

# Building Student Outcome Standard of High School Teacher Training Programs in Vietnam

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**Abstract** This article presents scientific basis for developing student outcome framework for high school teacher training programs. The student outcome framework built in direction of approaching students' qualities, capacities includes 5 standards: Developing personal qualities and profession values; General capacity; Specialistic capacity; Pedagogical competence; Profession development capacity. Based on this framework, education universities build student outcome standard for each faculty by relying on a system of controlled steps. Each outcome standard of a training program must determine specific requirements of profession competencies. Each standard consists of the criteria of competence. And each criterion is specifically divided into 2-3 indicators and the outcome will base on a 7-level scale for assessment. This is to ensure correctly evaluating capacities of graduates from high school teacher training programs.

**Keywords:** *student outcome framework, student outcome standards, criteria, indicators, high school teacher training programs*

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## 1. Introduction

Vietnam Ministry of Education and Training (MOET) issued Circular No. 2196 / BGDDT-GDĐH dated April 22, 2010, instructing higher education institutions to develop and publish student outcome standards for higher education [1]. According to Circular 2196, student outcome standard is requirements/regulations on the content of professional knowledge; practical skills, technical cognition, and problem solving; the works that learners can take over after graduation and other specific requirements for each level and each training sector. Vietnam Ministry of Education and Training issued Official Letter No. 3356/BGDDT-GDĐH dated 01 June 2012, on the establishment of outcome standard for teacher training colleges/universities [2].

Thus, establishing student outcome standard is mandatory for all higher education programs in Vietnamese universities. The student outcome standards of a higher education program are the content of graduate quality; the expected knowledge, skills / attitudes / capabilities/ qualities... which require the learner to attain after completion of the training program (course). So student outcome is the quality standard of training activities. Publishing student outcome standard in university training programs is a declaration of responsibility to the parties concerned for the quality of the educational product of the institution, as well as the education sector, primarily for learners

themselves, the society and beneficiaries and for the use of the universities' outcome products [3,4].

In the past 6 years, education universities have built and published their student outcome standards, but there is still no consensus among the universities, the student outcome standards have just been set up for dealing with the requests from the upper level management board and they can only meet the requirements of MOET (in accordance with the Circular No. 2196 / BGDDT-HE and Official Letter No. 3356 / BGDDT-HE). At present, most universities have not assessed graduates based on student outcome standard yet, because all curriculums have been theoretically formulated and published in fragmented ways, there is no consistence in the framework of student outcome standard for teacher training curriculum.

At present, we have set standards kit for evaluating the quality of teachers at primary, secondary, high schools and at college and university levels. However, the quality of standards kit for evaluating teachers does not clearly define student outcomes in approach of students' competencies like ABET has done.

This is the real obstacle for educational universities when developing student outcome standard in pursuit of approaching student capability in each training sector. Each educational college/university has dozens of curricula to train high school teachers. Hence, it's difficult every university can afford to develop curricula for high school teachers with assurance of good student outcomes, which meet all requirements of general education in pursuit of competence approach.

According to the experience of international and national universities when developing student outcome standard, they have chosen a kit of quality verification of educational curricula at the same sector/ industry accredited at national, regional or international level: Student outcomes are equal to competencies. This ensures that the requirements of student outcome built on can be benchmarked with international standard, and more easily recognized by the parties. For example, in the ABET (2013-2014) criteria of accrediting Engineering Programs, the criterion 3 sets student outcome standard as follows [5]:

The program must have documented student outcomes that prepare graduates to attain the program educational objectives

Student outcomes are outcomes (1) through (11) plus any additional outcomes that may be articulated by the program:

- 1- An ability to apply knowledge of mathematics, science, and engineering;
- 2- An ability to design and conduct experiments, as well as to analyze and interpret data;
- 3- An ability to design a system, component, or process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability;
- 4- An ability to function on multidisciplinary teams;
- 5- An ability to identify, formulate, and solve engineering problems;
- 6- An understanding of professional and ethical responsibility;
- 7- An ability to communicate effectively;
- 8- The broad education necessary to understand the impact of engineering solutions in a global, economic, environmental, and societal context;
- 9- A recognition of the need for, and an ability to engage in life-long learning;
- 10- A knowledge of contemporary issues;
- 11- An ability to use the techniques, skills, and modern engineering tools necessary for engineering practice.

