

INTRODUCTION

1. Reasons for choosing the thesis

1. In teaching, using exercises is the important tool, contributing to good performance of the basic content of the education principle: *Theory must go hand in hand with practice*; simultaneously, improving interest, practicing study skills for the students, enhancing teaching- training quality in the professional schools.

Therefore, it is very important to design and use a diversified and effective system of exercises in teaching. However, there are not many concerns about how to achieve a good and interesting system of exercises. In particular, there is not any practical scientific research about the technique of designing exercises, the system of exercises for a lesson; the system of exercises for a textbook and the procedure of using the exercises in teaching by the method of credit training regime.

Currently, there are many shortcomings in using the exercises in teaching. It can be seen that method of using the exercises system of teachers in teaching is not good; the teachers only use the exercises to improve knowledge, they do not pay attention to classifying the exercises to practice logic thinking, occupational skills of the students. So that, examination results shows that the students have good understanding about theories; but their practice skills are not good, their capacities of orienting and solving issues are still weak.

2. Improving training quality of the teachers is an important task of many pedagogy schools at the present. In the previous years, building and developing group of the teachers have been well- recognized by many teachers; and have created a movement in many places. However, there are many limitations in the training work such as: teaching method of the teachers still put emphasis on theory, not practice; practicing the teaching skills is not carried out regularly and adequately; entrance mark of the pedagogy schools or the multi-faculty schools with the pedagogy faculty in the recent years is low, of which many schools only require the average mark regulated by Ministry of Education & Training; many students are lazy, passive, etc without good study motive. To solve the above problems, it should renovate comprehensively the training work of the pedagogy schools; of which innovating the teaching method of the teachers towards developing activeness, independence, positiveness of the students in studying, practicing their occupational skills is the urgent requirements in the current period.

3. In the pedagogy schools, pedagogics is the professional subject which plays a special role in practicing the occupational skills, awareness, ethics for the students. However, practicing the teaching and training skills for the students through this subject is not regularly; the used exercises in teaching are usually based on experiences; lack systematic without being built and used on the basic of a clear theoretical foundation.

Therefore, study results of the pedagogics subject are still low; there are many limits in practicing, and solving occupational cases.

4. Currently, the universities do not apply the method of credit training regime. This new training method can strengthen self-study capacity of the students.

Therefore, designing and using the system of exercises in teaching will help the students become positive in their study, their occupational practice, not only in the class but also outside class-

For these reasons, choosing the thesis namely *“Design and use the system of exercises in teaching the pedagogics subject in universities”* is an urgent matter to implement objectives of the graduate education in the present period.

2. Aims of the research:

Design the system of exercises and propose the utilization procedure in teaching to stimulate the students to actively search knowledge through study activities; contribute to improve the training quality of the teachers in the pedagogy schools currently.

3. Object and subject of the research:

3.1. Research object: Teaching activity for the pedagogics subject in the pedagogy schools.

3.2. Research subject: Relationship between exercises and components of the teaching process

4. Scientific hypothesis

If it can design a system of the exercises for the pedagogics, which assures diversity and balance between theoretical exercises- practical exercises, reappearing exercises- creative exercises; simultaneously, can use a system of the exercises, which uphold the activeness, positiveness, creativeness of learners in their study; it can improve teaching and training quality in the pedagogy schools currently.

5. Research tasks

5.1. Research theoretical foundation for designing and using the system of exercises in teaching the pedagogics in the university.

5.2. Investigate reality of designing and using the system of exercises in teaching the pedagogics in the university.

5.3. Design the system of exercises and use the system of exercises according to the proposed procedure.

5.4. Organize teaching experiment to check science, feasibility of the system of pedagogics exercises and the proposed utilization procedure.

6. Scope of the research

6.1. Limit of the research contents: The thesis concentrates on studying the system of exercises in part I: General issues of the pedagogics (Unit of study: pedagogics) in the universities.

6.2. Limit of the research object: Sophomore of the regular graduate pedagogy training mode, lecturers of Psychology- Education

6.3. Limit of field and time of the research

- Investigate, survey in schools: Hanoi University of Education, Hong Duc University, Hue University of Education, Sai Gon University, Ho Chi Minh City University of Education.

- Pedagogy experiment: in Hong Duc University

7. Methodology

7.1. Theoretical methodologies: *Including analysis, synthesis, systematization of data; overview and comparison method; historical method*

7.2. Practical methodologies: *Investigation method; method of researching products, activities; method of pedagogy experiment; method of mathematical statistics.*

8. New contributions of the thesis

8.1. About theory:

The thesis will clarify the theoretical issues about the exercises, the new points of the pedagogics program in the university currently by the method of credit training regime.

- Finalize and develop the theory of designing and using the exercises in teaching including the requirements, principles, procedures of designing: an exercise, a system of exercises for a lesson, a system of exercises for a textbook; and using the exercises suitable with features of each lesson hour.

8.2. About reality:

By investigating status of using the exercises in teaching the Pedagogics to study awareness, attitude of the students about importance of using the exercises in teaching, objective and subjective reasons affecting study results of the pedagogics of the students; of which identifying the most important subjective reason.

- Use techniques of designing the exercises to design 74 exercises for the Pedagogics in the part: *General issues of Pedagogics* including the theoretical exercises, practical exercises, reappearing exercises, creative exercises; of which chapter I: 14 exercises, chapter II: 29 exercises, chapter III: 31 exercises; and organize experiment of the designed system of exercises.

9. Structure of the thesis: Besides the Introduction and Conclusion, the thesis contains 04 chapters.

CHAPTER 1

THEORETICAL FOUNDATION OF DESIGNING AND USING EXERCISES IN TEACHING PEDAGOGICS IN UNIVERSITIES

1. 1. Research history of the issue

1.1.1. In the world

The issue about designing and using the system of exercises in teaching has been concerned by many scientists all over the world. From the 18th century, Swiss Educator- Pestalogi (1746 – 1827) confirmed that “*Capacity of implementing things required by heart and brain is mostly based on action skills of human. Such skills are formed thanks to a system of special practice exercises with system and increasingly level of difficulties and complexities from simple skills to complex skills*”. [61, p.120].

