Investigating the Preservice Teachers' Knowledge Sources for Classroom Management: A Case Study

Öğretmen Adaylarının Sınıf Yönetimine Dair Bilgi Kaynaklarının İncelenmesi: Bir Örnek Olay Çalışması

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Abstract

Preservice teachers' classroom management knowledge is gained through varied teaching and learning experiences, yet limited research exists on its sources. Following a case study methodology, this research investigated sources of classroom management knowledge in the context of a classroom management course offered during the spring semester of a four-year teacher education program at a public university in Turkey. Study participants included 25 preservice teachers enrolled in the course. Data collection sources included a classroom management philosophy assignment, reflections, midterm exams, and a classroom management plan. Data analysis revealed that preservice teachers attributed their knowledge about classroom management to sources such as their teacher education program, literature, past teachers, student experiences, personal characteristics, and teaching experiences, as well as friends, colleagues, teacher acquaintances, conferences, mentor teachers, and their families. The analysis revealed that each knowledge source provided preservice teachers with different opportunities to observe, practice, and reflect on classroom management strategies and concepts.

Keywords*: Knowledge sources; classroom management; preservice teachers; teacher education.*

Özet

Öğretmen adaylarının sınıf yönetimi bilgi kaynakları ile ilgili az sayıda çalışma olmasına rağmen, birçok öğrenme ve öğretme deneyimi sonucunda bu adaylar sınıf yönetimi bilgisi elde etmektedirler. Bir örnek olay çalışması olarak bu araştırma Türkiye'de bir kamu üniversitesinde dört yıllık öğretmen eğitimi programının bahar döneminde sunulan sınıf yönetimi dersi kapsamında, öğretmen adaylarının sınıf yönetimine dair bilgi kaynaklarını incelenmektedir. Dersi alan 25 öğretmen adayı çalışmaya katılmıştır. Sınıf yönetimi felsefesi ödevi, yansıtıcı düşünme, ara sınav ve sınıf yönetimi planı veri toplama aracı olarak kullanılmıştır. Yapılan analizlere göre, öğretmen adaylarının bilgi kaynakları önem sırasına göre öğretmen eğitimi programı, alanyazın, geçmişteki öğretmenleri, öğrenci deneyimleri, kişisel özellkleri, öğretmenlik deneyimleri, akranlar, iş arkadaşları, öğretmen tanıdıkları, konferanslar, mentor öğretmenleri ve aileleler olarak ortaya çıkmıştır. Çalışma sonuçları bilgi kaynaklarının öğretmen adaylarına farklı açılardan sınıf yönetimi stratejileri ve kavramlarını gözleme,

uygulama ve yansıtma olanağı sunduklarını göstermiştir.

Anahtar Kelimler: *Bilgi kaynakları, sınıf yönetimi, öğretmen adayları, öğretmen eğitimi.*

1. Introduction

Recent research on the qualities of effective teaching has addressed the need for investigating what teachers know and the complex ways this knowledge develops (Driel & Berry, 2012). Experiences in teacher education programs as well as the practice of teaching itself have significant impacts on how teachers gain knowledge (Berry, Loughran, & Van Driel, 2008). Shulman (1987) claimed that to ensure a firm foundation, teacher education reform must consider teacher knowledge and its sources. Among this knowledge, classroom management has been designated one of the most important for preservice teachers (Piwowar, Thiel, & Ophardt, 2013). Evertson and Weinstein (2006, 4) "describe classroom management as the actions teachers take to create an environment that supports and facilitates both academic and social emotional learning," while new and preservice teachers continuously identify it as one of their greatest challenges (Hayden, Levy, &Thompson, 2007).

Learning to manage one's classroom is an ongoing and developmental process affected by both personal and contextual elements, and varied experiences in teacher education make significant contributions to the development of classroom management knowledge (Emmer & Stough, 2001). While relevant research has identified what classroom management is and how this knowledge is disseminated through teacher education programs, limited literature exists on the sources preservice teachers use to form classroom management concepts. Understanding how preservice teachers acquire knowledge and from what sources should provide teacher educators, researchers, and administrators with a stronger foundation for teacher education programs.