As such, the best solution for Vietnam's universities in building student outcome standard is to gather an expert team and focus on building a standard student outcome framework (in pursuit of approaching qualities, competencies to meet requirements in general education reform) for all training programs for high school teachers to ensure similar student outcomes among universities.

The building of student outcome standard and the training programs for high school teachers based on the framework of student outcome standard towards meeting the standard of professional teachers starts from practical needs and is necessary and useful for education universities. In order to build the framework of student outcome standard to meet requirements of the reform of the general education, orienting on the competence approach, it is necessary to understand the needs and desires of employers and to understand the requirements of the labor market in education sector.

If there is a good quality framework for high school teachers, aiming at meeting the new standards of a high school teacher, universities that build their own student outcome standard for each training program, specifying each competence, quality assessment will be carried out

more smoothly & easily. Based on student outcome framework to understand how qualified the graduates are, we can see the significant impact of public announcement of student outcome standard can be clearly acknowledged through the following points:

- Teachers and students know how to teach and learn to target at student outcome standard.

- By looking at student outcome standard, employers can understand what competencies graduates have and if the graduates fit recruitment criteria or not.

- The State and management units can use this student outcome standard to manage and evaluate the quality of the training products of the training institutions.

- Donors, parents know the investment efficiency when examining the results of training quality through student outcomes.

- This can be used to rank universities in a quantitative way.

- It can be a base/threshold for the development of training programs.

When the universities jointly set up a common student outcome framework for high school teacher education programs, in line with their competency-building orientations, the management of the quality of the training programs is monitored from the beginning. The content of each program module is checked through, training programs & additional activities carried out inside and outside of the university must orient to reaching the student outcome standard.

Developing the student outcome framework for high school teachers in a viable, feasible, consistent manner with MOET's new standards of high school teachers and developing a suitable assessment framework for graduates according to student outcome standard will be presented in this article.

## 2. Content

### 2.1. Scientific Basis for the Development of Student Outcome Framework for the Training Programs for High School Teachers

The student outcome framework for high school teacher training programs should be toward approaching students' qualities and capacities.

The bases for developing the student outcome framework for high school teacher training programs:

- Resolution No. 29 of the Central Committee 8, Session XI dated November 4, 2013 [6];

- Resolution No. 88/2014 / QH13 of the 13th National Assembly on renewal of general education textbooks, contributing to fundamental and comprehensive renovation of education and training [7];

- Criteria for the quality evaluation of training programs of higher education levels (according to Circular No. 04/2016 / TT-BGD & DT) [8];

- New general education curriculum (overall curriculum approved by MoET in July 2017) [9];

- Professional standards of high school teachers (Circular No. 30/2009 / TT-BGD & DT) [10];

- Draft Regulation on new standards for high school teachers (draft version dated March 26, 2018) [11];
- TEIDI standards (which were evaluated at 7 education universities in 2017) [12];
- Results of the student outcome survey on high school teacher training programs of the universities (7 education university participated in the TEIDI evaluation, 2017-2018) [13];
- Several international student outcome frameworks [5,14].
- Several international professional standards for teachers [15,16].
- A six-level capacity framework of English for Vietnam [17].

In addition to building the output framework, we also need to base on the requirements of the capacities and quality of human resources of the socio-economy (direct representatives of employers are on top priority) and of the domestic, overseas (ASEAN region) labor market to build the student outcome framework for high school teachers training programs. On the other hand, universities in Vietnam are planning to improve high school teachers training programs in order to meet the requirements of general education reform by 2018.

Based on student outcome standard, universities identifying and announcing student outcome standard for training programs reflect their role and responsibilities for the quality of their training products for the state, employers, and donors/sponsors, members of the universities. Universities realize their mission through training, scientific research and social services. As such, there is a need for a linkage among student outcome framework; student outcome standard, training programs, and the career standard of high school teachers (see Figure 1) [18].

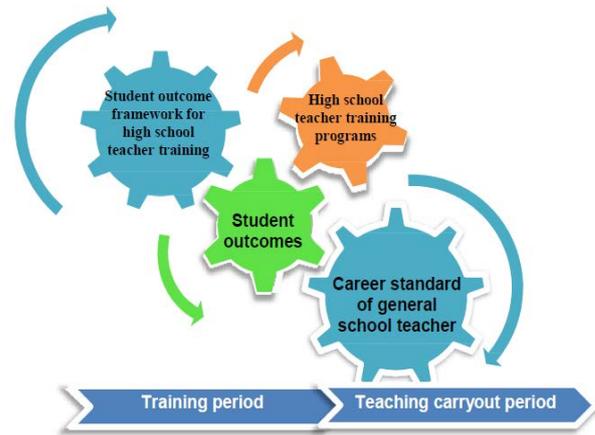


Figure 1. The relation of student outcome framework, training programs, student outcome standard and career standard of high school teachers

