Teaching Education Courses Based on Case Study Method in Pedagogical Universities in Vietnam

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Abstract Vietnam is in the process of renovating general education which poses many problems in teacher education. The subjects of professional knowledge in pedagogical schools, including the subject of Education is being strongly reformed in terms of contents, programs and teaching methods. Teaching the subject Education based on case study method is an effective solution for developing students’ pedagogical professional competences. However, in practice, whether the case study methodology has been used by the faculty in teaching Education courses or not, and the results have not been studied. This article aims to provide the data, information and observations for the situation in Vietnam in recent years, setting up a scientific basis for innovation and improvement of pedagogical training process in Vietnam in the next years.

Keywords: teaching, case study, case - study - based teaching, education courses

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1. Introduction

Case study method has its root in scientific research methods [1]. However, with its characteristics and advantages, the method has now become one of the modern teaching methods in higher education [2]. Case – study - based teaching is the use of this method in teaching basing on organizing students’ research of critical typical cases of profession reality [3,4]. The issues met by lecturers in their professional practice are the learning environment that lecturers bring to their students in order for their own research and self-interaction in a positive, independent and creative way through the two operation mechanisms as "assimilation" and "adapting", thus students develop high-order thinking skills, creating knowledge and ways of performance on their own [5]. With these advantages, case – study - based teaching should be used in teaching and training various disciplines in universities all over the world such as Medicine, Pharmacy, Law, Business Administration, Engineering, Pedagogy [6,7,8]. In teacher training, case - study - based teaching provides students with issues of educational practice to study, and to look for educational solutions helping them adapt to their careers and minimize the risks in future educational practices [9].

Vietnam is in the process of renovating general education which poses many problems in teacher education. The subjects of professional knowledge in pedagogical schools, including the subject of Education is being strongly reformed in terms of contents, programs and teaching methods. Teaching the subject Education based on case study method is an effective solution for developing students’ pedagogical professional competences.

Education is one of the important occupation courses taught at pedagogical universities in Vietnam. This course provides students with the basic, modern and essential skills needed for teachers. Its content consists of a number of concepts, categories, principles that are close to everyday life and educational practices but are not easy enough for students to explore on their own [2]. Meanwhile the requirements set to teacher students are to apply the theoretical base into reality, to solve the recent practical issues, meeting the demands of teachers’ competences needed training in these pedagogical institutions. In this context, the innovation of teaching methodology in Education is of great significance when the pedagogical universities in Vietnam all want to improve their quality of teacher education in the current period of time. Case – study – based teaching of the course Education is one of the most effective ways to innovate the teaching methodology, contributing to improving the quality of professional training in this field. However, in practice, there has not been fully investigation of how this method applied to the teaching fact in pedagogical universities and its results. This paper aims to provide the data, information and observations for this situation in Vietnam in recent years, to create a scientific basis for innovation and improve the quality of pedagogical training in Vietnam.
2. Content

The situation of case - study - based teaching of Education courses in Vietnam pedagogical universities was studied, evaluated and presented as below.

2.1. General points of the survey

2.1.1. Subjects

We conducted a random sampling with 108 faculty members teaching the subject Education at Hanoi National University of Education, Hanoi Pedagogical University 2, Thai Nguyen University of Education, Hue University of Education, Ho Chi Minh City University of Education with the characteristics of qualifications and seniority as presented in Table 1.

Table 1 shows that the number of lecturers teaching the subject Education with Master degree is in the highest number with 42.6%, the number of lecturers with Bachelor degree is at least (24.1%), the rest are lecturers with PhD.

The number of senior lecturers (from 5 to 10 years) has the highest quantitative, the lowest is 17.6% (with the period of working time over 20 years). The characteristics of the survey above respondents will have certain impacts on the survey results of the following contents.

2.1.2. Survey Contents and Methods

We surveyed with the contents as follows:
- Instructors’ understandings of the case study approach;
- Lecturers’ awareness on the suitability of case study method in teaching Education;
- The current state of levels, methodology and its effectiveness of teaching Education based on case study approach;
- Students’ learning outcomes in the subject Education;
- Teachers’ difficulties in the teaching process and their case – study – based teaching in the subject Education.