Knowledge base for classroom management

Classroom management usually involves teacher actions to promote student engagement, maintain order, and foster student cooperation (Reupert & Woodcock, 2010). According to Marzano, Marzano, and Pickering (2003, 8), "There are four general components of effective classroom management: (1) rules and procedures, (2) disciplinary interventions, (3) teacher-student relationships, and (4) mental set". Ideally, classroom management style should be in line with instructional goals, activities, and characteristics of students (Emmer & Stough, 2001). It is also associated with effective lesson preparation, cooperation with students, time management, meaningful curriculum integration, and appreciation of learner differences (Shindler, 2010). Classroom management knowledge spans a diverse range of theories and approaches regarding the roles of students, teachers, and schools in society (O'Neil & Stephenson 2012). For instance while some approaches emphasize behaviour management and discipline (Reupert & Woodcock, 2010), others focus more on positive aspects, such

as the facilitation of social interaction and self-motivation (Jones, 1989).

How preservice teachers gain classroom management knowledge

Teacher education courses are the most common contexts for gaining knowledge about teaching. Garrahy, Cothran, and Kulinna (2005) investigated classroom management knowledge sources and found that only one participant credited her coursework as a contributing factor, while other teachers agreed that their programs either provided minimal information on this topic or were taught in a way that was not applicable to a real school setting. Winitzky and Kauchak's (1995) study with elementary education students revealed that teacher candidates stressed fieldwork with children as the source of their classroom management knowledge over university courses or demonstrations.

Classroom management has been specifically explored within Turkish teacher education contexts. Two of the most commonly examined areas are the beliefs of teachers about classroom management (Polat, Kaya, & Akdağ, 2013) and the difficulties teachers face regarding student misbehaviour (Tanhan & Şentürk, 2011). While a few studies have reported past and current experiences of preservice teachers regarding classroom management (Erol, Özaydın, & Koç, 2010; Şentürk, 2006), the literature offers limited attention to the sources of this knowledge.

Teacher education programs incorporate classroom management courses in their curriculum to improve preservice teachers' competencies. These courses integrate various strategies, such as writing reflection papers (Balli, 2011), role playing (Koç, 2011), analysing hypothetical or actual case studies (Demiraslan-Cevik & Andre, 2013), participating in field experiences (Anderson, Barksdale & Hite, 2005), attending in-class and online discussions (Scherff & Singer, 2012), drawing concept maps (Muirhead, 2006), attending interactive computer-based simulations (Girod & Girod, 2008), observing classrooms (Mansfield & Volet, 2010), and reviewing videos (Altınay-Gazi &Altınay-Aksal, 2011). These approaches aimed to help preservice teachers understand the complexities of classroom management that they may encounter in the future. However, a disconnection between what preservice teachers learn in their coursework and what they practice in real classrooms is frequently reported in the literature. Hence, teacher educators have incorporated experiences to increase practical knowledge. Microteaching is a common method that provides preservice teachers' opportunities to practice classroom management skills with their peers and receive immediate feedback. Observations of experienced and mentor teachers' classroom management strategies in the field are also helpful in providing preservice teachers insight (Danielson, 2012; Sempowicz, 2011).

Purpose of the study

Few studies have examined the impact of classroom management courses and contexts on preservice teachers' development of classroom management. To investigate the classroom management knowledge base requires significant attention to how this kind of knowledge can be gained within and beyond preservice teacher education. This study aimed to address these needs within the context of a classroom management course offered in spring 2013 at a large public university in Turkey by answering the following question: What are the sources of preservice teachers' knowledge about classroom management?

2. Methodology

Case study was applied to this research to capture detailed accounts of preservice teachers' knowledge in different contexts and to compare contexts across cases (Yin, 2003). "Case studies can establish cause and effect, indeed one of their strengths is that they observe effects in real contexts, recognizing that context is a powerful determinant of both causes and effects" (Cohen, Manion, & Morrison, 2007, p. 253). The selected group is studied extensively to generate helpful interpretations (Fraenkel, Wallen, & Hyun, 2012). In this study, a case constituted a specific report of knowledge development, and units of analysis included the identified sources of classroom management knowledge.

Participants

This study took place during a spring semester of a four-year teacher education program at a public university in Turkey. Over the course of 14 weeks, 25 preservice teachers (10 male, 15 female) attended a required classroom management course. Participants represented the departments of English Language Teacher Education (*n* = 17), Computer Education and Instructional Technologies (*n* = 5), Secondary Math Teacher Education (*n* = 2), and Elementary Science Education (*n* = 1), with an age range from 20 and 22. Because a practicum is required during the fourth year of the program and most participants were in either their second or third years, the majority of them had not yet completed field experience (76%).

