



## COMPARATIVE RESEARCH OF THE STEPPED TRAININGS IN HIGHER EDUCATION SYSTEM OF MONGOLIA

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Tungalag Myangad

Mongolian University of Science and Technology,  
School of Information and Communication Technology

e-mail: [tungalag@must.edu.mn](mailto:tungalag@must.edu.mn)

**Abstract:** In the 84 universities of Mongolia, there are 19 forms of stepped trainings and it demands to research the arrangement of stepped trainings. The Mongolian education system has 5 forms stepped trainings that have 2-6 steps.

**Two-step form:** Professional primary education-higher diploma; diploma-bachelor; bachelor-master.

**Three-step form:** Professional primary education-diploma-bachelor; bachelor-master-doctorate.

**The four-step form:** Professional primary education-diploma-bachelor-master; diploma-bachelor-master-doctorate; complete secondary-bachelor-master-doctorate;

**Five-step form:** Professional primary education-diploma-bachelor-master-doctorate; elementary-secondary-bachelor-master-doctorate; preschool-elementary-secondary-bachelor-master.

**Six-step form:** Elementary-secondary-diploma-bachelor-master-doctorate.

Based on these five forms, I have been offering three models of preparing specialists with the stepped trainings.

**Keywords:** Diploma, Bachelor, Master, Doctorate, models

### Introduction

Since 1990, in the higher education system of Mongolia, the institutes were united and re-organized as the University. The vocational schools and colleges were unified and they had a stepped structure. Many private institutes were founded in the same time and they have established kindergartens and general educational schools under them in order to keep its existence. So, it created a demand of elements of stepped trainings. And innovation of educational technology was associated with the stepped training and the system of credit was introduced in accordance with international standards and it became an advantage of higher

education. In the Mongolian 84 universities and colleges, there are 19 forms of organization of stepped trainings.

While I have researched the stepped trainings in higher education system of 20 countries around the world I have revealed the following experiences:

- Stepped trainings are conducted at the three levels. These are public schools, the dual system for issuing professional primary education, and institutes and universities.
- There are following stages, namely: the professional primary education, diploma education, bachelor, master, doctoral degree (Germany, Switzerland, France, Indonesia, Korea, Netherlands, Norway and Thailand). From these steps the diploma, bachelor, master and doctoral degrees are common.
- There is 2-3 years training programs for admission to universities. (Denmark, Netherlands, Korea, France, Turkey, Singapore).
- The vocational and technical high schools are the preparatory steps for admission to universities according to this direction (Malaysia, Spain, USA, England, Japan, China, Romania and Portugal).
- The universities, institutes and colleges are classified in accordance with special requirements. (United States, Great Britain, China and Russia). Higher education institutions provide students with the necessary knowledge in that specialty.

In the frame of the standard education system, as similar with the specialized trainings, various types of giving vocational elementary, medium level education through the vocational and technical specialized training are commonly used in many European countries. It has similarities with those phenomena that occur in the educational system of our country. The countries of the world choose the models that have their own characteristics in a stepwise learning.

### **1. Stepped trainings in the higher education institutions**

In 84 schools of Mongolia, there are several forms of stepped trainings. There are 13 colleges, 3 institutes and 5 universities that are combined with an educational organization, which provide vocational primary education. Also there are 3 universities that have general educational secondary schools in its composition, 7 institutes have lyceum-high schools and one institute has a kindergarten and a middle school in its composition. There are two types of stepped training such as the vocational centers under the structure of colleges and vocational centers under the structure of university. The step as the complete secondary education, vocational education and diploma education is used at the Khovd branch of the Mongolian State University of Agriculture, the step for giving vocational, diploma and bachelor degree is used at the Technical and Technological Institute under the MUST in Orkhon-Uul province, the step as complete secondary education, vocational, diploma and bachelor degree is used Music and Dance College of Zavkhan province, Sukhbaatar Branch of Mongolian University of Science and Technology, Uvurkhangai Branch of Mongolian University of Science and Technology, Dornod Institute, Darkhan Technical College and Production art college in Ulaanbaatar, the step as complete secondary education, vocational education and bachelor degree is used at the Ulaangom College, Construction Technology College, Technical and Technological College, Khangai College and Construction College .