In order to investigate the contents above, we have used the following methods:
- Educational survey methodology: We developed and used a questionnaire consisting of open and close questions to collect the necessary information for the research topic. Survey data was processed through SPSS for Windows.
- Pedagogical observation: This method was done by taking part in teaching classes to study and analyze lecturers’ use of teaching methods in class and observe and evaluate students’ academic levels during their studying.
- Methodology of investigating educational products: This method is carried out by studying the lecturers’ plans in teaching the subject of Education and students’ tests during their studying to collect the necessary information related to lecturers’ use of case study teaching method.
- Methodology of conversation: Conversations conducted with lecturers while their teaching Education and with some students on some issues related to lecturers’ use of teaching methods, using case study in teaching the Education courses and students’ excitement during this process.

2.1.3. Database Processing

The data processing was carried out by using SPSS for Window software, with the steps as follows:
Step 1: Checking and correcting the answers of the questionnaire.
Step 2: Encoding the answers.
Step 3: Importing the encrypted data on the computer.
Step 4: Identifying errors in the database and cleaning the data.
Step 5: Creating tables for data and analysis.
Descriptive statistics are mainly used with such parameters as Mean, Median, and Frequency.

2.2. Status Survey Results

2.2.1. Teachers' Perceptions of the Necessity and Effectiveness of the Case Study Methodology and Their Usage Level of This Method in Teaching Education Courses

To investigate this issue, we used the questionnaire, which contained the closed question about the needs to use case study methodology in teaching Education. The obtained information was processed in the type of descriptive statistics in the correlation with the need for perception and the extent of using that method in practice. The item levels used in the survey questionnaire are as follows:
- Very often used: Used in teaching with 70% of the total lessons or more
- Frequently used: Used in teaching from 50% to less than 70% of the total lessons;
- Sometimes used: Used in teaching from 20% to less than 50% of the total;
- Rarely used: Used in teaching with less than 20% of the total;
- Never used: No classes used

The results are shown in Table 2.

| Quanification       | Bachelor | Master | PhD   |
|---------------------|---------|--------|-------|
| Total               | 24.1    | 42.6   | 33.3  |
| Years at workplace  |         |        |       |
| Less than 5 years   | 18.9    | 32.4   | 24.1  |
| 5 - 10 years        |         |        |       |
| 10 - 15 years       |         |        |       |
| 15 - 20 years       |         |        |       |
| Over 20 years       |         |        |       |
| Rate                | 60.0    | 83.3   | 83.3  |

Table 2. Teachers' perceptions of the necessity and effectiveness of the case study methodology and their usage level in teaching Education

| Level of necessity | Quan. | Rate | Usage level | Quan. | Rate |
|--------------------|-------|------|-------------|-------|------|
| Very necessary     | 18    | 16.7 | Very often used | 8     | 7.4  |
| Necessory          | 90    | 83.3 | Frequently used | 9     | 8.3  |
| Less necessary     | 0     | 0.0  | Sometimes used | 11    | 10.2 |
| Confusing          | 0     | 0.0  | Rarely used   | 15    | 13.9 |
| No necessity       | 0     | 0.0  | Never used    | 65    | 60.2 |
| Total              | 108   | 100.0|             | 108   | 100.0|
Looking at Table 2, we could find the difference between perception and reality in lecturers’ using the Case Study methodology in teaching the subject Education: As many as 100% of lecturers think that their use of case study methodology in teaching Education is “very necessary” and “necessary”, but in reality, 74.1% of lecturers have “never used” and “rarely used” this method in their teaching. Only 17.5% of teachers “regularly” and “very often” have used this method and 10.2% of lecturers have sometimes used.

So, what causes the difference between lecturers’ perception and their use of this method in their teaching job, we continue to study their understanding of its effectiveness in teaching Education with the illustration shown in Table 3.

