

International Conference on Education & Educational Psychology 2013 (ICEEPSY 2013)

Guided reflection for supporting the development of student teachers' practical knowledge

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Abstract

In this study we introduce a guided reflection procedure that aims to support student teachers in developing knowledge based on their practical experiences and by linking this with theoretical knowledge. Student teachers (n=22) with varying prior teaching experiences carried out the guided reflection procedure at a university in Estonia. In an empirical study we focused on student teachers' experiences and feedback on the guided reflection procedure. Data was collected with interviews and group interviews, and analysed employing a thematic analysis method. The findings showed that the perceived value of the reflection procedure is related to student teachers' prior pedagogical experiences.

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Selection and peer-review under responsibility of Cognitive-counselling, research and conference services (c-crcs).

Keywords: guided reflection; teacher's practical knowledge; initial teacher training; school practicum; student teachers

1. Introduction

Teacher education programs in Europe and beyond have been criticized in the past for leaving a “gap” between theory (i.e. research-generated knowledge) and practice (see for example, Kansanen et al., 2000; Korthagen, 2001; Meijer, 2010; etc.). In response, teacher education programs are nowadays aiming to support the development of student teachers' practical knowledge, accumulated wisdom, and the know-how teachers construct through experience and which is the basis for dealing with every-day teaching situations and linking

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this with research-generated knowledge (Meijer, 2010) in order to better prepare students for their professional career. The teacher reflection has been considered a dominant activity for developing practical knowledge and linking it with educational theories in teacher training programs (Korthagen, 2001, 2004; Korthagen & Vasalos, 2005; Korthagen & Wubbels, 1991, 2000).

1.1. Reflection in teacher education

Reflection can generally be defined as a cognitive process carried out in order to learn from experiences through individual inquiry and collaboration with others (Benammar, 2004; Dewey, 1933; Mezirow, 1991; Moon, 2004; Schön, 1983). Regarding teacher education, reflection is commonly reported as a process of self-examination and self-evaluation that teachers should engage in regularly in order to interpret and improve their professional practices (Husu, Toom, & Patrikainen, 2008). Based on studies of students and teachers in professional educational practices, Schön (1983) found that practitioners engage in two types of reflection: reflection in action and reflection on action, in which experience and reflection are related differently. Reflection on practice is commonly practiced in teacher education. However, the results of reflection assignments implemented in the teacher education context (mostly assignments that promote reflection on action) are often disappointing (see e.g. Abou Baker El-Dib, 2007; Lee, 2005; Mena, García, & Tillema, 2011a). One of the problems is that a majority of students' reflection result in mere descriptions of practice and not a critical evaluation or re-framing of their understandings.

The procedure of reflection on action that is currently so extensively used in teacher education seems, therefore, to support student teachers' stories of (their) teaching rather than enhancing them in reviling knowing-in-action (Schön, 1983) or a code of practice (Mena, García, & Tillema, 2011b). Student teachers need to be supported more effectively to extract "patterns" from the local activities in order to develop a theory of the action. Such abstraction is needed to find the most effective strategies, rules, or principles for practice as already proposed by Shulman (1987). Several scholars (Brown, Collins, & Duguid, 1989; Leinhardt, 1988) suggest that knowledge should be investigated in the situation in which it is being used; in other words, teachers' cognitions and actions should be investigated while they are teaching because during teaching, knowing and acting are inseparable. Therefore, instead of reflection on action, the procedures for illuminating student teachers' reflection in actions are needed to reveal effective strategies, rules, or principles for practice that Mena et al. (2011b) summarize as action-oriented knowledge.