Table 1.1

**Organizational forms of stepped trainings in the educational institutions that provide professional education and confer scientific degrees**

| #  | Training arrangements              | Educational steps                               |  |                                       |                |  |  |                        |           |   |  |                            |  |                   |                            |  |  |                                       |   |  |
|----|------------------------------------|---|--|---------------------------------------|----------------|--|--|------------------------|-----------|---|--|----------------------------|--|-------------------|----------------------------|--|--|---------------------------------------|---|--|
|    |                                    | Complete secondary, vocational and diploma high | Complete secondary, vocational, diploma and BA | Complete secondary, vocational and BA | Diploma and BA | Elementary, non-complete secondary, complete secondary, BA | Non-complete secondary, complete secondary, BA | Complete secondary, BA | BA and MA | Complete secondary, vocational, Diploma, BA, MA | Complete secondary, vocational, BA, MA | Complete secondary, BA, MA | Pre-school education, elementary, non-complete secondary, complete secondary, BA, MA | BA, MA, Doctorate | Diploma, BA, MA, Doctorate | Complete secondary, vocational, Diploma, BA, MA, Doctorate | Complete secondary, Diploma, BA, MA, Doctorate | Complete secondary, BA, MA, Doctorate | Elementary, non-complete secondary, complete secondary, BA, MA, Doctorate |  |
| 0  |                                    | 1   | 2  | 3                                     | 4              | 5  | 6  | 7                      | 9         | 10  | 11                                     | 12                         | 13   | 14                | 15                         | 16   | 17   | 18                                    | 19  |  |
| 1  | Doctorate                          |   |  |                                       |                |  |  |                        |           |   |  |                            |  |                   |                            |  |  |                                       |   |  |
| 2  | MA                                 |   |  |                                       |                |  |  |                        |           |   |  |                            |  |                   |                            |  |  |                                       |   |  |
| 3  | BA                                 |   |  |                                       |                |  |  |                        |           |   |  |                            |  |                   |                            |  |  |                                       |   |  |
| 4  | Diploma high                       |   |  |                                       |                |  |  |                        |           |   |  |                            |  |                   |                            |  |  |                                       |   |  |
| 5  | Vocational                         |   |  |                                       |                |  |  |                        |           |   |  |                            |  |                   |                            |  |  |                                       |   |  |
| 6  | Complete secondary                 |   |  |                                       |                |  |  |                        |           |   |  |                            |  |                   |                            |  |  |                                       |   |  |
| 7  | Non-complete secondary             |   |  |                                       |                |  |  |                        |           |   |  |                            |  |                   |                            |  |  |                                       |   |  |
| 8  | Elementary education               |   |  |                                       |                |  |  |                        |           |   |  |                            |  |                   |                            |  |  |                                       |   |  |
| 9  | Pre-school education               |   |  |                                       |                |  |  |                        |           |   |  |                            |  |                   |                            |  |  |                                       |   |  |
| 10 | Number of educational institutions | 2   | 3  | 11                                    | 6              | 2  | 1  | 1                      | 35        | 1   | 3                                      | 3                          | 1  | 8                 | 2                          | 1  | 2  | 1                                     | 3   |  |

The Culture University of Mongolia creates the step as the complete secondary education-vocational education-diploma education-BA -MA.

The Mechanical Engineering Institute of the Mongolian University of Science and Technology creates the step as the complete secondary education-vocational education-diploma education-BA-MA -Doctorate.

This innovation requires organizing of continuous education and stepped trainings at the institutes and universities.

**2. Main forms of stepped trainings and structures at universities, institutes and colleges of Mongolia**

There are 37 forms of stepped trainings that are used at the 84 educational institutions of Mongolia. There are 5 forms that have 2-6 steps of stepped trainings, which can be classified by the high-educational institutions of Mongolia.

### 2.1 The two-stage form of stepped trainings

The two-stage form of stepped training - is the award of professional primary degree, diploma or diploma of higher education, bachelor education or BA and MA education in one institution.