Looking at Table 3, it is clear that: The mean values show lecturers’ awareness of effectiveness gained in using teaching methods as in the following order:
- Giving presentation is considered the most effective method, followed by the method of practice, and then followed by the visualization method.
- For case study methodology, none of the lecturers has considered it as the most effective method in teaching Education. As many as 59.5% of faculty are confusing about the effectiveness of this method; another 35.1% thought this method was ineffective, and 5.4% thought it was “less effective” in teaching Education.

For further information for this research, interviews were implied with the results as follows:
+ / As many as 80% of lecturers are not aware of case study methodology, so that they rarely use this method in teaching Education.
+ / There are 15.7% of lecturers understand but not fully on this case study methodology. Even lecturers who regularly use this method are still confused about its effectiveness in teaching Education.
+ / Only 0.3% of lecturers know the method correctly, but this number is also confused about its effectiveness in teaching Education.

Thus there is a positive correlation between the instructor's understanding of effectiveness by case study methodology and their usage degree to which this method has been used in teaching Education. Due to lack of understanding of this method and its effectiveness, very few teachers use this method in teaching Education.

For lecturers who have used case study methodology in teaching Education, we continue to study the situation in terms of usage purposes; their teaching results; their difficulties encountered in the teaching process.

### Table 3. Teachers’ perceptions of case study methodology in teaching Education

| Effectiveness levels of teaching methods | Presentation | Visualization | Practice | Case study | Other methods |
|-----------------------------------------|--------------|---------------|----------|------------|---------------|
| Effective                               | 37.8         | 13.5          | 40.5     | 0.0        | 0.0           |
| Less effective                          | 56.8         | 67.6          | 43.2     | 5.4        | 0.0           |
| Confusing                               | 5.4          | 16.2          | 8.1      | 59.5       | 62.2          |
| No effectiveness                        | 0.0          | 2.7           | 8.1      | 35.1       | 37.8          |
| Total                                   | 100          | 100           | 100      | 100        | 100           |
| Average value                           | 3.1243       | 2.9189        | 3.1622   | 1.7027     | 1.6216        |

### Table 4. Lecturers’ teaching purposes in Education based on case study methodology

| Average value | Purposes                      |
|---------------|-------------------------------|
|               | Giving new knowledge          | Forming and promoting professional competences | Setting professional passions | Getting accustomed with teaching career | Other purposes |
| 4.2500        | 3.0000                        | 3.2500                                    | 3.7500            | 2.2500                   |
We observed students’ attitudes in class and marked their levels of expression on the observation checklist: their extent of attention; their level of expressing opinions when discussing; their level of participation in class; their level of questioning; their level of interest in receiving and implementing learning tasks. Amongst those, students’ feedback and discussion are one of the key manifestations of attitudes towards learning. We assessed students’ participation during class hours through the following criteria:

1. New, important and creative ideas (5 points)
2. New, creative ideas (4 points)
3. New, important news (3 points)
4. New, relevant, convincing ideas (2 points)
5. New ideas, not relevant, not convincing ideas (1 point).

Meanwhile:
+ / Creative ideas: Know how to apply knowledge creatively to solve the problem in a clever way.
+ / Important ideas: Know how to apply knowledge properly and have a decisive effect on the detection and resolution of the problem regarded in the case.
+ / New ideas: Do not overlap with other previous ideas.
+ / Persuasive opinions: Know the correct use of knowledge, combined with logical analysis.
+ / Correct ideas: Be able to use the correct knowledge but need to suggest
+ / Thoughts are not convincing: The application of knowledge is still confusing, not clear analysis, not logical.
+ / Unreasonable ideas: unknown knowledge manipulation, no effects to solve the problems.
+ / Many ideas: More than 5 comments referred/ lesson
+ / A sum of ideas: 3 to 4 comments referred/ lesson
+ / Occasionally comments: 1 to 2 comments referred/ lesson
+ / Very few comments: 1 comment referred/lesson

The assessment scale for students’ learning attitudes is a descriptive scale with levels of students’ participation in the learning process. The levels are:

Positive type: Scored 4 to 5 points and lots of ideas.
Rather positive type: Scored 3 to 4 points and more ideas.
Average positive type: scored from 2.5 to less than 3 points and more ideas.
Low positive: Scored 1 to 2.5 points and occasionally ideas.
Non-positive: No points and very few comments or no ideas.