## 2.2. Propose Student Outcome Framework for High School Teachers Training Programs to serve Current General Education Reform

### 2.2.1. Student Outcome Framework

Based on the results of the research on the construction of the student outcome framework for high school teacher training programs and survey results of student outcome standard of high school teacher training programs in education universities, our research team at the Hanoi National University of Education has developed the student outcome framework for high school teachers training programs which consists of 5 standards (with 18 criteria) as follows:

Table 1. Criteria and Indicators of the student outcome framework for high school teacher training programs

Criteria (component competences)	Indicators (expression indexes)
<b>Standard 1: Develop personal qualities and professional values</b> (includes 2 criteria with 4 indicators)	
1.1. Political qualities and civic responsibility	1.1.1. Understand and strictly abide with the guidelines of the Communist Party; policies and laws issued by the State. 1.1.2. Have civic responsibility, actively participate in community activities.
1.2. Moral and professional values	1.2.1. Understand the responsibility and ethical expression of the teaching profession. 1.2.2. Keep and promote the values and prestige of a teacher.
<b>Standard 2: General capacity</b> (includes 2 criteria with 5 indicators)	
2.1. Capacity for communication and cooperation	2.1.1. An ability to use Vietnamese language in the standard way, to be efficient in daily communication and in professional activities. 2.1.2. An ability to work in team. 2.1.3. Respect for differences and seek consensus through discussion and debate.
2.2. Capacity to solve problems and critical thinking	2.2.1. Be able to discover and solve problems effectively & creatively. 2.2.2. An ability to think critically.
<b>Standard 3: Specialistic capacity</b> (each speciality should add on more specific criteria and indicators to the training sector and adjust some criteria and indicators to match the characteristics of each specialized science)	
3.1. An ability to understand and apply the broad education knowledge (inter-subject science, supplementary & basic knowledge)	3.1.1. An ability to understand and apply knowledge of mathematics, science, etc 3.1.2. The broad education knowledge necessary to understand the impact of education solutions in a global, technological, economic, environmental, and societal context. 3.1.3. ...?
3.2. An ability to understand and apply specialized scientific knowledge	3.2.1. An ability to understand and apply a specialized scientific knowledge 3.2.2. A knowledge of contemporary issues of the speciality 3.2.3. ... ?
3.3. Competence in specialized scientific research	3.3.1. An ability to design a specialized scientific research to meet desired needs within realistic constraints 3.3.2. An ability to design and conduct experiments, as well as to analyze and interpret data. 3.3.3. ...?
3.4. An ability to use foreign languages in profession activities	3.4.1. An ability to speak foreign languages to meet the specific requirements of the training majors. 3.4.2. An ability to use foreign languages effectively in profession activities.
3.5. Capacity to use information technology in profession activities	3.5.1. Use common software in teaching and managing students 3.5.2. An ability to use teaching equipments in an efficient and creative way.