1.2. Supporting reflection in action in teacher education

To engage in reflection on experiences, an individual's active participation is required (e.g. Moon, 2004; Procee, 2006; Schön, 1983). Dewey (1933) stated that reflection requires attitudes that value one's own and others' personal and intellectual growth. Moreover, several authors agree that in addition to the requirements of active involvement, reflection needs to happen in community in interaction with others (e.g. Benammar, 2004; Dewey, 1933; Leijen, Valtna, Leijen, & Pedaste, 2012; Procee, 2006). This enables individuals to share and learn from experiences and ideas from others' perspectives, (re)interpreting and developing their own perspectives further. The potential methods for developing action-oriented knowledge have been found to be the guided reflection procedure (Husu et al, 2008; Leijen, Lam, Wildschut, Simons, & Admiraal, 2009; Sööt & Leijen, 2012) and the stimulated recall procedure (Meijer, Zanting, & Verloop, 2002). In the course of the current study the guided reflection procedure proposed by Husu et al. (2008) was further developed (see section 2.2.) and tested among student teachers in a university in Estonia. Owing that reflection in action emphasises students' active involvement in the learning process, we formulated the following research questions: How did student teachers experience the developed guided reflection procedure? What was the participants' perceived effectiveness of the

guided reflection procedure for supporting the development of student teachers' practical knowledge and linking this with research-generated knowledge?

2. Method

2.1. Participants

Twenty-two student teachers (all female; 17 students aged 22-24, four students aged 25-30, one student aged 49) from three teacher education curricula (eight students following the subject teacher in basic education curriculum, seven students following the class teacher curriculum, and seven students following the kindergarten teacher curriculum) carried out the guided reflection procedure in the course of their regular curricula activities during school practicum. Students following the subject teacher curriculum carried out their first teaching assignments during the school practicum. Students following the two other curricula had more teaching experiences; they carried out their final teaching practice (kindergarten teacher curriculum students) or a major teaching practice in an age group (class teacher curriculum students).

2.2. Guided reflection procedure

As described earlier, the premise of the guided reflection procedure is to develop such pedagogical practices in teacher education that are effective in enabling student teachers to construct professional agency and acquire such knowledge and skills they need when they enter into the teacher profession. Theoretically, the model is based on Deweyan (Dewey, 1933) definition of reflection as systematic and a rigorous way of thinking, and it emphasizes student teacher's personal aims and goals of learning, interaction with others, spoken and written reflection, and time used for prolonged reflection. The procedure consists of three stages:

I stage: Selecting instances for reflection. A lesson (or a part of a lesson in the case students following the subject teacher curriculum) taught by student teachers was recorded. Two days after the recording, student teacher viewed the whole recorded lesson and selected two critical instances for further reflection. One instance had to be positive; student teacher had to find an aspect that they were very satisfied with. The second instance was called a challenge, students were asked to identify an aspect that they wished to develop further.

II stage: Oral reflection took place a week after student teachers had selected the instances for reflection. During this phase students reflected on the selected instances following guided questions:

- 1. What is happening? 1.1. What can you see/hear yourself doing? 1.2. What can you see/hear the pupils doing? 1.3. Is there a relationship between what you are doing and what pupils are doing?
- 2. Why do you think this is happening? 2.1. Which pupils' behaviours are caused by your behaviour? 2.2. Which behaviour of yours is caused by the pupils' behaviour? 2.3. What makes the incident a critical incident for you?
- 3. Relating the incident to theory. 3.1. Which teacher role does the incident relate to? 3.2. How does literature support your causal explanation under 2 (in case of a positive incident)? 3.3. What suggestions does literature offer towards solving your problem (in case of a challenging incident)?
- 4. What have you learned from this event so far? How will you make use of those things that you have learned from this event?

This phase was carried out in three conditions: with a supervisor (seven student teachers), with a peer student (six student teachers), and alone (nine student teachers). Students were divided into different groups of oral reflection based on their preferences.

III stage: Written reflection took place one to two weeks after the oral reflection. During this phase student teachers reflected on the selected instances in an individual writing assignment. They followed the following guiding questions:

- 1. Relating the incident to theory. 1.1. Which teacher's role does the incident relate to? 1.2. How does literature support your causal explanation under 2 (in case of a positive incident)? 1.3. What suggestions does literature offer towards solving your problem (in case of a challenging incident)?
- 2. What will be your future action? 2.1. What will be your future action regarding this incident? 2.2. What do you hope to achieve by this action? 2.3. What personal principle underlies your choice of action?
- 3. How will you make use of those things that you have learned from this event?