Results of processing the observation checklist are described in Table 5.

Looking at Table 5, we could find that, in general, the students’ positive learning behavior in the classes with case study approach applied was moderate with average value (AV) only reaching 2.5 to 2.8. As follows:

- Only 5.4% of students have new ideas and positivity statues; 11.3% of students have relatively important opinions; 14.5% of students have convincing ideas; 5.3% of students have inappropriate comments.
- With occasional comments: 50% of students sometimes have new creative ideas; 54.3% of students sometimes have relatively important opinions; 62.4% of students sometimes have convincing ideas; 49.5% of students have inappropriate comments.
- Number of students with no opinions or very few ideas accounted for quite high rate: 44.7% of students have no or very little new creative ideas; 34.4% of students have no opinions; 23.25% students have no persuasive opinions; 45.2% of students had inaccurate ideas.

In addition, during observing students’ attitudes in the class hours of which instructors’ using case study methodology in teaching, we found that the number of students with positivity emotions in learning process is only 42%, the number of students who are interested in receiving and fulfilling the requirements and tasks is less than 50%. The atmosphere in the classroom was generally less active during the discussion. Students are not really interested in the lecture despite of lecturers’ having given educational stories and pedagogical situations to illustrate it. By interviews and observation, we could know that those educational stories and pedagogical situations used are not linked to theoretical contents of the lessons but mainly related to moral education for students during class time, it does not make sense to forge the students' teaching skills and other skills.

To further assert this, we continued to study students’ tests and their learning scores. These tests are conducted after lessons in some classes at pedagogical universities. Exam contents are geared towards students with the tasks of case study with five requirements:
+ To identify knowledge related to the details given in the case;
+ To apply the identified knowledge to analyze and evaluate problems arising in the given case;
+ To search for knowledge to solve the problem found in the case;
+ To solve the problem(s);
+ To refer the practical lessons.

The above requirements are directed to the skills test: Analyzing; Comparing; Looking for information; Information processing; Detecting the problems; Problem solving skills; Decision making skills. Students’ skills assessed through these tests and the results shown in Table 6.

| Levels of ideas | New creative ideas | Important ideas | Convincing ideas | Unreasonable ideas |
|-----------------|-------------------|-----------------|-----------------|-------------------|
|                 | Quan. | Rate | Quan. | Rate | Quan. | Rate | Quan. | Rate |
| Many ideas      |       |      |       |      |       |      |       |      |
| A sum of ideas  | 10    | 5.4  | 19    | 10.2 | 25    | 13.4 | 9     | 4.8  |
| Occasionally ideas | 93   | 50.0 | 101   | 54.3 | 116   | 62.4 | 92    | 49.5 |
| Very few ideas  | 68    | 36.6 | 54    | 29.0 | 36    | 19.4 | 66    | 35.5 |
| No comments     | 15    | 8.0  | 10    | 5.4  | 7     | 3.8  | 18    | 9.7  |
| Total           | 186   | 100  | 186   | 100  | 186   | 100  | 186   | 100  |
| Average value   | 2.5269|      | 2.7258|     | 2.8871|     | 2.5108|     |
Looking at Table 6, we find that student achievement scores are similar and with no significant differences. The scores are then organized with the following levels: good; rather; medium; weak. Table 7 shows the percentage of those achievement levels.

Table 7 shows that about over 50% of students have good test scores, the rest are ranked “average” and “weak”. Thus, this clearly demonstrates the students’ learning outcomes are not high, when lecturers have used case study methodology to teach the subject Education is not consistent with its characteristics and advantages in the right way. The cases are just stories or pedagogical situations used in a random manner and without a firm clear procedure. We continue to explore the difficulties and the reasons for the teaching process basing on case study methodology. This will help us identify the causes and propose measures to support the teaching Education.

2.2.3. Lecturers’ Difficulties in Teaching Education Based on Case Study Methodology

To investigate this issue, we continue to explore the faculty’s difficulties in teaching Education through the use of some survey questionnaires. The results are shown in Table 8.