Criteria (component competences)	Indicators (expression indexes)
<b>Standard 4: Pedagogical competence</b> (includes 6 criteria with 15 indicators)	
4.1. Capacity to understand learners and build an educational environment	4.1.1. Understand the psychological characteristics of learners, creating trust & learning motivation for learners 4.1.2. To create a democratic, friendly, fair, collaborative learning environment that promotes creativity.
4.2. An ability to understand and apply psychological knowledge (pedagogy, age), education methods (theory, teaching methods).	4.2.1. Understand and apply pedagogical psychology theories, ages to encourage learners. 4.2.2. Understand and apply teaching theories to develop teaching activities to improve learner capacity.
4.3. Capacity for making plan, organizing effective implementation of teaching and learning activities	4.3.1. To clearly define the objectives, contents, requirements and conditions for application of active teaching methods suitable to each learner. 4.3.2. An ability to make and organize implementation of teaching plans effectively. 4.3.3. An ability to effectively organize educational experiences. 4.3.4. Apply effectively and creatively teaching methods which are suitable to learners.
4.4. An ability to carry out integrated teaching and specialized teaching	4.4.1. Understand the nature of integrated teaching and be able to apply integrated teaching methods and techniques in accordance with the content, specific context of teaching and learners' ability. 4.4.2. Understand the nature of specialized teaching and be able to apply specialized teaching methods and techniques in accordance with content, specific context of teaching and learners' ability.
4.5. Capacity to assess student learning outcomes	4.5.1. An ability to design assessment tools and effectively implement learning assessment activities. 4.5.2. An ability to design and evaluate the effectiveness of educational experience activities. 4.5.3. Effectively use different types, methods and techniques to assess the capacity and quality of learners according to the designed standards.
4.6. Competency in job consulting and supporting students.	4.6.1. An ability to provide information, analyze evaluation results, feedbacks to give consultancy & support learners 4.6.2. An ability to effectively implement job consulting activities for students.
<b>Standard 5: Profession development capacity</b> (includes 3 criteria with 6 indicators):	
5.1. Self-assessment capacity	5.1.1. An ability to develop criteria and design tools for self-assessment and career development. 5.1.2. Use self-assessment results to develop profession development plans.
5.2. Self-development, life-long learning and guide colleagues in career development	5.2.1. An ability to control and promote self-development 5.2.2. An ability to self-study and develop lifelong learning skills 5.2.3. An ability to instruct, support colleagues to develop their career.
5.3. Capacity in doing educational research	5.3.1. An ability to make research platform and write essays relevant to the major. 5.3.2. An ability to apply scientific research methods to conduct simple research related to the professionally trained subject

The proposal for the student outcome framework for high school teacher training program has received contribution comments from lecturers and educational experts from seven education universities at the ETEPS project workshop held at The Da Nang University - University of Science and Education (in April 2018) and we have reached consensus on the standards, criteria and indicators of this student outcome framework. Each teacher training sector at education universities will base on this student outcome framework, and we will add more criteria, indicators on Standard 3 (specialistic capacity) to meet the specific requirements of the sector and we may add or revise some other appropriate criteria and indicators to build up student outcome standard of each high school teacher training program and ensure this student outcome standard of each program can be observed and measured.

### 2.2.2. Evaluation methods

Each indicator in each criterion will be evaluated based on evidence (with indications of the evidence source) on a seven-level scale:

1. The assessment of each indicator in each criterion, these standards using the 7-level scale, in which:

a) Level 1: Completely fail to meet the requirements of

the indicator (no documents, no plans, no evidence);

b) Level 2: Basically fail to meet the requirements of the indicator (issues / topics / requirements related to criteria that are at the planning stage);

c) Level 3: Not fully meet the requirements of the indicator, but there is only few improvement needed to meet the requirements (some documents available, but there is no evidence that these documents are being on implementation);

d / Level 4: Meet the requirements of the indicator (with documents and evidence showing that these documents are used);

e) Level 5: Meet the requirements of the indicator more satisfactorily (with clear evidence of effectiveness);

e) Level 6: Well meet the requirements of the indicator (with sufficient evidence to confirm that this is an example of the best training practice);

g) Level 7: Excellently meet the requirements of the indicator (with sufficient evidence of perfect response to the requirements).

2. Indicators rated from level 1 to level 3: not satisfying; from level 4 to level 7: satisfactory. The score of criterion is the average score of indicators.

Here is an example of a framework for evaluating the standard 5 (following criteria, indicators):

**Table 2. a framework for evaluating criteria, indicators (the standard 5: Profession development capacity)**

Criteria (component competences)	Indicators (expression indexes)	Sources of Evidence	Level							
			1	2	3	4	5	6	7	
<b>Standard 5: Profession development capacity</b>										
5.1. Self-assessment capacity	5.1.1. An ability to develop criteria and design tools for self-assessment and career development. 5.1.2. Use self-assessment results to develop profession development plans.	Student learning portfolio Rubrics Criteria and tools for self-assessment and career development (self-performance reports, checklists...) Self-assessment results Samples of self- assessment, project work, etc. Plans for profession development								
5.2. Self-development, life-long learning and guide colleagues in career development	5.2.1. An ability to control and promote self-development 5.2.2. An ability to self-study and develop lifelong learning skills 5.2.3. An ability to instruct, support colleagues to develop their career.	Plans for promoting self-development and performance results Plans for self-study Plans for developing lifelong learning skills Plans for instructing colleagues. Student self-reports Student self- performance reports								
5.3. Capacity in doing educational research	5.3.1. An ability to make research platform and write essays relevant to the major. 5.3.2. An ability to apply scientific research methods to conduct simple research related to the professionally trained subject	Study outline Research and publication data Student research results and reports Student research portfolio. Questionnaires								

### 2.3. Steps of Developing Student Outcome Standard for High School Teachers Training Programs

Based on this student outcome framework, education universities will develop student outcome standard for each sector of each high school teacher training program. Every student outcome standard of high school teacher training program must define specific requirements for each criterion, indicator ... how well each indicator clearly determines to evaluate the competency of graduates from high school teacher training programs.