In the beginning of XX century, L.X Vugotxki (1896 – 1934)- Soviet psychologist built the theory of “*Sub-development zone*”. He believed that at each development period of children, there were 2 levels: *current development level and nearest development zone*. It could realize these two levels by the way which the students solved their study tasks with the two different levels. The first level was the exercises which the children could do by themselves; and the second level was the difficult exercises with assistance of adults.

At the end of 80’s of the XX century, some Soviet Union authors such as G.C. Koschuc [103]; G.A. Ball [100], V. C. Avanhexop [96, 97, 98, 99], etc considered the

teaching process as a process of organizing the students to do the exercises. Besides, the authors such as Socolovskaia 1971, Abramova, P.B. Gophman, Kadoshicov, etc [54], [58] have got many writings/ works mentioning natures, meanings, contents and methods of designing, using questions, exercises in teaching.

Discussing about types of exercises, many authors such as I. Lecner, N. A Rubakin, Rretke, Robert J. Marzano, Debra J. Pickering, Jane E. Pollock, I.F Kharlamov, N. V. Bor ôpxkaia and A.A. Rean [76], [77], [57], [33], [101], etc have mentioned types of exercises as follows: cognitive exercises, exercises of practicing skills, case exercises, creative exercises, etc; of which the case exercises have been mentioned by many authors mostly.

Therefore: researching and using the exercises in teaching is not a new issue in reality, but it were mentioned by the scientists very early. The similar point among the authors is that: *Doing exercises is the process of strengthening knowledge, upholding inner force, intelligence of learners; improving interest, creativeness in science; contributing to renovation of teaching method in schools.* However, the theory about techniques of designing and using the exercises does not achieve much concern; method of evaluating results of each exercise has not been researched. This limits effects and values of using the exercises in teaching.

1.1.2. In Vietnam

Many scientists have concerned and have got many writings about the issue of designing and using the exercises in teaching, such as Vu Van Tao, Tran Van Ha, Nguyen Ngoc Quang, Nguyen Canh Toan, Thai Duy Tuyen, etc. Using the system of exercises in teaching plays an important role in creating the study cases to stimulate the students to develop their thinking, improve self-study capacity. The exercises include two basic types which are the theoretical exercises and the practical exercises. In each type of exercises, there are both the reappearing exercises and the creative exercises.

With this direct of research, there are some scientific research works of some authors such as Bui Thi Mui, Phan Thi Lan Phuong, Tran Thi Huong, Vu Thi Nguyet, Le Thanh Oai, Tran Dinh Chau, etc.

General comments:

Firstly, most of the authors have clarified importance of using the exercises in teaching; of which the case exercises achieved the most concerns of the scientists.

Secondly, research results of some recent scientific works about the pedagogics shows that the research works do not deeply clarify requirements, principles, procedures of designing and using an exercises, a system of exercises for a lesson/ program, a system of exercises for a textbook in teaching by the method of credit training regime. The research results only give the requirements, principles and procedures of designing a specific type of exercises; classifying the theoretical exercises- the practical exercises, the reappearing exercises- the creative exercises in each type of exercises is mostly not mentioned.

Thirdly, the Pedagogics is the subject including the general issues about theory of teaching and training; and the students do not learn this subject in the primary schools. Therefore, if teaching is not hand in hand with reality, study with practice, it

will make the subject become uninteresting, the students are not interested in study, leading to limitation of the students' creativeness.

1.2. Some basic concepts

1.2.1. Design

Design is the process of setting up project, plan for a specific activity, of which creativeness of researchers will be presented, aiming at achieving their purposes.

The design must include enough basic factors and establish necessary and reasonable relation among these factors. All the factors and relations create the clear procedure about logic and contents.

1.2.2. Exercise

Exercise is one type of study task made by teacher to students; on the basic of known information, the students have to think, find out solutions to comprehend study contents; practice skills; achieve objectives of the lesson, the subject.

1.2.3. System of exercises

“System of exercises is a set of exercises in a certain order, of which there is mutual relation among the exercises to implement objectives of the lesson hour, lesson and subject”.

A lesson can be carried out in a lesson hour or many lesson hours. Each lesson hour includes many stages such as: introducing, lecturing new lesson, strengthening, giving homework, etc; among the stages, there is mutual relation towards implementing objectives of the lesson. In teaching, the teachers can use the exercises in all the stages of one lesson hour.

1.2.4. Design the system of exercises

“Designing the system of exercises is the process of researching, collecting information, editing and designing the exercises in a close process, matching with logic of contents of the lesson, the subject to implement the teaching tasks”.

According to the above concept, it can be seen that designing the system of exercises has the following features:

- Designing the system of exercises is the intelligent activity, creative thinking of researchers; of which the intelligent operations such as analysis, synthesis, generalization, etc are regularly used to analyze the collected information, editing or designing the exercises by an identified objective.

- Designing the system of exercises must comply with the certain principles, assure the requirements and implement under a strict procedure.

- Design the system of exercises has to reflect features of the subject and must be diversified to form the occupational skills for the students on the basic of making use of the theoretical knowledge into different cases of the reality.

1.2.5. Pedagogics exercise

“ Pedagogics exercise is one type of the study task, of which including the theoretical and practical exercises to help the students comprehend knowledge; improve attitude, occupational ethics; and practice teaching and training skills; contribute to implementing graduate objectives”.

Characteristics of the pedagogics exercises

- The pedagogics exercises help the students have a thorough grasp of theory about teaching and training in the primary schools; practice their occupational skills.

- The pedagogics exercises are implemented by the students, therefore they have research property, help the students have awareness of observing, analyzing education phenomenon in daily life in viewpoint of the educators; to form and develop their scientific research capacity.

- The pedagogics exercises contribute to forming and developing personality of the future teachers by practicing the teaching specialty regularly or in teaching professional contests.

- The pedagogics exercises reflect both issues of primary education and characteristics of graduate education, which is the unique process of awareness and practice of the students; organized, controlled and guided by the lecturers in an identified program, objective. So that, the students will have a thorough grasp of scientific knowledge system and professional; form and develop their occupational capacities.