Option-I. Professional primary education-diploma higher education

Option-II. Diploma-bachelor education

Option-III. BA-MA

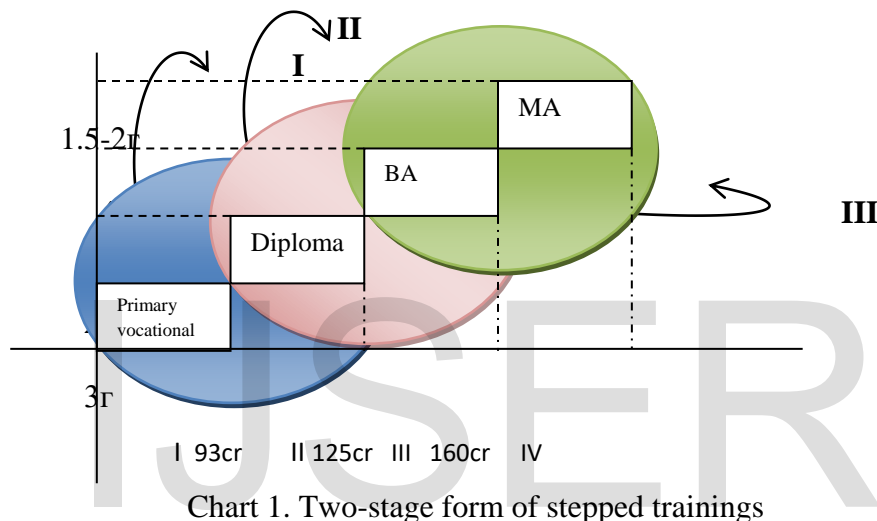


Chart 1. Two-stage form of stepped trainings

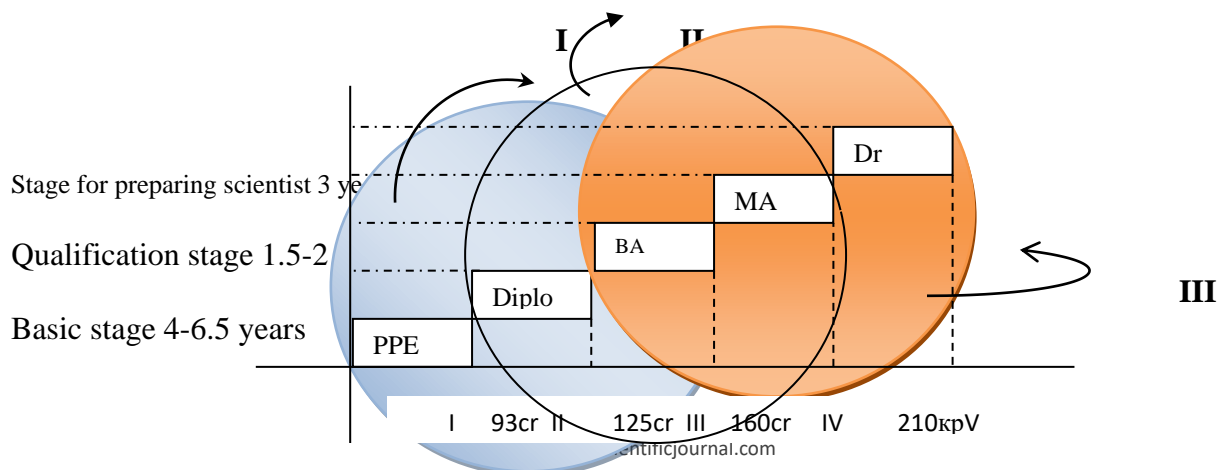
### 2.2 Three-stage form of stepped trainings

The three-stage form of stepped training is a stepped award of primary vocational education, diploma, undergraduate education or a diploma, BA and MA, and a continuous stage of succession awarding BA, MA and doctorate degrees in the same institution. However, there is no form of the diploma, bachelor, and master's trainings.