2.3. Data collection and analysis

Data about the student teachers' experiences with the guided reflection procedure was collected with six semi-structured group interviews and five individual interviews (in case students were not able to participate in a group interview) after student teachers had carried out the above described three phases of reflection. Altogether 17 students participated in a semi-structured interview in a group of 2-4 students. With two students, an individual semi-structured interview was carried out and three students answered the interview questions in writing. The answers of students participating in different interview groups did not differ substantially. The only major difference was that the answers given in writing were shorter. All of the major themes and most of the subthemes emerged. All interview questions focused on the guided reflection procedure. All interviews were recorded and fully transcribed. Data was analysed by the lead researcher using a thematic analysis (Ryan & Bernard, 2003) method. Thematic analysis is an inductive method of analysis containing a series of steps. First, open coding was applied to identify themes and subthemes occurring in the data. Second, the identified themes and subthemes were organized under wider categories. Third, all data was analysed based on the developed wider categories.

3. Results

This study aimed to clarify how student teachers experience the guided reflection procedure described in the section of methods and to analyse its perceived effectiveness in the context of supporting student teachers' practical and research-generated knowledge. Next, we introduce the main findings according to several stages of the procedure: what benefits and fears were revealed in using video recordings during the guided reflection procedure, what has been learned from conducting oral and written reflections, and which relationships can be found between the guided reflection procedure and the personal goals for the practice. Finally, some proposals for improving the procedure were made.

3.1. Video viewing

In general, most of the students following class teacher and kindergarten teacher curriculum pointed out that the video viewing helped them to observe the recorded lesson as a bystander. Many of them said that due to the video viewing they noticed details about themselves or pupils that they would not have noticed otherwise. The most commonly mentioned details about themselves were the sound of their voice, body language, and vocabulary. Moreover, many of the students following class teacher and kindergarten teacher curriculum said that their supervisor did not pay attention to the aspects that they saw from the video and considered to be important. Therefore, many of the important aspects that the students themselves pointed out as areas of improvement would not have emerged in the sessions with their supervisors. At the same time, the challenging aspects that student teachers pointed out were not usually negative. Students saw many of the challenges as opportunities for further development. In addition, many positive characteristics were noticed that in students words increased their self-confidence. Many students following class teacher and kindergarten teacher curriculum also pointed out that their initial feelings in the course of teaching the lesson were often more insecure and negative in comparison to their feelings after having viewed the lessons on video. Therefore, seeing oneself on video seemed to give them

assurance that the lesson did not go as bad as the first-hand emotions suggested. Many of the students said that it is entirely different to see yourself doing something rather than hearing someone saying you did something. The video is like a living proof that cannot be neglected.

Moreover, many of the students following class teacher and kindergarten teacher curriculum stated that the observations made on the bases of the video helped them during the next lessons. They explained that they were more aware of the aspects seen on video and tried to avoid the same mistakes. A couple of students added that the observations also improved their communication skills outside the school environment. Half of the students following class teacher and kindergarten teacher curriculum also pointed out that as beginning teacher they place more emphasis on the activities related to the lesson. Therefore, less attention is paid on pupils. Students explained that the video enabled them to observe each pupil individually if necessary.

The results concerning video viewing were different for students following the subject teacher curriculum. Most of them could not point out how the viewing of the recorded lesson helped them. Many of them mentioned that due to the lack of prior experience it is difficult to point out any benefits. Only a few students stated that the video viewing helped them to notice aspect about their voice or body language which they were not aware of. Some of them believed that it would be beneficial to watch the video in the future and to compare the progress that has been made. The majority of students following the subject teacher curriculum also believed that the procedure of guided reflection would be more beneficial during the final school practicum.

Several students pointed out that the thought of filming and viewing a video of oneself was rather frightening. The majority of students described the initial experience to be very odd because they were not used to seeing themselves on video, especially in the role of a teacher. Quite a few students stated that they did not dare to watch themselves and were a bit embarrassed. In addition, some students were concerned about the opinions of other people who might see the video. Almost all of the students following the class teacher and kindergarten teacher curriculum stated that the feeling of awkwardness disappeared when they continued watching the video and many useful observations were made about themselves and/or pupils. In addition, all of the participants affirmed that the filming did not disturb the actual lesson.

