



The pedagogical training management of gifted high school teachers in the region of Red River Delta based on a competency approach

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ABSTRACT

Pedagogical training for teachers is always an important issue of every education system. Teachers impart knowledge, give academic advice to students, and assist students in applying knowledge to develop society. This study investigated the gifted high school teacher pedagogical training management in the region of the Red River Delta according to the competency approach. Based on the available data, the research indicated three main things: (i) Professional pedagogical competence of gifted high school teachers; (ii) Pedagogical training activities for gifted high school teachers; (iii) Management of pedagogical training activities for gifted high school teachers. This study conducted a survey of 547 departmental and school managers in gifted high school teachers in nine provinces in Red River Delta, including Hanoi, Ha Nam, Thai Binh, Nam Dinh, Hai Duong, Hung Yen, Bac Ninh, Quang Ninh, and Vinh Phuc. These findings are only preliminary research, and they will be an important basis for proposing management solutions to improve the effectiveness of pedagogical training activities for gifted high school teachers.

Keywords: professional-pedagogical competence; pedagogical training management; gifted high school teacher; pedagogical skill

INTRODUCTION

The quality of education is always the most prior issue in the world. According to Becker (2009), the economist who won the Nobel Prize in 1992, no investment has yielded a great return as an investment in human resources, especially an investment in education. Education is the process of training people to gain knowledge, master professional skills, have a sense of advancement in science and technology, and become experts or scientists. This process could help learners to achieve the full potentials of intellectuals and create intellectual and talented resources for the country. To have an educational foundation of high quality, it is necessary to have a team of qualified teachers with standard pedagogical skills.

Teachers play a decisive role in the process of "Recognize – Learn – Teach", especially in the reorientation of education. Therefore, the quality of teachers will greatly affect the quality of education. Darling-Hammond (2006) claimed that the quality of instructors had a greater impact on students' learning than the quality of the curriculum, teaching techniques, school building, or parents' role. Moreover, other researchers reported that teacher traits have more effect on student score than class size (Aaronson et al., 2007; Hanushek, 2010; Hanushek, 1992, 1998, 2006; Hanushek et al., 2005). Thus, teachers' pedagogical skills are crucial, and they need to improve and enhance these skills to meet the requirement of developing an educational foundation. Besides, Framework of Competencies Professional development for new teachers should be organized around a set of evidence-based instructional practices (Freiberg & Driscoll, 2000). These abilities assist new teachers in bridging the gap between theory and practice and establishing high-quality learning environments in their classrooms. The tactics are classified as follows: organizing, instructing and assessing (Freiberg, 2002).

To improve the quality of professional training activities for teachers, the management of training activities should be planned in terms of plans, objectives, contents, methods of organization, and conditions of effective development (Nguyen, 2013). Postareff et al. (2007) found a similar effect in those teachers who had pedagogical training courses score lower on the student-centred scale than teachers who did not have any training courses. Additionally, one would assume that the benefits of participating in a pedagogical training

course will manifest themselves only after a while has passed during which a teacher has had the opportunity to reflect on what they have learned and apply their new knowledge (Parsons et al., 2012). Hood and Houston (2016) and Trigwell et al. (2012) showed that this might be the same.

Although the issue of developing and fostering teachers has been a concern for a long time, it has always been the most concerning issue of all the world, including Vietnam. The quality of the teaching staff fully reflects the potential of education. The teaching-educational capacity of teachers is not meet the requirements of educational innovation, especially for gifted education or, this is a special teaching and training program for gifted students who have outstanding ability in a certain field. Owing to the special traits of this type of educational program, teachers need to improve their pedagogy to meet the needs of education. Although the training and improvement of the quality of teachers have been paid attention, the programs of regular, periodical training, standardized and innovative training are not appropriate and have not created confidence and motivation for teachers to change to self-study and self-improve their professional capacity (Pham & Bui, 2017). There has been a lack of study on pedagogical training for teachers in Specialized High schools. To bridge this gap, this study examines the gifted high school teacher pedagogical training management. These research results will be useful scientific bases to propose management solutions to improve the effectiveness of pedagogical training for teachers at gifted high schools in The Red River Delta region and nationwide. The research starts with reviewing the literature on teacher pedagogical training. The second section is a basic analytical framework, including the research methodology, result, and discussion. Finally, the conclusion is in the last section.