Make assessment of the student outcome standard of a high school teacher training program (making review on standards, criteria and indicators of the student outcome standard to check if they are performance requirements graduates of the high school teacher training program must meet?), and by basing on this assessment, we can design suitable high school teacher training program for each faculty.

For training activities to be effective, training programs are designed on the same page with testing programs. It means that training program elements need to be linked to learning objectives and output results (student learning outcomes) and the alignment, curriculum pacing and curriculum mapping of training program need to be defined.

Program alignment is a process by which the learning standards required for learners' achievement (output) are analyzed so that the design of training objectives can be in line with prescribed standards.

Curriculum pacing is a process that helps teachers plan for each teaching activity, ensuring that all testing contents are included in the teaching curriculum and are actually taught before testing takes place.

Curriculum mapping is a process that helps teachers monitor what is actually being taught throughout the

course. Mapping becomes a tool that allows teachers to adjust and refine what is needed for students in the next year of the course.

Thus, through program alignment, curriculum pacing and curriculum mapping activities, program elements are linked to output objectives and results.

The development of student outcome standard for high school teacher training program based on the student outcome framework includes the following key steps:

- Step 1: Faculties set up a professional group of experts in the field of education and training and experts on education measurement and evaluation (skilled experts who have experiences in building student outcome standard).

- Step 2: Group of experts will discuss and make consensus on taking standard 1, 2, 4, 5 (including all criteria and indicators) from student outcome standard. Regarding standard 3, several criteria & indicators are recommended to be added on to be in line with the typical characteristics of the subjects. Discuss unified criteria, indicators of student outcome standard. The expert group may propose to adjust some criteria or indicators to be clearer (in other standards).

- Step 3: Organize seminars, consult lecturers, employers, educational assessment experts ... on the draft of the student outcome standard through the following subjects: 1) Specialists/Experts (Experts on each subjects, education, evaluation); 2) Lecturers; 3) Leaders, managers; and 4) Employers.

- Step 4: Modify and supplement the first draft of student outcome standard, make assessment and open a workshop for gaining contribution comments and then release the second draft of student outcome standard.

- Step 5: Finalize and announce the student outcome standard for academic courses.

Thus, if the student outcome standard is built in accordance with the above mentioned steps, it will

ensure that the student outcome standard can reflect and meet the requirements of the relevant parties about capacities/qualities of the graduates from high school teacher training courses.

### 3. Conclusion

The student outcome standard framework for high school teacher training programs is developed in a quality / competence approach, ensuring a theoretical and practical basis for addressing the requirements for high school teacher training reform in Vietnam.

Based on this framework, it is necessary to develop a framework for evaluating and developing a self-assessment tool for graduates by relying on student outcome standard (a 7-level self-report scale). Firstly, develop evaluation framework: give guidance, suggest evaluation methods, techniques for each criterion, indicator and suggest evidence compatible with each level. Then, develop and test a self-assessment toolkit for graduates of high school teachers training based on the assessment framework, to standardize and serve as basis for pedagogical/education universities for graduates from high school teacher training programs so that they can make self-assessment to compared with student outcome framework.

This student outcome framework has been discussed and commented by teachers, administrators and evaluation experts of seven schools at the workshop on the development of high school teaching training programs on April, 2018 at The University of Da Nang - University of Science and Education. The research team has listened and received feedback and proceeded correction. At the same time, the Hanoi National University of Education organized two workshops with the presence of 23 faculty heads, senior lectures and some assessment experts to give comments on this student outcome framework and the team will add more criteria and indicators for standard 3 (Specialistic capacity). The research team will also get comments from employers. Some suggested continuing getting references from international frameworks. Some showed concerns that based on this student outcome framework, it's necessary to develop evaluation framework and clear guidelines on how to make evaluation, how to determine appropriate evidences for each criterion/indicator for success/failure levels. At the same time, it is necessary to design a toolkit for students to self-assess immediately after they have just graduated from training program in order to quantify the quality and effectiveness of the training program.

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