1.3. Basic issues about the exercises

1.3.1. Role of the exercises in the teaching process

- *The exercises help the students have more thorough grasp of knowledge*
- *The exercises is the good education tool*
- *The exercises can help to develop intelligence and feelings of the students*

1.3.2. Classify the system of exercises

1.3.2.1. Classify by content

1.3.2.2. Classify by difficulty

1.3.2.3. Classify exercises by nature

1.3.2.4. Classify exercises by stages of teaching process

1.3.2.5. Classifying exercises by characteristics of cognitive activity of the students

Based on cognitive characteristics of the students, the exercises are divided into two types of exercises, namely the reappearing exercises and the creative exercises, according to viewpoint of Thai Duy Tuyen author [70, p.233].

- *Reappearing exercises*: is type of exercises which requires the students to recall, reappear learned knowledge and skills. In a higher level, the reappearing exercises requires the students to realize the basic knowledge which have less or more changes in comparison with the learned knowledge, to express the learned knowledge by their own language, shorter and more detailed.

- *Creative exercises*: is type of exercises which requires the student to apply the learned knowledge and skills to solve matters in new cases, synthesized matters.

In a higher level, the creative exercises requires to solve the matters by a new direction, new technique, new method. Such new requirements are new things for individuals and whole society.

With the viewpoint of synthesis, selective inheritance and based on purposes, requirements of using types of the exercises in teaching the Pedagogics, we give out types of the exercises as follows:

- ***Theoretical exercises***: including the exercises based on reappearing the learned knowledge to help the learners analyze, clarify the scientific concepts, arguments about teaching.

The theoretical exercises can include the below levels:

+ *Level 1*: Reappearing the theoretical learned knowledge at frequency level. This type of exercises usually starts with phrase such as “present”, “analyze”, etc.

+ *Level 2*: Apply the learned knowledge to the exercises with contradictions at simple level

+ *Level 3*: Apply the learned knowledge to the exercises with complex contradictions, by analyzing, evaluation, searching new ways, new methods to solve matters effectively.

- ***Practical exercises***: This type of exercises is applying theory to solve matters which have been occurring in the teaching reality. They are the exercises to practice the occupational skills, including:

+ *Practical exercises with theoretical property*: Aims of these exercises is to help the learners strengthen system of the learned knowledge; as well as they are one tool to improve thinking and reasoning methods of the learners.

+ *Exercises from the reality to withdraw the pedagogy conclusions*: This is type of the exercises which requires to withdraw advices for teaching. From teaching phenomenon, it should propose conditions, ways of pedagogy impacts, education methods [3], [7].

+ *Practical exercises to solve the education cases*: This is type of the exercises to apply the theoretical knowledge to solve cases in the teaching reality, help the students to practice teaching skills.

+ *Practical exercises to practice skills*: To design the quality system of exercises, firstly, the teachers should identify system of skills which the students must practice, and objectives which the students must achieve in each skill.

1.4 Some theoretical issues about graduate teaching

1.5. Training method by credit system of education

1.5.1. Concept

The credit system of education is the flexible training method; of which the students actively set up plan and register study, accumulate each knowledge section according to schedule matching with their capacity and their condition and school aiming at completing the training program for granting degree. [65].

1.5.2. Characteristics of the credit system of education

1.5.3. Advantages, disadvantages of the credit system of education

1.5.4. Teaching method by system of credits

Conclusion: Training by the system of credits is the advanced training method and the indispensable tendency of the university education; because the philosophical foundation of this training method is: *Respect learners, take learners as center of the training process; the flexible training program so that the universities can easily meet changeable demands of human force market*. Therefore, implementing route of training by the system of credits is also indispensable, suitable with general tendency of development of university education in Vietnam and the world.

1.6. Basic characteristic of the Pedagogics unit of study in pedagogy universities

Summary of Chapter 1

1. The issue of designing and using the exercises in the teaching process is the important task of the teachers and the researchers to organize, guide the students to

use knowledge about the subject, intelligent operations to implement their study tasks, aiming at bringing the students a new knowledge, strengthening knowledge or frequently making use of skills; improving the students' passion, creativeness in science.

2. Based on selective inheritance of the viewpoints, purposes and requirements of using types of the exercises in teaching the pedagogics, we give out two basic types of exercises which are the theoretical and practical exercises. In each type of these exercises, there are both the reappearing exercises and the creative exercises.

3. We have also deeply analyze and compare the detailed program of the pedagogics unit of study (4 credits) in two universities which are Hanoi University of Education and Hong Duc University. The achieved results show that contents of the pedagogics subject in the two schools are similar. However, building the program structure, teaching time of the unit of study in the two universities is different; of which Hanoi University of Education builds the theory hours more than discussion hours/ exercise. Unlike Hong Duc University, a number of discussion hours are more than the theory hours.

4. The university education by the system of credits is the new training method bringing many good study opportunities for the students. However, innovating the teaching method of the teachers in the universities is only effective when the students really become active and positive in innovating their study method, turning one-way teaching method into two-way cooperation method, renovating the teaching method of the teachers towards teaching way of study for the students with guideline: study-ask- understand- apply; taking understanding as fulcrum, practice as development point.

5. The pedagogics is the professional subject characterized by both theoretical and high application. Therefore, using the pedagogics exercises in teaching contributes to improving the teaching quality of the primary teachers currently.

CHAPTER 2

PRACTICAL FOUNDATION OF DESIGNING AND USING EXERCISES IN TEACHING PEDAGOGICS IN UNIVERSITIES

2.1. Aims, subject, contents and method of investigation

2.1.1. Aims of investigation:

Evaluate status of using the pedagogics exercises in the universities currently; identify difficulties of the teachers and students in the implementation process; assess feasibility of procedure of designing and using the exercises in teaching in the pedagogy universities.

2.1.2. Contents of investigation:

- Awareness of the teachers, students about meanings of using the exercises in teaching
- Awareness of the teachers, students about requirements, principles, procedures of designing and using the system of exercises in teaching
- Reality of using the exercises in teaching the pedagogics; reasons of the reality

2.1.3. Subject of investigation: 551 sophomore students of education faculty and 62 teachers of 5 universities.

2.1.4. Method of investigation

2.2. Investigation results of the reality

2.2.1. Awareness of lecturers and students about necessity, meanings of using the exercises in teaching the pedagogics subject

Table 2.1: Teachers and students' awareness of the necessity in the use of exercises in teaching Education courses.