METHOD

Participant

The survey subjects were departmental managers, school administrators, and teachers of nine gifted high schools in nine provinces in the Red River Delta: Hanoi, Ha Nam, Thai Binh, Nam Dinh, Hai Duong, Hung Yen, Bac Ninh, Quang Ninh, and Vinh Phuc. The quantitative survey sample was 774 people, including 18 departmental managers, all teachers, and managers of nine gifted high schools (36 school administrators and 720 teachers). The percentage of gender was 53.3% for females and 46.7% for males; Most of the survey respondents have been had working experience from 5 to 10 years (32.6%) and more than ten years (54.9%). Interviews were conducted with three departmental managers encoded from CBQLS1 to CBQL3, five school administrators encoded from CBQLT1 to CQLT5, and five teachers from GV1 to Teacher5.

Instrument

The author built the quantitative survey questionnaire based on the professional standards of teachers and approached the CIPO model in pedagogical training management. Three subscales on the following contents: professional-pedagogical competence of gifted high school teachers, pedagogical training activities for gifted high school teachers, and management of pedagogical training activities for gifted high school teachers. These instruments consist of 4 levels: Not Competent/Not at all guaranteed/Not Performed/Poor and Good Competency/Completely Guaranteed/Very often/Good. Semi-structured interview form for managers at all levels and teachers, including contents related to training activities and management of pedagogical training to find out the causes of this study, factors affecting the research problem.

RESULTS

The reliability results showed that the Cronbach's Alpha of the three scales is higher than 0.8, showing that the internal consistency of the scales is very high (Nunnally & Bernstein, 1994). For this sample, the internal consistency reliability estimate was .983 for professional-pedagogical competence of gifted high school teachers, .957 for pedagogical training activities for gifted high school teachers, .983 for management of pedagogical training activities for gifted high school teachers. As a result, the variables of these scales are significant and reliable. All the items on the scale were calculated; these are reported in Table 1.

Table 1: Internal consistency

Scale	Reliability Statistics	
	Cronbach's Alpha	N of Items
Professional pedagogical competence of gifted high school teachers	.983	5
Pedagogical training activities for gifted high school teachers	.957	9
Management of pedagogical training activities for gifted high school teachers	.983	21

The first subscale was the mean score of all the questions belonging to that scale. There were five components to be examined based on the professional standards of teachers prescribed by the Ministry of Education and Training, including competence for developing personal expertise; Competence for developing teaching and educational plans in the direction of developing students' quality and capacity; Competence for using teaching and educational methods in the direction of developing students' quality and capacity; Competence for

examining and assessing in the direction of developing students' quality and capacity; and Competence for advising and supporting the student. These components were used the five-point Likert with answers ranging from the lowest to the highest, particularly from "no competence" to "good competence". Because the participants of this study were teachers and managers from gifted high schools, this would lead to the difference in the levels of adaption of this competence in teaching and educational activities. Owing to this, the levels of expectation and the actuality of gifted high school teachers' professional pedagogical competence were examined.