Classroom management course context

The course aimed to improve preservice teachers' understanding of classroom management and develop necessary skills to establish and maintain an effective environment for learning in the classroom setting. The course was taught by the first author, and all researchers worked on the data collection process together. The course featured four main activities: conducting a classroom management microteaching activity (CM Demo), analysing classroom management cases, attending to online activities and reflections via the Edmodo course management platform, and designing a classroom management plan. The course integrated Edmodo as a class social networking and learning management platform. The purpose was to support online course mainte-

nance (submission of assignments and grades), nurture online resource sharing (videos and pictures), promote collaboration (group work and discussion), and encourage reflection (about CM demo videos).

Each week during the semester, one group of three to four preservice teachers designed and conducted a CM demo that illustrated techniques related to a designated topic. Preservice teachers were expected to: 1) prepare for the activity by reviewing both online and offline resources, 2) design an activity handout featuring written descriptions of the strategy, 3) use Edmodo for group design conversation, 4) conduct a 30 minute CM demo, and 5) facilitate a class discussion. All CM demo sessions were video-recorded and published on Edmodo in 10 minute segments. Next, preservice teachers were asked to reflect on the demonstrated classroom management strategy by responding to the following questions:

1. How useful was the strategy that was demonstrated in class? Weaknesses? Strengths?

2. How can it be improved? Provide recommendations for better practice.

3. How would you modify it for a particular classroom you might have in the future?

The CM demos were evaluated using the teaching evaluation rubric. In addition to these reflections, an in-class midterm exam was conducted to evaluate the application of classroom management concepts. The exam included five cases on the topics of physical design, rules and routines, cooperation with students, and misbehaviour in classrooms. While responding to the questions, preservice teachers were asked to make references to the sources of their claims (e.g., teaching or learning experiences, readings, research, CM demos, observations) to justify their knowledge. Midterm exams were evaluated using a rubric that assessed how preservice teachers demonstrated their knowledge of classroom management theories or concepts and their synthesis of that knowledge using various sources.

The classroom management plan was the final assignment in the course and included three sections: a personal classroom management philosophy, classroom management knowledge domains, and a reflection on the sources and development of that knowledge. In order to understand how preservice teachers gained their knowledge of classroom management during the course, they were instructed to write a classroom management philosophy at the beginning of the semester. The assignment asked preservice teachers to consider the purpose of education, characteristics of effective teachers and instruction, the management role of a teacher, goals of a classroom management plan, and personal strengths and weaknesses related to the plan and teaching profession. At the end of the semester, they were asked to revisit their philosophy and submit a revised version. Preservice teachers were also asked to present plans for addressing classroom management knowledge domains, such as positive climate,

learner diversity, design of the physical environment, classroom rules and procedures, student cooperation, seatwork, time management, disruptive behaviour and cooperative groups, classroom management and technology, and partnerships with parents. Finally, preservice teachers were asked to provide input about where they gained their classroom management techniques and strategies.

Data sources

Four main data sources were used in this study: 1) pre- and post-classroom management philosophy assignments, 2) reflections on the CM demo videos on Edmodo, 3) midterm exams, and 4) classroom management plans. Figure 1 presents the data sources and collection timeline.
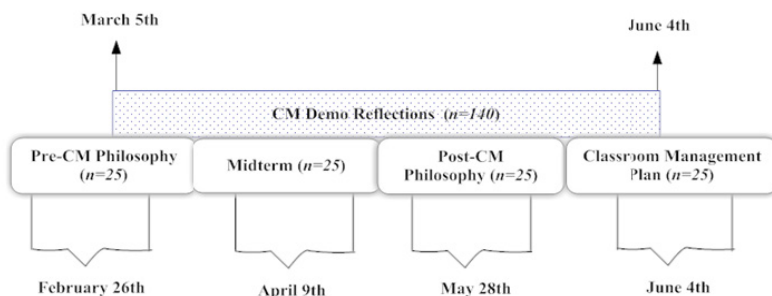
Figıre 1. Data sources and collection