Subjects	Exercise use level	North		Central		South		Total	
		number	%	number	%	number	%	number	%
Teachers	Very necessary	5	27.77	6	26.09	5	23.81	16	25.81
	Necessary	11	61.11	15	65.21	15	71.42	41	66.13
	Not very necessary	2	11.11	2	8.69	1	4.76	5	8.06
	Not necessary at all	0	0	0	0	0	0	0	0
	Total	18	100	23	100	21	100	62	100
Students	Very necessary	78	40.62	94	46.31	55	35.26	227	41.20
	Necessary	98	51.04	91	44.83	89	57.05	278	50.45
	Not very necessary	12	6.25	13	6.40	7	4.49	32	5.81
	Not necessary at all	4	2.08	5	2.46	5	3.21	14	2.54
	Total	192	100	203	100	156	100	551	100

General comments: From results of the table 2.1 most of the teachers and the students have high agreement about necessity of using the exercises in teaching; however, the teachers assess necessity higher than the students.

Doing the pedagogics exercises brings many effects; of which the main effects are: *strengthening knowledge of the subject, improving learning interest in the subject, testing, evaluating study result of the pedagogics subject, practice creativeness and independent working capacity, practice skills of solving cases in teaching and training.*

2.2.2. Awareness of the teacher about requirements, procedures of designing and using the exercises

General comments: From results of the table 2.3, 2.5 and 2.7, the teachers evaluate that all the requirements are necessary when designing: an exercise, system of exercises for a lesson, system of exercises for a textbook; of which designing an exercise concentrate on the requirements: *the exercises has to reflect a specific content in the subject's program; the exercises has to make students become interest and form demand of solving matters.* Designing a system of exercises for a lesson concentrates on the following requirements: *the system of exercises has to reflect*

objectives of the lesson; the system of exercises has to guarantee logic among contents of the lesson; the system of exercises has to make student become interest and form demand of solving matters; quantity of the system of exercises for each class hour should not too many, it should guarantee logic of the lesson, balance of parts, etc. When designing a system of exercises for a textbook, the following requirements are evaluated with the highest level: *the system of exercises must be practical, closely with characteristics of the subject; the system of exercises has to reflect objectives of the textbook; the system of exercises must be suitable with contents and time of each chapter; the system of exercises has to guarantee correctness of knowledge, science of matters.*

- From results of table 2.4, 2.6, 2.8, it can be seen that the teachers in 3 regions agree that the procedure of designing an exercise includes 08 basic steps, 10 basic steps for the procedure of designing a system of exercises for a lesson and 09 basic steps for the procedure of designing a system of exercises for a textbook; among these steps, there are logic relation mutually.

Getting to understand about teachers' awareness in using exercises during class time, we obtained the following results

Table 2.9. Teachers' awareness of using exercises in class

Lessons	Procedure of exercise use	North		Central		South		Average	
		\bar{X}	<i>TB</i>	\bar{X}	<i>TB</i>	\bar{X}	<i>TB</i>	\bar{X}	<i>TB</i>
Theory	Define the objective of the lesson	1.11	<i>1</i>	1.94	<i>1</i>	1.00	<i>1</i>	1.58	<i>1</i>
	Analyse the lesson's content and define the central content of each lesson	1.89	<i>2</i>	2.56	<i>2</i>	2.00	<i>2</i>	2.29	<i>2</i>
	Select relevant exercises	3.67	<i>3</i>	3.33	<i>3</i>	3.25	<i>3</i>	3.52	<i>3</i>
	Make plan	4.11	<i>4</i>	3.78	<i>4</i>	4.25	<i>4</i>	4.16	<i>4</i>
	Lead students to acquire the lesson's content through problem solving.	4.78	<i>5</i>	5.11	<i>5</i>	5.00	<i>5</i>	4.96	<i>5</i>
	Teacher check students' problem solving.	5.62	<i>6</i>	5.56	<i>6</i>	5.50	<i>6</i>	5.56	<i>6</i>
	Teacher gives comment on the results, continues with the sequent contents.	6.67	<i>7</i>	6.39	<i>7</i>	7.00	<i>7</i>	6.55	<i>7</i>
Discussion	Define the objective students need to achieve	1.00	<i>1</i>	1.22	<i>1</i>	1.00	<i>1</i>	1.13	<i>1</i>
	Select relevant exercises/topics for discussion	2.22	<i>2</i>	1.94	<i>2</i>	2.00	<i>2</i>	2.03	<i>2</i>
	Assign work for each group	2.78	<i>3</i>	3.00	<i>3</i>	3.00	<i>3</i>	2.93	<i>3</i>

Students	theoretical base.	3.37	3	3.31	3	3.29	5	3.33	4
	Practical based drawn from pedagogical conclusions.	3.40	4	3.21	2	3.22	1	3.28	2
	Practical exercises solve education situations.	3.43	5	3.33	4	3.25	2	3.34	5
	Practical exercises train skills	3.32	1	3.35	5	3.28	4	3.32	3

General comments: Both the teachers and the students have high agreement that three types of the exercises (*the practical exercises to solve cases, the practical exercises with theoretical property, the practical exercises to practice teaching and training skills*) are mostly used in teaching. However, the evaluation results of the teachers are higher and more suitable with the reality than that of the students.

- However, the students are aware of importance of doing the exercises, they are not really positive in learning, practicing their skills. The students do the pedagogics exercises when: *being required by the teachers; when preparing examination; when preparing practice, teaching listening for practice and teaching practice in primary schools; when joining in contests of practicing teaching professional.*

- Studying difficulties of the students in the process of doing the pedagogic exercises, we realize that there are two group of basic reasons: objective reasons and subjective reasons; but there are many more the subjective reasons.

Summary of Chapter 2

1. Most of the teachers and students agree necessity of using the exercises in teaching; of which evaluation of the teachers is higher than that of the students.

2. Evaluating meanings of doing the pedagogics exercises, most of the teachers and students believe that doing the pedagogic exercises bring many effects; of which evaluation of the teachers is more concentrated; there are not many differences in average mark in comparison with the students.