Table 8 shows that there are 12 main difficulties that lecturers have faced in the teaching process with the following levels:
- Delay of textbook innovation accounts for 81.1%. When discussing with some lecturers teaching Education on this issue, they said that: the subject Education contents are still heavy in academic theories, not really associated with educational reality in general schools. A number of knowledge units are cliche, abstract, confusing. The lectures are filled with abstract information, which makes students less interested in the subject. On the other hand, students are reluctant to study the textbooks because of their lack of self-study support information. The content is nothing new compared to the previous curriculum, meanwhile the teaching and learning practice in schools are no longer the same. During the interviews with some lecturers, we noted that some of the theoretical issues need changing or rewriting so that it is more relevant to the real world and the social and educational practices. For example, there is a need to make a clearer revision of the roles of each element in personality formation and development; the concepts of educational goals and objectives are not clear and do not clarify the difference between these two definitions; the teaching process essence is no logical lead and analysis as learners still have to accept it as a mathematical axiom fixed.
- Lack of active teaching methods in teaching this subject (78.4%). When interviewing a number of faculty members, we learned that many faculty are concerned about finding materials and researching how to use modern teaching methods in Education courses.
- Students lacked learning materials are at the number 78.4%, the number of students with low self-learning positivity is 70.3% (with the crucial details are students don’t have good preparation to get or bring important materials to class in Education lessons, informed by lecturers in interviews). Some students do not have learning materials because they do not like studying the subject Education, they are unaware of its role and importance to teacher students’ professional formation and development. Others do not like to learn because the subject contains a lot of theoretical and confusing knowledge.
- Limited teachers' understanding of active teaching methods accounts for 64.9%. In interviews with a faculty staff, 100% of faculty members stated that their level of understanding of active teaching methods was insufficient to use them to teach Education. This is the difficulty not only for the faculty teaching Education but also for the others teaching other subjects in colleges, because the in-depth study in any teaching methods requires seriousness, time-consuming, hard work and financial investment as well as good support from university administrators.
- Limited course length occupies 64.9% in total. For lecturers' opinions, as the current course length stipulated in pedagogical universities, the Education course curriculum for undergraduates consists of 03 credits, of which 02 credits in terms of theories, 01 credit of practice certificate. However this one credit practical program has missions of forming students with 20 teaching competencies in outputs, which sounds impossible for the faculty to do and the quality gained.
- Too large class size accounts for 62.2%. When interviewing a number of lecturers teaching Education at some universities, we know that a typical credit class with the portion of between 70 and 120 students. It is a big problem for faculty members who want to innovate teaching methodology in Education with the intention of increasing practice, reducing theory and focusing on professional skills training.
- Lack of care by the university for teaching method innovation accounts for 48.6%.
- Inadequate education and training programs occupy 45.9% of the main difficulties. It is not appropriate here, as some lecturers’ explanation, in the first two years it is unreasonable for students to learn the subject Education while they have not got adequately knowledge of other basic disciplines such as Philosophy, Physiology, Educational psychology.
- Lecturers’ lack of practical experience with the rate of 27.0%; not yet well teaching skills account for 16.2%; lecturers’ not good preparation for lectures accounts for 16.2%.

Table 9. Lecturers’ difficulties in teaching Education based on case study methodology

| Difficulties                                           | Frequency | Rate % |
|-------------------------------------------------------|-----------|--------|
| 1. Limits in knowledge of case study methodology      | 13.8      | 100.0  |
| 2. Inadequate skills of using the method              | 13.8      | 100.0  |
| 3. Lack of cases                                      | 13.8      | 100.0  |
| 4. Students’ low attempts, self-consciousness and hardworking in learning | 10.3 | 75.0 |
| 5. Students’ lack of learning materials.              | 6.9       | 50.0   |
| 6. Limited course length                              | 10.3      | 75.0   |
| 7. Inadequate textbooks                               | 3.4       | 25.0   |
| 8. lack of teaching equipments                        | 10.3      | 75.0   |
| 9. Too large number of students in a class.           | 13.8      | 100.0  |
| 10. Other difficulties.                               | 3.4       | 25.0   |

Thus, it can be seen that lecturers face many difficulties during their teaching process of Education courses, from determining teaching objectives, teaching contents, selection and use of teaching methods, examining and evaluating students' learning outcomes. These difficulties could be considered as the limits for the effectiveness in teaching Education. In the face of such difficulties, we have researched lecturers’ difficulty in using case study in teaching Education to identify the causes and measures to improve its influence in teaching the subject Education. These difficulties are described more detailed in Table 9.