Option I. Professional primary education- diploma-BA

Option II. Diploma-BA -MA

Option III. BA-MA -Doctorate



2 years  
 2.5-3 years

Chart 2. Three-stage form of stepped trainings

**2.3 The four-step form of stepped trainings**

The four-step form of training is a award of professional primary education, diploma, BA and MA or diploma, BA, MA, Doctorate and complete secondary education, BA, MA, Doctorate in a continuous succession of stages in a same institution.

Option I. Professional primary education-diploma-BA-MA

Option II. Diploma-BA-MA -Doctorate

Option III. Complete secondary-BA-MA - Doctorate

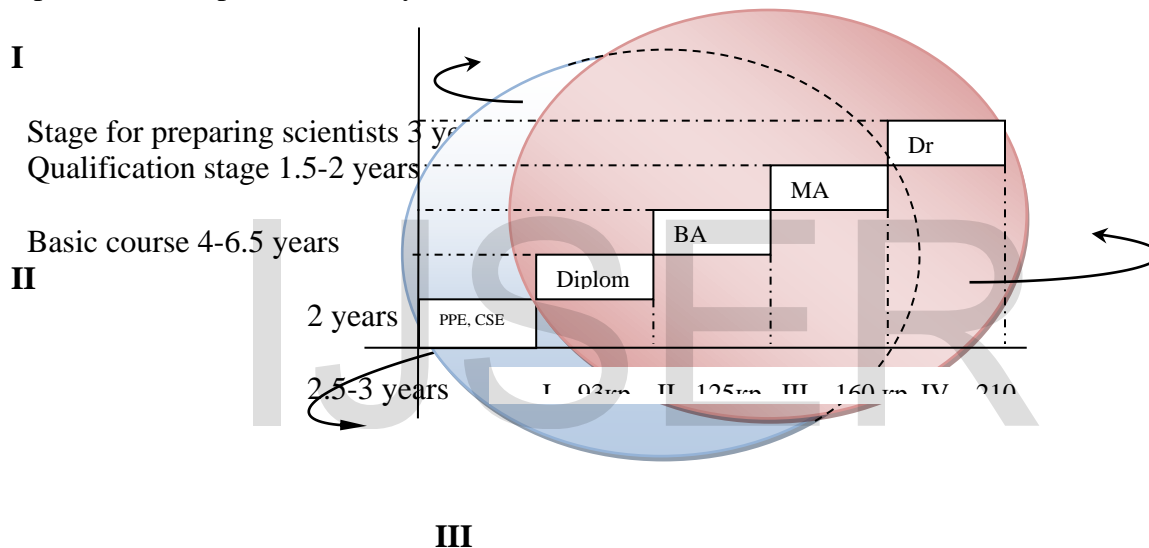


Chart 3. Four-stage form of stepped trainings

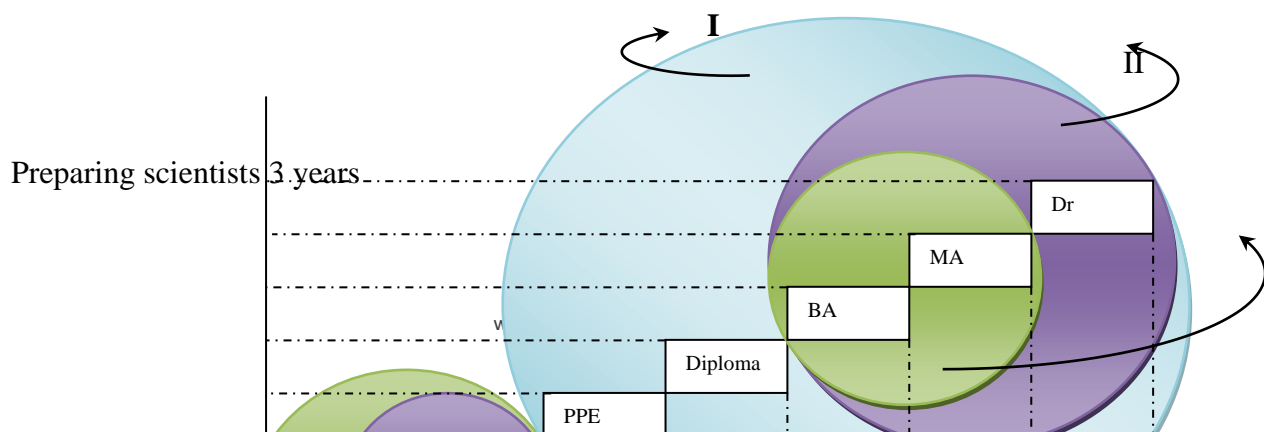
**2.4 Five-step form of stepped trainings**