3. To design the exercises, the teachers use many sources of information; of which the main sources of information are: *textbook of the subject, building exercises by themselves, summarizing teaching experiences of the teachers in charge in primary schools.* For the students, to do the pedagogics exercises, the teachers carry out researching: *textbook of the subject, group discussion, searching information on internet and solving matters by themselves.* However, activeness in learning, practicing skills of the students is not good; practicing the occupational skills is not implemented regularly.

4. Reasons for the above reality are both the objective and subjective reasons which affect the study results in the pedagogics subject; of which the reasons such as: *practical understanding of the students is limited; the students are still lazy, do not value the subject; the students do not know how to learn and solve matters effectively* are the subjective reasons which have significant impacts in the study results of the

pedagogics subject. Besides, some objective reasons such as: *the subject is difficult, abstract, uninterested; the textbook, references are few* also affect interest in learning the pedagogics subject of the student.

5. Applying the new training method in the universities is really a challenge with the teachers and the students in the schools. The classes are organized by the academic year, but the students have the loosely connection mutually through general study of the classes in some units of study. These are also difficulties for the teachers in organizing, monitoring the classes.

6. To contribute to improving the teaching quality in general, the pedagogics subject in particular, we have built the theoretical foundation about the requirements, principles, procedures of designing an exercises, a system of exercises for a lesson, a system of exercise for a textbook. Checking scientific values of this theoretical foundation shows that most of the teachers highly evaluate importance of designing and using the exercises in teaching; the requirements, principles and procedures of designing and using the exercises are suitable with the reality and feasible.

CHAPTER 3

DESIGN AND USE SYSTEM OF PEDAGOGICS EXERCISES IN UNIVERSITIES

3.1. Design the system of exercises

3.1.1. General principles when designing the system of exercises

- *The system of exercises reflects the basic contents of each lesson, contributes to implementing objectives of the subject, the lesson*

- *The system of exercises must be problematic, stimulates the students to solve the study tasks with clearly expressed data.*

- *The system of exercises must be typical, highly generalized; and upholds positiveness in awareness of the learners*

- *The system of exercises have to originate from the reality and have education meanings*

- *The system of exercises must be suitable with typical characteristics of each lesson hour*

- *The system of exercises must be reasonable*

- *The system of exercises must guarantee that the students have enough knowledge and sources of documents for researching and finding out solutions.*

3.1.2. Requirements of designing the system of exercises

3.1.2.1. Requirement of designing an exercise

- *The exercise reflects a certain content of the lesson*

- *The exercise guarantees correctness, science of the contents*

- *The exercise contains a contradiction*

- *The exercise must be suitable with typical characteristics of the subject*

3.1.2.2. Requirement of designing the system of exercises for a lesson

- *The system of exercises reflects relation among contents of the lesson*

- *The system of exercises should strengthen capacity of active and creative thinking of the learners; and must be suitable with the teaching method of the teachers.*

- *The system of exercises must be diversified*

- *The system of exercises in each lesson should not too many; should be focused and suitable with logic of the lesson*

3.1.2. 3. Requirement of designing the system of exercise for a textbook

- *The system of exercises reflects objectives of the textbook*

- *The system of exercises must be systematic*

- *The system of exercises guarantees the increasing level of difficulty; besides the basic exercises, it must have the common exercises integrated from many contents of the lesson or from many lessons, chapters*

3.1.3. Procedure of designing the system of exercises

3.1.3.1. Procedure of designing an exercise

Step 1: *Analyze structure of learning documents; identify objectives, key contents of the lesson*

To build an exercise, firstly, it should research objectives and key contents of each lesson; of which specifying which contents must use the exercises. Using the exercises is not only carried out in the class, but also assigned at home for the students to practice.

Step 2: *Research objectives, contents of each part of the lesson*

Each lesson includes many contents, the teachers can implement in one class hour or many class hours; therefore, the teachers should estimate suitable type of exercises.

Step 3: *Research awareness characteristics of the learners*

In teaching, acquisition level of the students is different; so that designing the exercises must guarantee the general requirements. It should concern about capacity of each individual to give out the separate requirements matching with capacity of the learners. Therefore, besides designing the basic exercises, it should have the advanced exercises to check and classify level of the learners.

Step 4: *Design the exercise*

To implement the step 3, firstly, the researchers should collect information by referring sources of documents; then find out factors, basic relations among the contents to compile the exercises with high practical values.

Step 5: *Prepare answer for each exercise*

The exercise should have attached answer. Designing the answer can help the teachers make reference in teaching, and the students make reference in learning.

3.1.3.2. Procedure of designing the system of exercises for a lesson

Step 1: *Identify objectives of the lesson:*

Based on researching curriculum and objectives achieved by the learners in each subject, each lesson; the researchers should provide quantity of the exercises. Each lesson can be carried out in one class hour or some class hours. If the lesson is carried out in one class hour, the teachers should research detailed objectives which the students need to achieve in each lesson.

Step 2: *Analyze contents of the lesson:*

Having a thorough grasp of the lesson's contents is expressed by identifying basic contents, key contents; then disclosing inner structure of the lesson.

Step 3: Identify quantity of the exercises in each content of the lesson:

Quantity of the exercises in each lesson is less or more depended on contents, distribution of time for each lesson, awareness characteristics of the learners and organization method of teaching hour of the teachers; depended on difficulties of the teachers and the students in organizing the class hour. The teachers should plan which the exercises are implemented in the class, which the exercises are implemented at home in order to match with time and study condition of the students.

Step 4: Collect information and design the exercises:

To have the interesting system of exercises, the teachers have to refer many sources of documents and occupational experiences. An interesting exercise contains a not too complex but not too simple matter.

Designing the exercises should prepare the attached answer. This is the tool for the teacher to assess the study results of the learners. The answer must be clear, correct; and it only gives the most correct and unique answer.

Step 5: Arrange the exercises in an order suitable with logic of the lesson

Based on logic order of the lesson, the exercises must be arranged in a closely logic order aiming at stimulating the study positiveness of the learners; simultaneously, the teachers can check, evaluate and classify the acquisition level, skills practice of the learners.