Data analysis

We analysed the data to identify sources of preservice teachers' classroom management knowledge. Following the coding process suggested by Miles and Huberman (1994), we created a provisional "start list" of ideas for emerging codes and categories. Scanning the data and the literature simultaneously, an open coding process resulted in two master codebooks: 1) classroom management knowledge sources and 2) classroom management knowledge domains. A grounded theory approach (Glaser, 2002) permitted refinement of the categories. This approach involved examining the data sources closely for emerging codes, which were used to develop 12 categories for the classroom management knowledge sources codebook and 3 for the classroom management knowledge domain codebook. A knowledge source was the location from which preservice teachers gained information or perspectives about classroom management. The midterm, classroom management plan and pre- and post-classroom management philosophy assignments prompted preservice teachers to consider where their ideas originated, what experiences led them to suggest these ideas, and what

examples from the coursework supported their ideas. Once the data was coded, each knowledge source was reviewed to identify its related knowledge domain. The relationships between knowledge sources and domains were then analysed to find patterns, and preservice teacher cases were compared. The categories and codes from these two codebooks are presented in Table 1.

Table 1. Knowledge sources separated into codebook categories and sub-codes.

Knowledge Sources
1.Teacher Education Program
1.a. Teacher Education Program (General)
1.b. Classroom Management (CM) Course (General)
1.b.i. CM Course
1.b.ii. CM Course Instructor
1.b.iii. CM Course Materials
1.b.iv. CM Course Demos
1.b.v. CM Course Edmodo
1.b.vi. Classmates
1.c. Other Teacher Education Courses
1.c.i. Educational Science Courses
1.c.ii. Department Courses
2.Past Teachers
2.a. Past Teachers (General)
2.b. Elementary School Teacher
2.c. High School Teacher
2.d. University Teacher
3. Student Experiences
3.a. Student Experiences (General)
3.b. K12 Student Experiences
3.c. College Student Experiences
4. Friends
5. Literature
6. Teaching Experiences
7. Personal Characteristics
8. Colleagues
9. Teacher Acquaintances
10. Conferences
11. Mentor Teachers
12. Family

Trustworthiness

Several measures were taken to ensure the trustworthiness of the study. First, different sources of data were collected in order to triangulate findings. Second, the codebooks were refined through several cycles of inter-coder reliability. Sufficient agreement was reached among three researchers, who coded the data sources together and separately over two months in order to finalize operational definitions and supply data-driven keywords or examples for each code. The inter-coder reliability, which was considered good according to Krippendorff's (2004) standards, reached a 75% agreement on the coding of classroom management knowledge sources and 82% agreement on knowledge domains. Ethical clearance was obtained, and guidelines were followed. Participants gave consent for the data collection.

3. Results

This research aimed to investigate the sources of preservice teachers' knowledge of classroom management and related knowledge domains.

The analysis of the data sources revealed that preservice teachers attributed their knowledge about classroom management to sources such as their teacher education program (55.45%), literature (11.99%), past teachers (9.1%), student experiences (6.91%), personal characteristics (7.74%), and teaching experiences (7.41%), as well as friends, colleagues, teacher acquaintances, conferences, mentor teachers, and their families. The most cited knowledge source, teacher education programs, included sub-codes such as classroom management courses (52.03%), and other teacher education courses (1.8%). Additional codes under classroom management courses included classroom management course—general (27.2%), classroom management materials (31.9%), classroom management course instructor (7.7%), demonstrations (22.6%), Edmodo (6.8%), and classmates (3.5%), while teacher education courses included educational sciences courses (1.5%) and courses offered in their departments (3.1%).

Classroom management course as a knowledge source

The classroom management course and its elements—course materials, course instructor, CM demos, Edmodo, and classmates—were the most significant knowledge sources, specifically in the domains of general classroom management knowledge development, establishing rules and procedures, and managing misbehaviour. The knowledge sources identified within the course revealed that preservice teachers seemed to make connections between theory and the classroom by practicing and observing strategies during their CM demos.