Five-step form of learning is the awarding of the professional primary education, diploma, BA, MA and doctorate degrees in a continuous succession of stages in a single organization.

Option I. Professional primary education-diploma-BA-MA-Doctorate

Option II. Elementary-complete secondary-BA-MA-Doctorate

Option III. Pre-school-elementary-complete secondary-BA-MA



Qualification 1.5-2 years

I

III

Basic course 4-6.5 years

Profession 2-3 years

2 years

6 years

6 years

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3 years

Chart 4. Five-step form of stepped trainings

**2.5 Six-step form of stepped trainings**

Option I. Elementary, complete-secondary, diploma, BA, MA

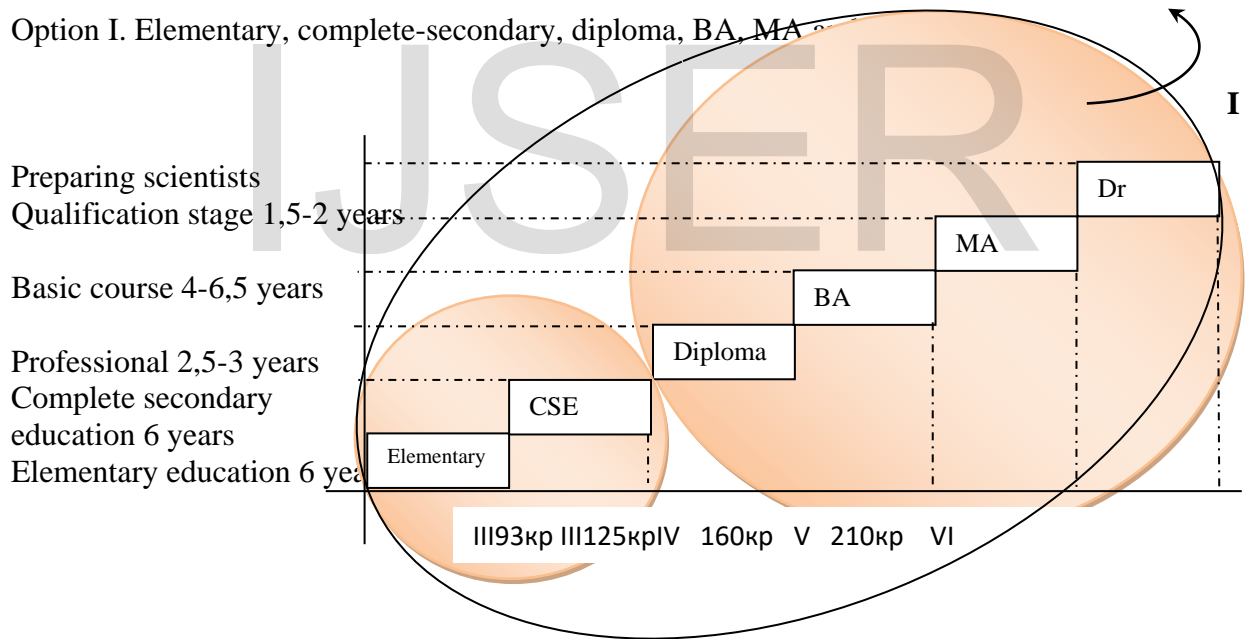


Chart 5. Six-step form of stepped trainins

**3. Exemplary model for preparing specialists at the schools, have stepped trainings**

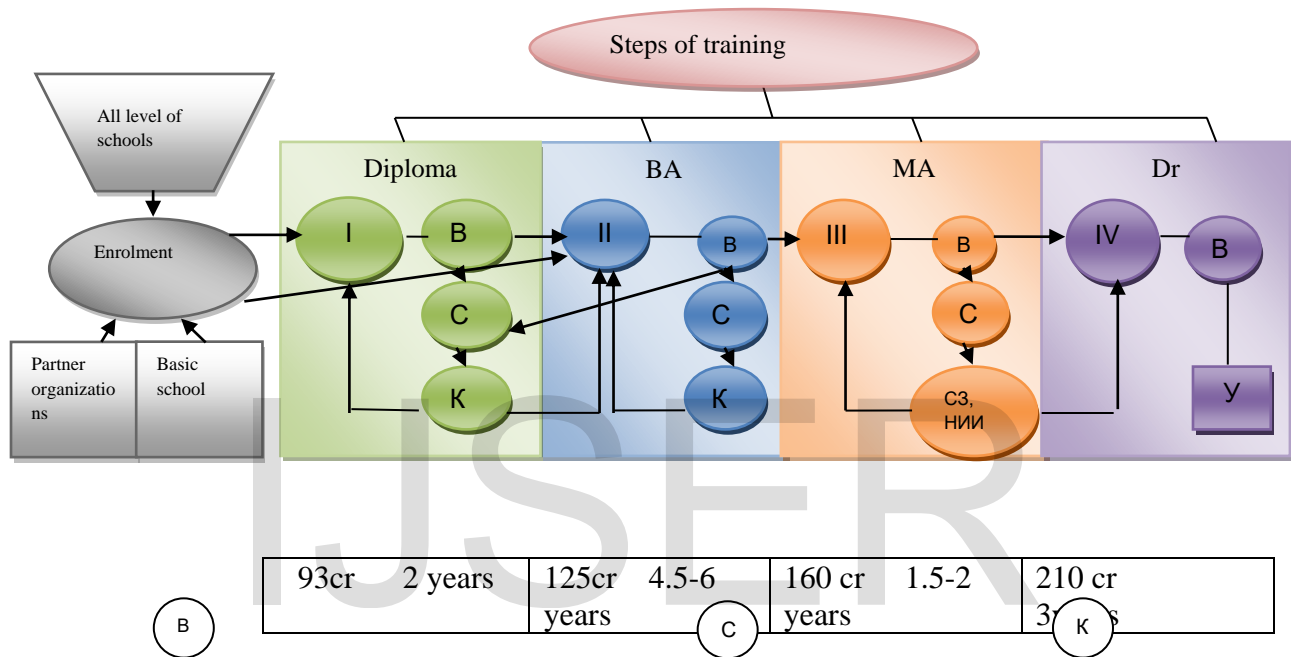
The exemplary model to prepare specialists with the method of stepped trainings at the Mongolian high education institutions is offered on the bases of international experience and based on 5 main forms of stepped trainings with its 12 options.

### 3.1 Model #1 for preparing specialists with stepped training

This model is formulated based on the 2<sup>nd</sup> and 3<sup>rd</sup> options of two-step form of stepped trainings, 2<sup>nd</sup> option of three-step form, 2<sup>nd</sup> and 3<sup>rd</sup> options of four-step form of stepped trainings, which are used in the higher education institutions of Mongolia.

This step provides students with education and profession adjusting to their knowledge level, practice, ability. This model has an advantage that the requirements, to be put to the students' knowledge and ability, are raised with increasing of level of study.

#### Model #1 for preparing specialists with stepped trainings



Explanation: - Graduate of B level – Specialist completed C level training – K Company