3.1.3.3. Procedure of designing the system of exercise for a textbook

Step 1: Identify objectives which the students need to achieve after ending the lesson

Identifying objectives of the lesson, relation among the chapters is the base for planning quantity of the exercises and types of the exercises matching with typical characteristics of each chapter.

Step 2: Research contents of the textbook:

Researching contents of the textbook allows the teachers to imagine contents and time limit of each chapter, basic knowledge, focus of each chapter; to choose way of organizing teaching activity of the teachers and learning activity of the students.

Step 3: Identify types of the exercises and quantity of exercises corresponding to each chapter.

Contents and time limit of each chapter are important base for the teachers to build the exercises. However, the system of exercises must guarantee the balance of the theoretical exercises and the practical exercises; of which it should pay attention to building the system of practical exercises.

Step 4: Design the system of exercises.

To design the system of exercises, the researchers should base on many sources of knowledge: from textbook, references of such subject, research results of the published scientific works, the scientific conferences at all levels, etc.

Designing answer for each exercise helps the teachers control the class hour; use the exercises suitable with subjects and stimulate activeness, creativeness of the students in learning.

3.2. Use the system of exercises in teaching

3.2.1. General principles when using the system of exercises in teaching

- *The system of exercises must be suitable with objectives of the subject and specific teaching conditions*
- *The system of exercises must be suitable with typical characteristics of each class hour*
- *The system of exercises has to reflect reciprocal relation between the teachers and the learners, between the learners with others*
- *The system of exercises has to connect with innovation of the teaching method, method of testing, evaluating results of the lesson, subject*

3.2.2. Requirement when using the system of exercises in teaching

3.2.2.1. Theory hour

- Using the system of exercises must be suitable with way of organizing the class hour of the teachers
- Using the system of exercises should orient to majority of the students
- Using the system of exercises must be suitable with cognitive capacity of the learners
- Using the system of exercises must be suitable with time and objectives of each class hour

3.2.2.2. Discussion hour, seminar

- Discussion theme must be the basic and key issues of the subject's program to implement objectives of the subject.
- Discussion contents have to generalize and connect with the reality; stimulate interest of the students and mutually cooperate to discuss, search information and write report.

3.2.2.3. Self-study hour

- The system of exercises must be diversified, suitable with objectives of the subject, suitable with characteristics of the students; connect with occupation of the students; match with self-study time of the students; reflect results of some study skills.

3.2.3. Procedure of using the exercises

3.2.3.1. Theory hour

* The procedure of using the exercises in the theory hour is as follows:

Stage 1: Choose the exercises used in the class hour

Step 1: *Research objectives of the theory class hour*:

In order to effectively use exercise system, firstly, it is necessary for a teacher to specify the objectives in each study hour. Each lesson can be conducted in many study hour, including students' theory, discussion and self-study hours. Therefore, carrying out objectives in each hour is carrying out objectives of each part in the lesson.

Step 2: *Analyzing content of the hours, defining basis contents and the focus of the hour.*

On the basis of analyzing objectives that students must obtain in each study hour, the teacher analyzes contents of the study hours, defines basis contents and the focus of each hour.

On the basis of the curriculum, the teacher divides contents in each hour into knowledge unit in minor modules, in each minor module, it is needed to define objectives that students must obtain. In one school hour, there is (are) one or many modules, carrying out objectives in each module is carrying out objectives of the study hour.

Step 3: Choosing exercises in conformity with process of study hour:

On the basis of contents in each study hour, students' abilities to aware knowledge and time to execute each module, the teacher choose typical and practical exercises with many directions for students to analyzes and discuss. There are 2 ways to orient to use exercises:

- Instructing students to get new knowledge then bringing exercises to strengthen the knowledge.
- Using exercises during introduction of the lesson, apprehending the lesson but it is necessary to choose number of exercises to ensure the exercises suits to time of study hours.

It is needed for the teacher to estimate time for each exercise to actively give lessons, in order to prevent the lesson to be absurdity.

Step 4: Planning to teach for each specific study hour.

This step requires the teacher to define process of the lesson, the way to using exercises and preparation of teaching and studying conditions such as classroom, facilities, space for teaching and studying and recommending references.

- Stage 2: Organization of the study hour.

The general direction in the hour is to minimize the teacher's presentation in class, therefore, it is necessary to design the lessons into minor modules depending on the specific content of the lesson. Some modules is directly presented by the teacher but some are studied and presented by students.

Results of exercises depend on many factors, of which the key factor is the effort of each student. Therefore, it is important to the teacher help students to shape and develop self-learning and self-practice motivation and method.

- Stage 3: Testing and evaluating results of the exercises

This is the final stage in teaching in order to help the teacher and students to collect information for adjustment of teaching activities. Therefore, after each student's answer, the teacher should comment and evaluate the performance result of tasks.

3.2.3.2. Discussion hour/Seminar

**Exercise using procedure in discussion hour/seminar as following:*

Stage 1: Choosing exercises and topic for discussion.

Step 1: Defining objectives in the discussion hour/ seminar.

Objectives of each discussion hour/seminar are defined on the basis of: objectives of lessons/chapters, theory contents of the previous lesson.

Based on the curriculum, the teacher prepares lesson plan and design discussion topics in minor modules, task mission to each group, define targets that

student obtained in each minor module. The level of each group's task completion is basic to define obtained targets in the discussion hour.

Step 2: Choosing exercises and topics for discussion

The teacher should discuss topics reflecting main contents in the lesson and having an extension and relating to the practice. Basing on many factors to choose discussion topics such as objectives and contents in the lesson; allowable time; students' awareness ability and the teacher's ability; facilities for discussion as classroom space, numbers of students in the discussion class, details or other teaching facilities, etc.

Step 3: The teacher assigns discussion to the class, group, and guide students to perform these discussion tasks, as well as find out reference resources.

- Number of students per group is basis for the teacher to assign.
- The teacher introduces the students document resources to apply and perform the task.
- The teacher instructs students to solve exercises.

Step 4: Planning the discussion

The discussion result depends on many factors such as anticipation of discussion process, the teacher's discussion preparation, time and place of discussion, students' awareness and behavior in solution of exercises, discussion topics; conditions for discussion, building criteria for evaluation of the discussion.