The CM demo was a key course activity. Following the weekly microteaching of selected content areas and classroom management strategies, preservice teachers designed and implemented presentations, followed by reflection. Preservice teachers considered the CM demos the greatest contributing factor to the development of their knowledge of general classroom management, establishing rules and procedures, and managing misbehaviour. Several times, preservice teachers cited their observations of peers during the demos, especially regarding classroom design and rules and procedures. Burcu (pseudonyms are used throughout) indicated in her classroom management plan,

> "*When we were discussing in class after the demo, it was stated that teacher should tell the students about the rules, routine, responsibility, and consequences.*"

The analysis of preservice teachers' reflections about the CM demos on Edmodo also revealed a valuable space for the re-examination of existing knowledge about classroom management. The course seemed to provide preservice teachers with insights into teaching via the CM demos, which, as practical examples of specific

strategies, helped develop knowledge about real life applications of classroom management, such as classroom design and establishing rules and procedures.

The preservice teachers agreed that Edmodo activities related to weekly content, such as discussion and reflection assignments, helped them develop their knowledge of general classroom management (n = 29) and classroom management and technology (n = 3). Serpil, in her classroom management plan, indicated:

> "Edmodo assignments were more of reflection type assignments and related to our critical thinking abilities about classroom management strategies… We thought about better ways of using those strategies that contributed to our knowledge of classroom management."

Literature as a knowledge source

Literature as a knowledge source includes the relevant articles, books, and other publications that preservice teachers referred to in their midterm exam, classroom management plan, and reflections, accounting for 11.9 % of reported sources. The analysis revealed that the literature contributed most to the development of general classroom management knowledge (n = 33), establishing rules and procedures (n = 14), learner diversity (n = 9), and gaining students' cooperation (n= 9). Encouraging preservice teachers to support their arguments with the literature helped them develop the habit of reviewing available research on classroom management.

Teaching experiences as a knowledge source

Teaching experience as a knowledge source included opportunities for actual teaching of students in real learning environments. While 76% of preservice teachers had not yet completed their fourth-year practicum, teaching experiences still emerged as one of the top knowledge sources. Those preservice teachers who had field experience recognized its value as a critical source of classroom management knowledge. Preservice teachers' field experiences included tutoring, community service, and volunteering. For example, one preservice teacher, Ezgi, who volunteered in a school for visually impaired students, frequently referenced her observations and interactions in the school as the sources of her knowledge of classroom management. Serpil, who taught at a private English tutoring institution, also associated her teaching experiences with the course content. She stated in her classroom management plan: "I have two years of teaching experience, I always had problems in my classes, I wasn't able to control them, I only shouted at them. During this course, I learned different ways of dealing with misbehaviours. The knowledge domains that teaching experiences affected the most were general classroom management knowledge, establishing rules and procedures, and managing misbehaviour.

Past teachers as knowledge sources

The analysis revealed that the preservice teachers' elementary school, high school,

and university teachers also played a role in the formation of their classroom management knowledge. Elementary school, high school, and university teachers all were categorized as past teachers; teachers that the participants of the study had in the past. So past teachers as a knowledge source contributed to four classroom management knowledge domains: general classroom management knowledge (n = 20), teacher characteristics (n = 12), managing misbehaviour (n = 11), and establishing rules and procedures (n = 9). Duygu explained in her classroom management plan,

> "My first source is absolutely my teachers, who contribute a lot to developing my own strategies. I perceive my past teacher as a model and use some of his techniques."

Personal characteristics as knowledge sources

Preservice teachers' own personal characteristics served as another critical knowledge source, specifically to the development of their understanding of personal strengths and weaknesses regarding classroom management and being a teacher. Emre, in his classroom management plan, said:

> "I believe that I bring the following personal strengths to the teaching profession and to develop my management plan: First, I have always chosen to be calm and patient. If you are teaching anything, you have to be patient under any circumstances because it is highly possible to encounter an unexpected situation."

Student experiences as knowledge sources

Preservice teachers' personal experiences as students served as yet another knowledge source. These experiences helped them develop their knowledge of general classroom management, managing misbehaviour, learner diversity, and gaining student cooperation.

Preservice teachers in this study cited teacher education programs, literature, past teachers, personal characteristics, teaching experiences, and experiences as a student as the main sources of their knowledge of classroom management. These sources were fundamentally effective in the development of classroom management knowledge domains such as general classroom management, establishing rules and procedures, managing misbehaviour, designing the physical environment, personal strengths and weaknesses, and gaining student cooperation. While seldom cited, knowledge sources such as colleagues, conferences, teacher acquaintances, friends, and family did also contribute to classroom management knowledge.