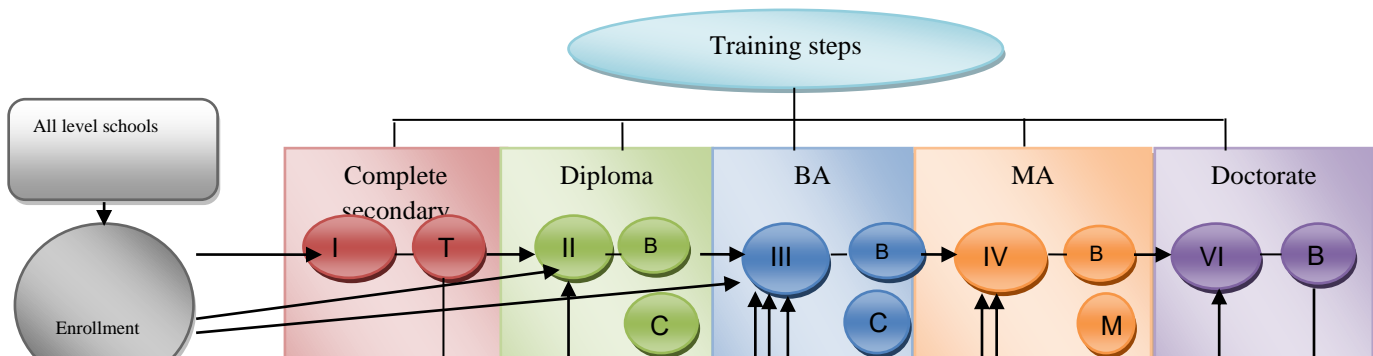
Chart 6. Basic forms of stepped trainings

### 3.2 Model #2 for preparing specialists with stepped trainings

This model is formulated based on the 2<sup>nd</sup> and 3<sup>rd</sup> options of five-step form of stepped trainings, 1<sup>st</sup> option of six-step form of stepped trainings, which are used at the Mongolian Health Science University and Mongolian University of Science and Technology.

The model includes 2 years learning at the lyceum-high school, which is a preparatory step for further study at the university. By this model, students obtain complete secondary education and they also learn the primary subjects of specialization.

#### Model #2 for preparing specialists with stepped trainings



|         |               |                    |                    |                |
|---------|---------------|--------------------|--------------------|----------------|
| 2 years | 93 cr 2 years | 125 cr 4-6,5 years | 160 cr 1,5-2 years | 210 cr 3 years |
|---------|---------------|--------------------|--------------------|----------------|

(B)

(C)

(K)

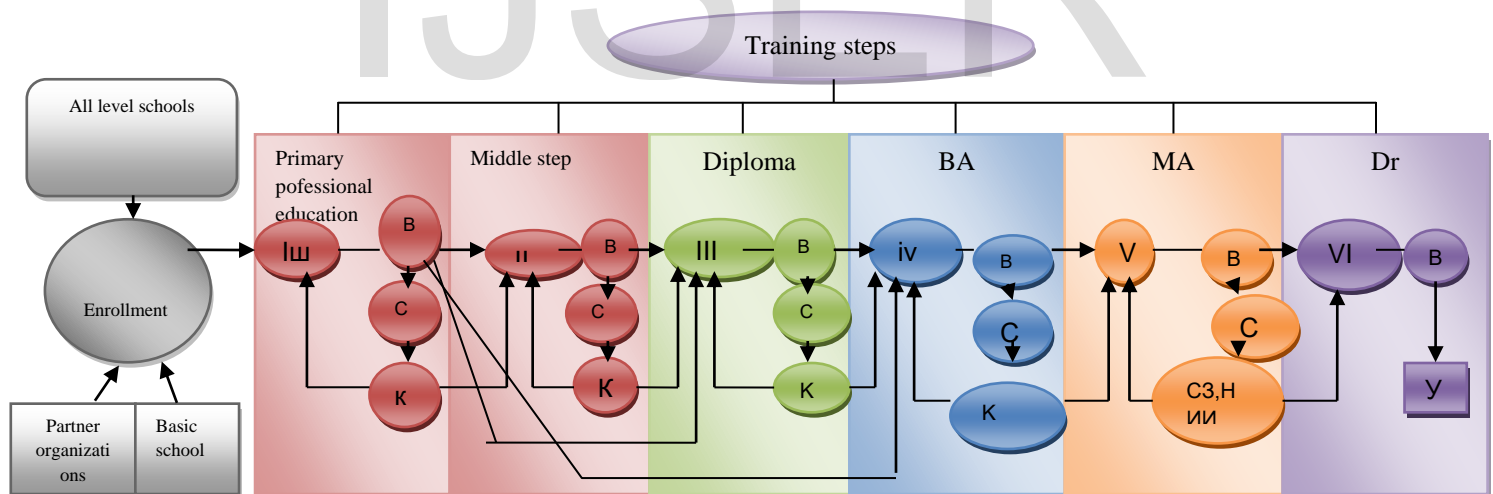
Explanation: - Graduate of R level – Specialist completed C level training – K Company