Table 2: Professional pedagogical competence of gifted high school teachers

	Actuality		Expectation	
	Mean	SD	Mean	SD
Competence for developing personal expertise	3.80	0.77	4.87	0.35
Competence for developing teaching and educational plans in the direction of developing students' quality and capacity	3.53	0.83	4.87	0.35
Competence for using teaching and educational methods in the direction of developing students' quality and capacity	3.47	0.83	4.80	0.41
Competence for examining and assessing in the direction of developing students' quality and capacity	3.33	0.82	4.80	0.41
Competence for counseling and supporting student	3.13	0.99	4.47	0.52

The survey result showed the gap between actual professional pedagogical competence of gifted high school teachers and expectant professional pedagogical competence of gifted high school teachers in the Red River Delta. The indicator that the highest point was competence for developing personal expertise (M = 3.80, SD = .77), which had 1.07 lower than the expected point. The following indicators were competence for developing teaching and educational plans in the direction of developing students' quality and capacity (M = 3.53, SD = .83); Competence for using teaching and educational methods in the direction of developing students' quality and capacity (M = 3.47, SD = .83); Competence for examining and assessing in the direction of developing students' quality and capacity (M = 3.33, SD = .82). And the lowest point was competence for counselling and supporting students (M = 3.13, SD = .99) which had 1.34 lower than the expected point.

Qualitative results through in-depth interviews clearly explained the cause of this result when most administrators and teachers agreed that teachers (not only in gifted schools) were similar to each other. They were confused and had difficulty implementing innovation in examining and assessing to develop students' quality and capacity. Although the current policy of innovating, examining and assessing capacity has existed for a long time and teachers have been trained, the practical implementation is still limited. The competence for advising and supporting students is rated at the lowest level, partly because the teacher training process has not paid attention to the formation and development of this capacity in teachers (opinion of managers, teachers), partly because the teaching activities of gifted schools are still too focused on academic achievement (teacher's opinion). There is a notable opinion in schools that teams work as consultants for students, so this competence is not too important.

Table 3: Pedagogical training activities for gifted high school teachers

	Mean	SD
Training goals	4.33	1.05
Training contents	3.67	1.05
Training methods	3.67	0.72
Training formations	3.53	0.74
Teams of reporters	3.27	0.88
Facilities, equipment, instruments	3.00	0.85
Funding	2.80	0.77
Training time (time, duration)	3.13	0.74
Regimes and policies for training activities	2.87	0.64
Total	3.36	0.72

The authors measured the pedagogical training activities for gifted high school teachers with nine criteria: Training goals; Training contents; Training methods; Training formations; Teams of reporters; Facilities, equipment, instruments; Funding; Training time (time, duration); and Regimes and policies for training activities.

The results in table 3 reported that among nine items of the pedagogical training activities for gifted high school teachers score, the indicator that Training goal was the highest point (M = 4.33, SD = 1.05); followed by

Training contents (M = 3.67, SD = 1.05); Training methods (M = 3.67, SD = .72); Training formations (M = 3.53, SD = .74); Teams of reporters (M = 3.27, SD = .88); Facilities, equipment, instruments (M = 3.00, SD = .85); Funding (M = 2.80, SD = .77); Training time (time, duration) (M = 3.13, SD = .74); and the lowest point was Regimes and policies for training activities (M = 2.87, SD = .64).

When being interviewed, the managers said that the facilities' equipment for training, regimes and policies, funding, and training time had met the requirements of pedagogical training activities. Meanwhile, for teachers, the funding for training activities was still too low. The regimes and policies for teachers participating in the training were not guaranteed. Teachers wanting to learn external training courses had no financial support. Regarding the training time, teachers said that the training courses had been needed to be adjusted in terms of training time, specifically increasing the duration, especially the time spent on practical activities.

Applying the management model according to the CIPO approach, the authors focused on evaluating the pedagogical training management for teachers at gifted high schools in the Red River Delta on four fields: Input factors management; Process management; Output factors management, and regulation; Adapting to the impact of the context. In the first three fields, the authors used quantitative scale, and for the field that Adapting to the impact of the context, open-ended questions and interviews were used to learn and evaluate the pedagogical training management for teachers at gifted high schools as well as potential causes that were difficult for quantitative research to find.