3.2. Oral and written reflection

Almost every student following the class teacher and kindergarten teacher curriculum stated that the separate stages of reflection contributed to a more profound analysis of the selected instances. Similarly, many of the students mentioned that with each stage of reflection new ideas emerged. Furthermore, most of the students pointed out that the questions guided them to think in a different way. In particular, the analyses from pupils' standpoint were considered important. Students were more used to carry out self-related reflections but, due to the guided reflection procedure, the conscious consideration of pupils was added.

In comparison with previous analyses, most of the students following the class teacher and kindergarten teacher curriculum found the reflections of this procedure to be more thorough and explicit. Most of the students stated that their previous analyses were more general and somewhat superficial. Most of the students pointed out that this procedure supported the profound analysis of concrete instances, which was considered more useful. Many of the students emphasized the bystander's viewpoint that gave the objective glance to one's reflection. In addition, some of the students mentioned the advantage of prolonged reflection that supports the settling of the instances. Therefore, the potential improvements of their teaching practice resulted from the guided reflection procedure were more easily adoptable.

The results relating to the reflections were different for students following the subject teacher curriculum. Most of the students could not point out how the reflection procedure helped them. For students following the subject teacher curriculum the most important feedback was the one given by the supervisor. All of them stated that the supervisor supported the analysis of emotions and thoughts that did not emerge from the video or from

the reflections. In the opinion of the majority of the students following the subject teacher curriculum, the self-related feelings and thoughts were the most important aspects of their reflections.

More than half of the students who conducted the oral reflection alone described that it was difficult to reflect without assistances. Therefore, they felt that they did not get as much benefit from the procedure as those reflecting with somebody. The students explained that the guidance of someone would have contributed to their reflection. Most of the students who conducted the oral reflection with a peer or a supervisor pointed out that it was easier to reflect with another person. Some students explained that a supervisor or a peer helped to guide the reflection and gave the questions more understandable content. One of the students who reflected with a peer stated that the peer helped to ease the tension and to make the situation more pleasant. Many of the students who conducted the oral reflection with a supervisor or a peer believed that the reflection would not have been as beneficial when reflecting alone. Several students following the subject teacher curriculum found the oral reflection following the guided reflection procedure not to be as useful as the immediate feedback given by the supervisor.

The guided reflection procedure consisted of three stages. In general, the majority of students were content with the division of different stages. Students stated that the current division provided enough time to be engaged in different stages. Most of the students did not find any difficulties with finding the time necessary for the different stages. A couple of students pointed out that the reflections were time-consuming. Only a few of the students stated that the different stages of reflections could take place more closely so that the memories would be more vivid. At the same time, they explained that the division of stages contributes to the objectivity of reflections.

3.3. The relationships between the guided reflection procedure and the personal goals for the practice

Almost every student following the class teacher and kindergarten teacher curriculum stated that the procedure helped them to consider to what extent they had fulfilled their personal goals for their practice. Two students admitted that they just did not pay enough attention to the specification of personal goals and for this reason they could also not evaluate how the reflection procedure helped them to achieve the personal goals. For the students following the subject teacher curriculum it was their first experience to give a lesson; therefore, most of the students stated that their main goal was merely to give a lesson. Almost every student following the subject teacher curriculum felt that the procedure did not contribute to the fulfilment of her goal for practice. One of the students pointed out that the feedback from her supervisor contributed to the fulfilment of her goal for practice.

All of the students following class teacher and kindergarten teacher curriculum stated that the guided reflection procedure was beneficial and necessary and it should be a compulsory part of practice. Couple of students indicated that the reflection procedure would benefit in-service teachers as well as pre-service teachers. Most of the students said that the procedure should be done several times so that one can have the opportunity to assess one's progress. Many of the students also mentioned that the assignment could be beneficial for their earlier practices. Nevertheless, the majority of the students suggested that the filming should not take place in the first lessons. They explained that the procedure is more beneficial when the student feels more comfortable with the pupils.

Most of the students following the subject teacher curriculum did not find the guided reflection procedure beneficial due to the lack of prior experiences. Moreover, since no practical experiences followed the assignment, they had no practical opportunities to improve their teaching practice. Most of the students following the subject teacher curriculum stated that the assignment would be more beneficial during the further stages of practice. Some prior experience was considered necessary to reflect on one's actions.