Chart 7. Form of stepped training that includes general educational schools and lyceums

### 3.3 Model #3 for preparing specialists with stepped trainings

This model is formulated based on the 1<sup>st</sup> option of two-step form of stepped trainings, 1<sup>st</sup> option of three-step form, 1<sup>st</sup> option of four-step form and 1<sup>st</sup> option of five-step form.

#### Model #3 for preparing specialists with stepped trainings



|        |    |         |          |              |          |
|--------|----|---------|----------|--------------|----------|
| 2.5-3г | 2г | 93kp 2г | 125kp 4г | 160kp 1.5-2г | 210kp 3г |
|--------|----|---------|----------|--------------|----------|

(B)

(C)

(K)

Explanation: - Graduate of T level – Specialist completed M level training – K Company



## Chart 8. Form of stepped training combined with vocational school

### Conclusions

I consider that it is expedient to organize the stepped training in Mongolia by the following 5 basic forms namely:

- **Two-step training form:** Professional primary education-Diploma high; Diploma-BA; BA-MA;
- **Three-step training form:** Professional primary education-Diploma-BA; BA-MA-Doctorate;
- **Four-step training form:** Professional primary education-Diploma-BA-MA; Diploma-BA-MA- Doctorate; Complete secondary-BA-MA-Doctorate;
- **Five-step training form:** Professional primary education-Diploma-BA-MA-Doctorate; Elementary-Secondary-BA-MA-Doctorate; Preschool education- elementary- secondary-BA-MA
- **Six-step training form:** Elementary-complete secondary-Diploma-BA-MA-Doctorate;

Three models for preparing specialists at the institutes and universities with stepped trainings are offered.

- A) Basic form of stepped trainings;
- B) Form of stepped training combined with general-educational school and lyceum;
- C) Form of stepped training combined with vocational schools;

### REFERENCES:

- [1] R.Bandii, Economical aspects for preparing and using specialists in MPR, M., 1991
- [2] G.Batkhurel, Ts.Tsetsegsuren, Comparative research of arrangement and structure of stepped trainings in Mongolian educational system, Magazine "Education study" State press. UB.:2008/06 page.83
- [3] O.Purev, International example for classifying the institutes and universities. Magazine "Education study" State press. UB.:2003/08, page.75
- [4] G.Batkhurel The issues of management theory and methodology of organizations, UB.: 2008. page.226
- [5] Ch.Purevdorj, The international system of education. State press, UB.: 1999, pages 27.36
- [6] N.Begz Main problems in the theory and methods of education development of Mongolia in the period of globalization, UB.: 2001, page. 57
- [7] Information directory for universities, institutes and colleges of Mongolia, UB., 2010
- [8] J.Hakuto. Feature of professional education in Japan. Education magazine. M: 2000/ pages 14, 39-40
- [9] <http://www.education.unecko.org/>
- [10] <http://www.ed.gov/Technology/international.html>

- [11] / [www.mecs.pmis.gov.mn/](http://www.mecs.pmis.gov.mn/)
- [12] [www.edufrance.fr](http://www.edufrance.fr)
- [13] [www.egide.asso.fr](http://www.egide.asso.fr)
- [14] [www.wes.org](http://www.wes.org)
- [15] [www.oecd.org/edu](http://www.oecd.org/edu)
- [16] [www.spainexchange.com](http://www.spainexchange.com)
- [17] [www.euroeducation.net](http://www.euroeducation.net)
- [18] [www.eurydice.org](http://www.eurydice.org)
- [19] [www.eec.mn](http://www.eec.mn)
- [20] [www.education.ub.mn](http://www.education.ub.mn)
- [21] [www.ed.gov](http://www.ed.gov)
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