Table 4: Input factors management

	Mean	SD
Assessment of the professional competence of gifted teachers	3.47	0.64
Identifying the pedagogical training needs of gifted high schools	3.80	1.15
Developing pedagogical training programs in line with goals and practice	3.73	0.80
Full of information about pedagogical training plans to units and teachers	4.20	1.08
Developing plan to manage to fund for training	3.67	1.05
Selecting teams of reporters to ensure requirements	3.87	0.99
Determining the conditions of facilities and equipment for training	3.58	1.13
Total	3.76	0.89

The authors measured the input factors management with seven criteria: Assessment of the professional competence of gifted teachers; Identifying the pedagogical training needs of gifted high schools; Developing pedagogical training programs in line with goals and practice; Full of information about pedagogical training plans to units and teachers; Developing plan to manage to fund for training; Selecting teams of reporters to ensure requirements, and Determining the conditions of facilities and equipment for training.

The results in table 4 reported that among seven items of the input factors management score, the indicator that Full of information about pedagogical training plans to units and teachers was the highest point (M = 4.20, SD = 1.08); followed by Selecting teams of reporters to ensure requirements (M = 3.87, SD = .99); Identifying the pedagogical training needs of gifted high schools (M = 3.80, SD = 1.15); Developing pedagogical training programs in line with goals and practice (M = 3.73, SD = .80); Developing plan to manage to fund for training (M = 3.67, SD = 1.05); Determining the conditions of facilities and equipment for training (M = 3.58, SD = 1.13); and the lowest point was Assessment of the professional competence of gifted teachers (M = 3.47, SD = .64).

Table 5: Process management

	Mean	SD
Building a coordination mechanism between departments and individuals; assigning tasks to people taking responsibility in the training process	3.60	1.06
Ensuring that the implementation of the training program is consistent with the set goals and programs	3.75	1.00
Ensuring the use of modern and active methods in the training process	3.80	1.01
Choosing a form of training that is suitable and flexible with the practical context	4.00	1.03
Ensuring discipline in the training process	3.93	0.97
Using funding for appropriate training	3.64	0.80
Ensuring training materials are printed and provided in full and timely to students	4.07	0.96
Ensuring conditions of facilities, equipment, and teaching instruments during the training process	3.93	0.94
Ensuring training time (right time, adequate duration)	3.52	1.13
Total	3.80	0.92

The authors measured the process management with nine criteria: Building a coordination mechanism between departments and individuals; assigning tasks to people taking responsibility in the training process; Ensuring

that the implementation of the training program is consistent with the set goals and programs; Ensuring the use of modern and active methods in the training process; Choosing a form of training that is suitable and flexible with the practical context; Ensuring discipline in the training process; Using funding for appropriate training; Ensuring training materials are printed and provided in complete and timely to students; Ensuring conditions of facilities, equipment, and teaching instruments during the training process; and Ensuring training time (right time, adequate duration).

The results in table 5 reported that among nine items of the process management score, the indicator that Ensuring training materials are printed and provided in full and timely to students was the highest point (M = 4.07, SD = .96); followed by Choosing a form of training that is suitable and flexible with the practical context (M = 4.00, SD = 1.03); Ensuring discipline in the training process (M = 3.93, SD = .97); Ensuring conditions of facilities, equipment, and teaching instruments during the training process (M = 3.93, SD = .94); Ensuring the use of modern and active methods in the training process (M = 3.80, SD = 1.01); Ensuring that the implementation of the training program is consistent with the set goals and programs (M = 3.75, SD = 1.00); Using funding for appropriate training (M = 3.64, SD = .80); Building a coordination mechanism between departments and individuals; assigning tasks to people taking responsibility in the training process (M = 3.60, SD = .06) and the lowest point was Ensuring training time (right time, adequate duration) (M = 3.52, SD = 1.13).