4. Discussion

This case study aimed to investigate the sources that contribute to the development

of preservice teachers' knowledge of classroom management within the context of a classroom management course offered in the teacher education program of a large public university in Turkey. Over the course of one semester, preservice teachers were guided to reflect on how different knowledge sources contributed to their knowledge by engaging in four main activities: a CM demo, classroom management case analysis on the midterm exam, online activities and reflections using Edmodo, and a classroom management plan. The analysis revealed that each knowledge source provided preservice teachers with different opportunities to observe, practice, and reflect on classroom management strategies and concepts.

Researchers have investigated classroom management courses where theoretical and practical approaches were integrated into course contexts (Koç, 2011; O'Neil & Stephenson, 2012; Reupert & Woodcock, 2010). O'Neil & Stephenson's (2012) study on the effects of coursework on preservice teachers' feelings of preparedness to manage student misbehaviour revealed that course activities can influence teachers' practical knowledge of classroom management. Similarly, the present research revealed that classroom management courses had the strongest impact on preservice teachers' formation of general classroom management knowledge. The findings of this study are in line with previous research in supporting the critical role classroom management courses play in helping preservice teachers revisit previous knowledge. However, because the majority of participants had not yet had formal field experience, focusing on classroom management strategies via CM demos was insufficient in helping them gain practical knowledge such as managing cooperative groups and designing a physical environment. Additionally, findings revealed that preservice teachers were most likely to develop classroom management practices when given opportunities to unpack and apply these approaches via multiple ways and in varied contexts, including field experiences and guided microteaching practice.

Teacher education begins long before preservice teachers officially enrol in programs of study. Their experiences as students and the way their teachers taught and interacted with them also influence their knowledge (Borman et al., 2008). Being exposed to classroom management approaches this way, preservice teachers may develop resistance to alternative strategies introduced in teacher education programs.

This study revealed that contexts that situate classroom management within simulated and real-world classrooms promoted the development of practical aspects of classroom management knowledge, such as establishing rules and procedures, managing misbehaviour, and designing a physical environment. Video-recorded classroom cases can provide opportunities for reflection, analysis, and construction of understanding about classroom management (Emmer & Stough, 2001). Microteaching activities also provide opportunities to practice classroom management strategies in a safe environment without the complexities of a real classroom (Mergler & Tangen, 2010). In this study, demonstrating classroom management strategies, getting immediate feedback from peers and the instructor, and participating in discussions about the

application of certain strategies helped preservice teachers connect theory to practice. Interaction among peers during microteaching also may act as a helpful source of classroom management knowledge.

The preservice teachers in the course overwhelmingly identified their teacher education program as a primary source of class management knowledge. This finding conflicts with other research, where preservice teachers cited their teacher education program among the least contributing sources for knowledge gain (Tsai & Liu, 2013). In the context of this study and the related teacher education program, preservice teachers complete field experience in their last year, one semester after the present course. Therefore, the reason these preservice teachers considered the course as the strongest contributing source could be because they had not yet been exposed to field or practicum situations where they could observe or practice strategies within the classroom. Similarly, Yıldırım (2013) noted that in teacher education programs in Turkey, the relationship between theoretical and practice courses remains unclear; future programs should establish a balance between them based on research outcomes. This balance is important since, within practice courses, preservice teachers work with mentor teachers and observe many appropriate classroom management strategies (Şentürk, 2006). Erol, Özaydın, and Koç (2010) further revealed that preservice teachers mostly remember instances of classroom management from their own student experiences, particularly when their teachers were ineffective.

Preservice teachers who had voluntary field experiences increasingly cited them as critical knowledge sources. Because they were able to connect theory to practice, they appropriated more sophisticated views of how certain classroom management strategies could be translated into action and what potential outcomes could be. Having chances to observe and practice teaching in real world classrooms appears to significantly affect preservice teachers' perceptions of how theory is applied into practice (Kaya, Lundeen, & Wulfgang, 2010). Field experiences were increasingly seen as connected to classroom management courses and extending the concepts introduced in these courses by providing "understandings about the role care, relationships, and culture play in effective classroom management" (Marks, 2010, 179). Öksüz et al., (2011) reported that when preservice teachers take both classroom management and field practice courses, they tend to perceive their classroom management competency more positively. Because the majority of the preservice teachers in this study had not completed their practicum yet, the influence of teaching experiences and mentor teachers on the development of classroom management knowledge was not evident. While microteaching provided preservice teachers opportunities to practice classroom management strategies, the course was limited in providing real life classroom experiences.