Table 9 shows lecturers’ difficulties in using the case study method in teaching Education in details:
- 100% of teachers have faced the following difficulties: Limited understandings of the method case study; Not well-versed skills in using this method; lack of cases usable in the teaching process; Too large class size. With the Case Study methodology, the ideal implementation when organizing discussions with 20 to 60 students in class. If the number of class members is too large (over 100 students), the number of groups or members of a group would increase more than normal (7 to 10 students per group), the students do not have the opportunity to lecture, or every member could leave their chances to share ideas in group. The case study methodology implementation could take a lot of time in class, that sounds impossible to complete the 3 credit coursework with high quality.
- 75% of lecturers have met the following difficulties: Students’ low attempts, self-consciousness and activity in the learning process; Lack of teaching equipment; Limited course length.
- Students’ lack of learning materials due to their dependence and lack of self-discipline and learning positivity has become another difficulty for 50% of lecturers teaching this subject. They have no opportunity to complete their curricula. 25% of lecturers believe that the contents of Education courses are not suitable for teaching by case study method.

Some other difficulties are shown in 25% of lecturers such as: Students’ low adaption with this method; lecturers are reluctant to apply regularly case study methodology because of its not yet clearly assessed effectiveness.

3. Conclusion

Thus, the results of the survey on case – study - based teaching Education courses show that:
- Lecturers’ understanding of case study method in teaching Education is very limited. This method is quite unfamiliar to most lecturers teaching Education courses. A considerable number of lecturers have never heard of this method, so most of them have not understand this method in the right way.
- Instructors rarely use the case study methodology in teaching Education due to their lack of understanding of advantages and use of this method in the right way. The majority of lecturers have used presentation as the main lecturing way in Education courses. Of the few lecturers who have used case study methodology in their teaching, most have the goal of transferring new knowledge to students, meanwhile this purpose is not the primary one of case study method in nature. Thus, students’ learning outcomes just get the average level, and have not really distinguished differences with students in the normal lectures (without this methodology).
- In order to be able to develop the methodology in teaching Education courses, the prerequisite is a system of
case studies, which is the main materials for this method. However, educational cases are not really available, so teachers need to search and choose or build them up. This is one of the important reasons why lecturers are difficult to imply this method in teaching Education.

- Advantages of case study methodology in teaching Education courses has not been exploited, so it is essential to organize training workshops for lecturers to improve their understandings of this method, providing theoretical knowledge and ways how to use it in teaching effectively Education courses.

- The reasons of the teaching Education situation basing on case study methodology include:
  + Objective causes include: The in-use textbooks of Education courses in pedagogical universities are not really suitable for students’ self-study in the credit-based training; Students’ low self-consciousness of material preparation for the subject; Inadequate arrangement in curriculum; Lack of unification in active teaching methods and the use of case study methodology in teaching Education. Too large class size is also one of the reasons limiting the teaching effectiveness of this method.
  + Subjective causes include: Lecturers’ lack of information and understanding of modern teaching methods, including the case study method; Limited preparation and application of these methods in teaching Education. The number of young lecturers who have been working for less than 10 years is quite high, so their teaching experience is still limited as their teaching skills have not brought about the desired effect.

A number of measures to help faculty overcome difficulties and improve the effectiveness in teaching Education includes training the faculty to select or build case studies to teach Education courses; Training them the using process in the right way; Organizing lectures for lecturers teaching the methodology of Case Studies; Assigning lecturers to attend lessons by specialists of case study methodology; Adjusting the class size in accordance with the case study method; Adjusting the textbooks to suit students’ self-study. These measures may help faculty overcome the difficulties in teaching Education courses, and at the same time be able to develop students’ professional competencies to meet the requirements of the outcome standards of pedagogical universities.

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