Table 6: Output factors management and regulation

	Mean	SD
Organizing assessment of output results according to competency standards	2.32	0.83
Collecting students' feedback on the effectiveness of the training course	2.81	0.72
Collecting feedback from schools on post-training teachers	2.65	0.74
Management of certifications, certificates, diplomas	4.05	0.91
Supporting and advising for teachers and schools after training	2.96	0.82
Total	2.96	0.84

The authors measured the output factors management and regulation with five criteria: Organizing assessment of output results according to competency standards; Collecting students' feedback on the effectiveness of the training course; Collecting feedback from schools on post-training teachers; Management of certifications, certificates, diplomas; and Supporting and advising for teachers and schools after training. The results in table 6 reported that among five items of the output factors management and regulation, the indicator that management of certifications, certificates, diplomas was the highest point (M = 4.05, SD = .91); followed by Supporting and advising for teachers and schools after training (M = 2.96, SD = .82); Collecting students' feedback on the effectiveness of the training course (M = 2.81, SD = .72); Collecting feedback from schools on post-training teachers (M = 2.65, SD = .74); and the lowest point was Organizing assessment of output results according to competency standards (M = 2.32, SD = .83).

Most of the participants agreed that the contextual factors affecting the pedagogical training and management activities for gifted high schools' teachers in the Red River Delta, including relevant mechanisms and policies, the context of educational innovation and the implementation of the 2018 high school education program, the need of human resources for gifted high schools... With the interview questions such as what activities do the units of the teachers do and measures used to adapt to the impact of these contextual factors, the most answer was promoting training at school and encouraging teacher self-improvement activities. It can be said that on-the-job training and promoting the self-improvement role of teachers could overcome the lack of a separate pedagogical training program for teachers at gifted high schools, and meet the training needs of teachers and schools, reduce costs, take advantage of local resources. This is one of the important bases for managers in creating solutions to improve the effectiveness of training and management of pedagogical training for teachers at gifted schools.

DISCUSSION

This study investigated the gifted high school teacher pedagogical training management in the region of the Red River Delta according to the competency approach. Based on the available data, the research indicated three main things: (i) Professional pedagogical competence of gifted high school teachers; (ii) Pedagogical training activities for gifted high school teachers; (iii) Management of pedagogical training activities for gifted high school teachers.

The first field was the Professional pedagogical competence of gifted high school teachers, which had the highest score was competence for developing personal expertise, and the lowest score was competence for counselling and supporting students. In general, if compared with the levels, the pedagogical competence of the teachers at the gifted high schools in the Red River Delta is only at the Quite Good level, in which Competence for counselling and support students, Competence for examining and assessment in the direction of quality

development, student capacity is only average. Therefore, the professional-pedagogical competence of gifted high school teachers in the region of the Red River Delta needs to be improved to upgrade their pedagogical skills to have numerous changes in their career paths. Rahman (2014) indicated that pedagogical competence enhances the teacher's performance because the capacity to manage the learning material of the teacher would be delivered to students effectively through a variety of techniques, and the teachers could choose appropriate forms of media material to be taught.

With the Pedagogical training activities for gifted high school teachers, the highest score was the Training goal, and the lowest score was Regimes and policies for training activities. The professional-pedagogical training activities for gifted high school teachers were just at the average level, though several factors had high scores. All participants agreed that the development of training goals has focused on improving the quality of teachers to meet the general requirements of professional standards and the requirements of innovation of high school education programs. From clearly and accurately identifying the training goals, the training contents have also begun to be built in accordance with the training goals associated with the developmental capacity orientation, which are the necessary contents of the training courses. Thus, teachers participating in pedagogical training activities bring about numerous benefits for their professional pedagogical competence. When teachers lack access to pedagogical training, they might be unaware of improved teaching skills (Postareff et al., 2007). Nowadays, the training methods are also gradually innovated which exploiting the activeness of students. The choice of form of training is also more flexible to suit the actual conditions, especially the online form of training in the context of the COVID-19 pandemic but it is still necessary to consider and evaluate the effectiveness of the training program seriously and scientifically.