Stage 2: Discussion

Step 5: The teacher repeats objectives and requirements in the discussion hour, exercises and topics of each student group that makes the students attend the lesson and the teacher ready for the discussion.

Step 6: The teacher elects a student group to present the discussion result

Organizer's capacity plays an important role in the success of a discussion. Therefore, basing on previously assigned exercises and topics, tasks of each group, allowable time, the teacher presents the discussion process and selects a student group for presentation of each module. Form of selecting presentation group as following:

- The teacher encourages the groups to register statement. If students do not register to present discussion result, the teacher can assign any group to present the discussion result and other groups will concentrate on listening and commenting. The teacher and student groups listen to the group's presentation.

Step 7: Exchange between the groups for discussion.

Based on the results of the group presenting the report, the groups can discuss a similar topic to identify, assess and supplement. If the groups have not a similar idea, each group will give evidence and explanations to protect the idea.

If there is no consensus among the groups in the discussion, it is needed for the teacher to adjust to prevent rambling and no-ending in the discussion.

Stage 3: Evaluating the results of each group assignments

The teacher comments the discussion result of presenting group and other groups' studying behavior then marks the presenting group. The teacher switches to the next exercises and topic for discussion.

3.2.3.3. Self-study hour.

Stage 1: Choosing exercises and topics for self-study, including:

Step 1: Determining the objectives of the subject, the chapter and the lesson

Step 2: Studying contents of the chapter and the lesson.

Step 3: Determining contents for students to self-study, exercises for students/schedule of outline in detail to ensure that students have enough time to complete the tasks.

Stage 2: Implementation

Step 4: The teacher assigns exercises and topics for students to self-study.

It is necessary for the teacher to specify objectives and requirements, inform time of completion, and recommend references, students' result in self-studying must presented in many forms.

Step 5: Students perform self-study tasks at home.

In order to do this step, students must carefully determine weekly table of study, content of self-study, then make plan scheme of self-study to ensure study schedule, quality.

Stage 3: Evaluation of performance result

To evaluate result of performance and self-study tasks, the teacher can use testing forms such as oral test in a theory hour, a discussion hour, testing the students' self-study books then mark as regular marks.

3.4. Conditions to design and use of exercise system in teaching education part effectively.

Conclusion of chapter 3

1. Being active in studying activities of students is use of teaching methods to impact on studying of students, to change students' position in studying from passively receiving to actively receiving to achieve the objectives. One of methods with the high practical meanings in studying education subject is using exercise system in teaching.

2. Inheriting scientists' research result at home and aboard, we researched and completed theoretical basis for design and use of exercises in study hours including requirements, principles and procedures design and use of exercises. Each subject has its own characteristics, it is necessary to care its own requirements when designing the exercises but generally to comply with a certain procedure to reach high results in teaching.

3. On the basis content analysis, teaching time for education lesson, we have designed the exercise system Part I: "*Common problems in education*". We illustrated the use of education exercise system in study hour (theory, discussion/seminar, and self-study) though applying the exercise using process.

4. In order to effectively design and use exercise system in general and exercises in educational subject particularly, it is needed to ensure the specific conditions including objective and subjective conditions. The combination of these conditions contributes to improve the quality in training teachers in current pedagogic universities.

CHAPTER 4: TEACHING EXPERIMENT

4.1. General information about the teaching experiment.

4.1.1. Purpose:

The purpose is to verify effectiveness of using exercises and designed exercise system for students to have the more positive attitudes with the subject.

4.1.2. Content:

The experiment uses the designed exercise system during teaching chapter II, III (Part I) named Education and Development of Personality, purpose and mission of education.

4.1.3. Subjects:

The second year students with training system: pedagogic university and the first students with training system: pedagogic college in Hong Duc University, Thanh Hoa. Teaching experiment is performed in 2 academic years in Control experiment mode. The subjects for the experiment are selected randomly according to teaching assignment as following:

- First round experiment: Academic year 2010 – 2011
- Experiment round 1: School year 2010-2011

System	Class	Object	Code	Number of students
University	K12 Maths	Experiment	TN 1	43
	K12 English	Reference	C 1	34
College	K32 Maths- Informatics	Experiment	TN 2	77
	K32 Ti ng Anh	Reference	C 2	53

Experiment round 2: School year 2011 – 2012.

System	Class	Object	Code	Number of students
University	K13 Maths	Experiment	TN 3	72
	K13 Literature Teaching Education	Reference	C 3	84
College	K33 Maths- Informatics	Experiment	TN 4	36
	K33 English	Reference	C 4	33

4.1.4. Experiment method

Each experiment period is divided into 2 periods:

1st period: Exploration experiment

This period is implemented in 2010 – 2011 in natural science and foreign language departments. After finishing Chapter I: "Education is a science", we give students a test to estimate the knowledge level and their practical skills of subjects. (*Input examination*)

2nd period: Impact Experiment.

We implement the experiment with the contents of chapter II, III (Education and personality development, purpose and education duty). After finishing chapter II, we give a test (*the 2nd test*) to 2 groups of students (Experiment and reference).

Similarly, after finishing contents of chapter III, Students of 2 above groups implement the 3rd test under the 1 ch trình gi ñ ng d y of detailed outline.

4.1.5. Experiment implementation

4.1.6. Standard criteria and experimental scale of evaluation

Evaluating the experimental results is based on standards and scales of evaluation as follows:

- *Assessment of student's level of perceived knowledge* (Including 5 levels)
- *Assessment of student's attitude in receiving and exercise solvement:* through the student's performance in class observation, results are based on assessment of lecturer s, self-assessment of students, group's assessment.
- *Assessment of education exercise solvement skill. Skills of test performance, experimental results based on following skills:* problem recognition skill, data receivment skill, theoretical building skill, problem solvement skill, test performance and results.

The level of implementation of these skills is divided into 5 levels

4.2. Experimental period in 1st round

4.2.1. Result analysis before experiment.

4.2.2. 1st round experiment

4.2.3 General assessment of experimental result in 1st round:

- *In term of level of students' perceived knowledge:* In Overall, students have successfully identified data and requirement of exercises, gradually use the knowledge to solve learning tasks. To experiment group, students present key contents of theory exercise, but only achieved mature knowledge, have not yet had the creativeness in the presentation, cannot give examples naturally.