Recent advances in technology integration into the classroom require adequate preparation of preservice teachers. Using technology to provide rich visual cases and classroom management scenarios may help preservice teachers become aware of and

critically reflect on the application of certain strategies (Yoon, Ho, & Hedberg, 2006). This study modelled the use of Edmodo as an exemplary classroom management platform. Uploading video-recorded microteaching activities to Edmodo and guiding preservice teachers' reflections on strategies provided another means by which preservice teachers observed their own and peers' performances and considered the implications of the practices demonstrated.

The findings of this study are in line with previous research on the essential contribution of different sources to the development of the classroom management knowledge of preservice teachers (Garrahy, Cothran, & Kulinna, 2005). Preservice teachers gain an aggregated form of knowledge formed by exposure to various classroom management contexts (Silvestri, 2003). Identifying the knowledge sources and domains gained within certain contexts revealed findings regarding the construction of teacher education experiences as well as the conceptualization of classroom management knowledge.

Conclusion

This study addresses critical gaps in the literature on the development of classroom management knowledge. First, understanding the sources preservice teachers' access to gain classroom management knowledge may offer insights to teacher educators that could help to shape subsequent preservice teacher education curricula in deliberate ways and to produce recommendations on the development of effective teacher education experiences. Particularly, the importance of course activities that help preservice teachers make informed decisions about classroom management, including microteaching, research, reflective practice, and field practice, may guide teacher educators in designing courses. Second, we join other scholars in our attempt to conceptualize classroom management knowledge as a critical knowledge base for teacher development (Garrahy, Cothran, & Kulinna, 2005). The findings signify the importance of some underestimated areas that had critical effects on classroom management knowledge, such as experiences as a student, personal characteristics, and past teachers. Findings from this study emphasize that preservice teachers enter teacher preparation programs with a set of ideas ready to guide them to becoming a teacher. Further experiences within and beyond the teacher education program have unique contributions to the formation of classroom management knowledge.

Limitations of the study

Several limitations should be addressed. First, this study was conducted within a single course with a small sample size. Therefore, findings emerged from the unique course context with the instructor, preservice teachers, and the nature of teacher education programs in Turkey. While these findings cannot be broadly generalized, the in-depth information collected provide a clearer and richer picture of the case; therefore, other researchers could transfer some of the findings to new contexts. Second,

because the majority of the preservice teachers in this study had not yet gained active teaching experiences, rendering their sources of knowledge proved somewhat narrow. The final limitation concerns methodology and the role of one of the researchers as the instructor of the course. Although objectivity should not be the aim of such research, the instructor's presence could have affected student responses. However, to avoid influencing preservice teachers to cite the course as a main knowledge source, the instructor reminded them of several potential sources during activities, such as prior learning experiences, prior teachers, and field experiences. The instructors' thoughts were also filtered during data analysis, as two other researchers guided the analysis and all three researchers ensured intercoding reliability.

Recommendations for research and practice

The knowledge sources identified in this research as contexts for teacher knowledge development have important implications. Teacher educators should prepare preservice teachers to be reflective of their experiences and to generate new knowledge by taking those experiences into consideration. Understanding the unique contribution of each knowledge source to classroom management knowledge may help teacher educators design courses and field experiences accordingly. For example, a classroom management course curriculum could be organized to encourage preservice teachers to examine their current knowledge base on classroom management so that it can be revisited more effectively and applied to practical situations.

Future research needs to examine how preservice teachers gain classroom management knowledge across teacher education courses and field experience. Questions still remain on how these contexts lead to long-term growth in teaching practice. Research, therefore, needs to target how knowledge of teaching and teaching practices develops over time as preservice teachers transform from student to student teacher to novice teacher.

There is promise in reflective microteaching activities that are scaffolded into classroom management practices within preservice teacher education courses, as well as technologies such as Edmodo in promoting preservice teachers' thinking processes. Future research needs to examine how microteaching activities enhanced with technology enhance preservice teachers' knowledge of classroom management. Future research could also compare classroom management knowledge sources before and after field experiences.

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