complementary and closely related; Combining professional career development with skills training, developing common capabilities and specific capabilities. Through this activity, the quality of learners is improved, contributing to helping them after graduation to work effectively in educational institutions or to adapt well to other working environment.

References
[1] Department of Geography, Thai Nguyen University of Education 2018 Report building curriculum in a new context (Thai Nguyen)
[2] Doan Thi Minh Trinh and Nguyen Hoi Nghia 2012 Design and develop training programs to meet the output standards (Ho Chi Minh City National University Press) pp 56-62
[3] Judith S, Rycus Ph D, and MSW IHSI 1994 handout for “Training of Trainers on Development Curriculum” (Ohio Child Welfare Program - December 2006) pp 1
[4] Ministry of Education and Training 2018 The draft general education curriculum Geography (Ha noi) pp 57
[5] Nguyen Thanh Son 2015 A development on higher education curriculum to meet the output standards (Journal of Science Vol 5) chapter 1 (An Giang University) pp 50-54
[6] Pham Hong Quang 2013 Develop teacher training programs - theoretical and practical issues (Thai Nguyen University Press) pp 22-35