- *Assessment of student's attitude to subject:* That students are interested in joining to find problem solvement in experiment group is better than reference group. In the reference group, students often do their duties when required, there are limitation in being proactive in searching resources addressing exercise. There are some issues such as doing exercise laziness and copy each other.

- *Assessment of student's subject practice skill:* In general, students have successfully identified data and requirement of exercises, however, theory building, problem solvement finding is not good. To experinent group, data screening skills, orientation and problem solving is better than in the other. However, there are still dependency on lecturer r 's orientation, creativeness of students are still not high.

4.3. The 2nd round experiment

4.3.1. Result analysis before experiment

4.3.2. 2nd round experiment

4.3.3. General assessment of experimental result in 2nd round

- *In term of level of students' perceived knowledge:* Students have deeper knowledge of subject's contents. They can present quite adequate knowledge, but the creativeness and science in problem solvement is not high and shortage of actual knowledge still remains.

- *Assessment of student's attitude to subject:* Students are focus on lecturer listening, active in building lessons, contributing their thoughts in group discussion, have respect and willing listen to the friends' opinion, there is the high coordination

among team members to solve common tasks. Complete lecturer r's requirements under the prescribed time

During discussion lesson of each group, students have good preparation of requirements. However, the report types such as: *summary, general building, system table prepare, diagram* have not yet been scientific, especially report method of system prepare, diagram is rarely used by students. The cooperation of student still remains some problem.

Self-study is implemented fully. However, self-study result mainly reaches the level of knowledge achievement, creativeness in exercise solvement is not high.

- *Assessment of student's subject practice skill*: Almost students are well-done in skills of data scanning, theory building, but there is limitation in student's problem resolvment.

Summary of Chapter 4:

Through analysing, result assessment of 2 rounds of experiment, we have some following results:

1. Before experiment, students' perceived knowledge, practice skill of 2 groups is similar. Students present basic knowledge, but not naturally. They still suffer from giving examples.

Assessment of subject practice skill: Generally, Student gradually identify data and requirements of exercise, but some practical skills are ill, student are depend on lecturer r s orientation. Creativeness of student in problem settlement is not high.

2. After the experiment, results of experiment group is higher than reference one. The high rate of reference group students get average mark, but the rate of students in the other reaching many good marks is higher.

The above results shows that Education exercise system brings the initial results during the teaching process, students pay much more attention to the subject, subject practice skill is implemented regularly and creativeness development in problem resolvment. That means exercise system are suitable with each chapter's content and aim, learner's awareness and lecturer r's teaching organization.

3. From the experiment results, we can see our proposed exercise using procedure is totally suitable with the reality, ensures the system logics among periods. Moreover, this result proves that our scientific hypothesis is totally proper.

CONCLUSION AND RECOMMENDATION

1. Conclusion.

1.1. Education at school, under the direct leadership of lecturer r is the most effective, oriented for the youth to achieve knowledge with the selected purpose, elite cultural, scientific, and art heritage system of humans being. Therefore, lecturer r need to have enough qualification, strong professional capacity, always innovative teaching methods to change studying method of students from passive to active.

1.2. For students to have the activeness in studying and training professional skills, apart from the organization, guidance for student, lecturer r s must pay attention to design exercises and organize for students to train during studying at University.

1.3. Inheriting a division of exercise, based on the using purpose, requirements of exercise, we split them into 2 kinds of exercises: Theory and practice exercise. There are reproduced and creative exercises in each kind.

1.4. From the results, major lecturer r s and students have agreement to assess the necessity of using exercise in teaching. However, students just only do exercise when required or for examination preparation and assignment. It shows the ill pro-activeness in studying of students.

Many objective and subjective reasons result this situation, in which the main reason lies in objective ones.

1.5. To design a exercise system, it is necessary to comply some principles, and based on those, the thesis gives a exercise design procedure, a exercise system design procedure for a lesson, or curriculum, in which, there some relations among steps.

1.6. Use exercise at university level need to comply some principles, based on above principles, we build the exercise system use procedure in the basic kinds of lessons: Theory lesson, discussion and self-study time. In order implement this procedure successfully, ensure certain conditions of both lecturer r s and students.

1.7. Based on exercise design procedure, Education curriculum, we have deep research and design exercise system Part I: “General issues of Education” of the Education subject. Education exercise system is experimented in Hong Duc University in 2010-2011, 2011-2012. The result shows the suitability, feasibility, efficiency of the system as well as their using procedure.

2. Recommendations

2.1. In terms of university

Update regularly reference resources to meet students’ studying demand.

Adjust the suitable number of students at class to ensure the lecturer r ’s control and training quality.

Continue to invest in infrastructure, equipment to demand practice, experiment, training and teaching to meet the training requirement under the credit system.

Expand the time for students to practice regularly at high schools, relating theory to practice.

2.2. In term of department and subject.

Review and adjust detailed outline of credit units, unify the program and teaching time among departments and universities.

Based on time, content of each subject, each course need preparing the exercise system under reference, help students to be active to train, improve occupational practice skills to students.

Organization, management and assessment of each course need to be strengthened in each department, subject and managed under the strict procedure.

Strengthen the teaching reference hour, gain experience of teaching in each subject; university should have measure to inspect teaching hour of lecturer r under the schedule.

2.3. In term of lecturers

Each lecturer should renew teaching method, forward to reduce presentation, apply more exercises in which include problems to stimulate student thinking, encourage students to present their own point of view, the application of information presentation and reporting harvested products.

Each lecturer need diversify the method of test such as: writing, oral, test, practice to strengthen the training and practice of professional skills for students such as present skills, practice skills as well as use assessment method: regular assessment, mid-term test and final test, this influences on students' studying attitude to subject.

Lecturer s must improve the qualification, profession and their selves, and observe and communicate regularly with management official, lecturer r s of high school to catch the educational changes at different grade, in order to design exercise system which suitable with high school reality, with the characteristics of students' awareness to implement the goal of the university grade.