3.4. *Proposals for improvement*

Most of the students found the questions and instructions to be clear. Many of the students pointed out that the questions were guiding and they had a good focus. Nevertheless, students made several well-grounded proposals of how to make the questions and instructions even more clear. Most of the proposals consisted of suggestions to add some explanations or examples to some questions in order to make them more unambiguous. Almost half of the students pointed out that the questions could be broader in order to be adapted for different instances. In addition, several students felt that they wanted to discuss about more aspects during the reflections but there was no place for that. Furthermore, some of the students experienced that there should be a question about the lesson as a whole as well. Students explained that the different parts of lessons are interrelated thus background information would help to explain the instances better. Similarly, some students felt that a question about the emotions during the lesson would benefit the reflections.

All of the students stated that at least to some extent they struggled with the questions relating the instances to theory. These questions were about teacher role and literature support. Many students pointed out that they did not know where to find the literature and theoretical basis. Some students stated that they have a general knowledge but they could not relate it to specific theories. In addition, many students indicated that they lack pedagogical knowledge to reflect on the selected instances.

4. Discussion

In this article we introduced and improved a guided reflection procedure that was developed based on an earlier version proposed by Husu et al. (2008). The developed guided reflection procedure is based on the Deweyan approach to reflection and developed to enhance student teachers' reflection in action (Schön, 1983). Owing that reflection in action emphasises students' active involvement in learning process, we designed an empirical study that focused on students' experiences and their feedback on the developed guided reflection procedure. Student teachers from three teacher education curricula carried out the guided reflection procedure.

In general, most of the students following the class teacher and kindergarten teacher curriculum stated that the guided reflection procedure supported the development of their practical knowledge, as was expected based on several authors (Husu et al., 2008; Leijen et al., 2009; Sööt & Leijen, 2012). These student teachers had several pedagogical experiences from different school practicums and they were probably prepared to conduct reflection regularly in order to interpret and improve their professional practice as indicated by Husu et al. (2008). Contrastingly, we found that students without any previous teaching practice experienced difficulties with the guided reflection procedure and usually failed to point out benefits of this procedure. The aim of the reflection is to learn from practical experiences (Benammar, 2004; Dewey, 1933; Mezirow, 1991; Moon, 2004; Schön, 1983), the findings of the current study show that student teachers might require a more solid base of practical experiences in order to be able to benefit from the developed guided reflection procedure.

Results of the current study also indicate that during the preliminary stage of practical experience it is difficult for students to move beyond their personal thoughts and feelings. In the current study, students following the subject teacher curriculum had their first teaching experiences. During the analysis, the students focused above all on themselves. The majority of the students stated that self-related thoughts and feelings were the most important aspects of their experience. The students valued the feedback from their supervisors and reported it to be the most important assurance they actually needed. The results are in accordance with the indications of Husu et al. (2008), stating that student teachers usually move from self-related concerns towards task-related and impact-related reflection. The above-described findings indicate that depending on their prior teaching experiences, students seem to require different focus and guidance of reflection activities.

In line with several authors (e.g. Benammar, 2004; Dewey, 1933; Leijen et al., 2012; Procee, 2006), the results of the current study show that reflection should happen in interaction with others. The majority of participants stated that the oral reflection conducted with a supervisor or a peer is more beneficial than reflecting alone. As mentioned by Mena et al. (2011a), students felt that they needed to be guided in order to reach a more profound analysis of the instances and further development of their own perspective. At the same time it is noted that there is a “gap” between student teachers’ practical and theoretical knowledge (see for example, Kansanen et al., 2000; Korthagen, 2001; Meijer, 2010; etc.). Results of the current study indicate that students have difficulties relating practical experiences to theory. The guided reflection procedure helped students to become aware of the shortages and promoted the development of a linkage between theory and practice.

Acknowledgements

This project is carried out with the support of the Lifelong Learning Programme of the European Union (no. 526318-LLP-1-2012-1-EE-COMENIUS-CMP).

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