Additionally, the present study presented that the management of pedagogical training activities for gifted high school teachers was just met the higher average level. To begin with the input factors management, the items Assessment of gifted teachers' professional competence was underrated. Because each instructor must own their pedagogical competence to carry out their learning duties (Rahman, 2014). Most teachers believed that "the assessment of professional competence is still formal, sometimes lacking in objectivity and fairness". Although Identifying the pedagogical training needs of gifted high schools is highly appreciated. Still, some administrators said that "the needs of the school have not been taken care of. The fostering work has not focused on the unique characteristics of gifted schools"; "training activities at the school are organized based on the training needs of teachers. If they are provided by the department or granted by the higher organization, most of the training is shared with other schools, and the training program is often not the need of the school".

Then, the process management had the items with the highest score was Ensuring training materials were printed and provided in full and timely to students. The lowest score was Ensuring training time (right time, adequate duration). In general, in the management of training activities, the management subjects have paid great attention to ensuring the implementation of the training program in accordance with the training goals. Moreover, the conditions of facilities, equipment, and teaching facilities are also increasingly modernized, discipline in fostering activities is also ensured, forms of training are selected flexibly. However, there are still limitations, such as training time. A teacher gave an opinion that departments of management need to arrange a more reasonable training schedule. Another teacher said that the management of training time is relatively lax. Most of the training sessions were not guaranteed to meet the announced duration. Building a coordination mechanism between departments and individuals; assigning tasks to people taking responsibility in the training process has not been done well. Sometimes problems arise during the training process, but it is not timely handled because there is no responsible person. The main management mechanism is still only one-way from top to bottom. The lack of coordination mechanism and unclear assignment of tasks would lead to the unexpected effectiveness of organizing the training.

The output factors management and regulation with the item that management of certifications, certificates, diplomas was the highest score; and Collecting feedback from schools on post-training teachers was the lowest score. It showed that the assessment of teachers according to the post-training competency standards has not been done well. Examination and assessment activities do not incentivise teachers to actively participate in learning and do not help managers evaluate training effectiveness. Collecting feedback to find out the thoughts, aspirations, and evaluations of teachers and schools about the training is a necessary activity because it will point out the advantages and disadvantages of each training session. Therefore, school administrators should be taught the students about feedback literacy. Student feedback literacy development is essential to improve feedback processes and broader efforts to enhance student learning outcomes (Carless & Boud, 2018). However, suppose this activity is not taken seriously. In that case, it will not help the managers have a basis to make decisions to adjust and change for the next training sessions and sometimes lose interest and beliefs of teachers. After training, the support and advice for teachers and schools have not been organized synchronously, and networks of exchange, learning experiences, and support after each training course have not been formed. This is a problem that management subjects need to pay attention to and have solutions to overcome. Doing this well will help maintain efficiency and bring sustainable benefits from training courses.

In the Adapting to the impact of the context, the authors indicated that factors in the context affecting the training activities and pedagogical training management of gifted high schools' teachers were relevant mechanisms and policies, the context of educational innovation, and the implementation of the 2018 high school education program, the need of human resources for gifted high schools. This is a crucial foundation for managers when developing ways to increase the efficacy of teacher training and management in gifted schools.

CONCLUSION

Pedagogical training is an important component in the development of teachers in each country. Improving the quality of pedagogical training requires appropriate and accurate management solutions. The results of this study have shown that the activities of fostering and managing pedagogical training for teachers of gifted high schools in the Red River Delta still have many limitations such as the development of content and training programs have not come from the training needs of schools and teachers; Do not have paid attention to the collection of information and feedback from schools and teachers about the effectiveness of training; The time to organize the pedagogical training is not reasonable. One of the main reasons that many people agree with is the lack of organizing separate pedagogical training sessions for teachers of gifted schools. Although these findings are only preliminary research, they will be an important basis for proposing management solutions to improve the effectiveness of pedagogical training activities for gifted high school teachers.

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