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The Development of Preservice Teachers' Self-Efficacy for Classroom and Behaviour Management across Multiple Field Experiences

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Abstract: Classroom and behaviour management difficulties are consistently reported among the top reasons given by both novice and experienced teachers for leaving the profession. In order to successfully prepare and retain teachers, it is imperative that we understand the factors related to issues of classroom and behaviour management that may influence their decision to remain in the field. This study explored the development of preservice special education teachers' self-efficacy for classroom and behaviour management as they progressed through a four-semester professional development sequence. Findings indicated that although self-efficacy levels were variable across semesters, statistically significant changes in group self-efficacy levels were noted when compared to beginning levels. Despite noted increases in self-efficacy levels, participants continued to express a need for training in evidence-based practices and strategies for addressing extreme behaviours. Implications and limitations are discussed.

Introduction

Teachers are leaving the profession at alarming rates (Aud et al., 2011). The attrition rate among novice teachers, those with three or fewer years of teaching experience, is more than double their more experienced colleagues (i.e., teachers with 10 or more years of experience). When asked about the factors influencing their decision, novice teachers (Meister & Melnick, 2003; Melnick & Meister, 2008; Romano, 2008) and experienced teachers (Adera & Bullock, 2010; Benham Tye & O'Brien, 2002; Melnick & Meister, 2008) consistently reported classroom management difficulties amongst the top reasons (Provasnik & Dorfman, 2005; Romano, 2008). This phenomenon is not isolated to general education teachers. Special educators, teachers of students with disabilities, leave the field in equally alarming rates. When teaching assignment is factored, reports indicate that special education teachers who serve students with emotional and behaviour disorders leave the field in higher proportions when compared to teachers of students with other identified disabilities (Adera & Bullock, 2010; Viel-Ruma, Houchins, Jolivette, & Benson, 2010). This, coupled with the attrition rates among general educators who struggle with general classroom and behaviour management with students without disabilities, becomes particularly disconcerting when one considers the move in the U.S. toward inclusive instruction in which students with disabilities are educated in classrooms alongside their peers without disabilities. It becomes imperative that we understand the factors that influence this exodus of teachers from the profession if we are to successfully and proactively address such factors,

particularly as they relate to issues of classroom and behaviour management.

Self-Efficacy

It has been well document that self-efficacy, or an individual's perceived ability to implement the behaviour necessary to yield a specific outcome despite external factors (Bandura, 1977, 1986, 1997), influences teachers' performance in the classroom (e.g., Hudson-Baker, 2005; Fuchs, Fuchs, & Bishop, 1992; Woolfolk, Rosoff & Hoy, 1990). According to Bandura (1977), self-efficacy plays an important role in an individual's choice of activities, degree of effort expended, and duration of sustained effort when presented with stressful situations. Researchers have found that a strong sense of self-efficacy is linked to a teacher's willingness to try and use new and varied strategies (Hudson-Baker, 2005; Fuchs, Fuchs, & Bishop, 1992; Woolfolk, Rosoff & Hoy, 1990). Additionally, preservice and practising teachers' perceptions of effective strategies have been found to influence implementation of classroom management practices (Main & Hammond, 2008). Still, self-efficacy in and of itself will not result in a desired performance if the preservice teacher's skills are undeveloped (Bandura, 1977).

Self-Efficacy for Classroom Management

It has been posited that self-efficacy is a protective factor against burnout (Aloe, Amo, Shannahan, 2013; Schwerdtfeger, Konermann, & Schönhofen, 2008). In fact, teachers' perceptions of their competence in classroom management and discipline have been found to relate to levels of burnout, in that teachers with higher perceived competence had lower levels of burnout (Friedman & Farber, 1992).

Self-efficacy for classroom management, described as a teacher's perceived capability of creating and maintaining an environment conducive to learning and serving students who exhibit challenging behaviours, is a construct distinct from other aspects of teaching self-efficacy. (Emmer & Hickman 1991). In addition to sharing some features of general personal teaching efficacy (Gibson & Dembo, 1984), researchers have proposed two distinct dimensions of self-efficacy for classroom management including classroom management/discipline and external influences (Emmer & Hickman, 1991). The classroom management/discipline dimension represents perceived competence in the area of management and discipline. According to Emmer and Hickman, the external influences dimension reflects the belief that influences outside of a teacher's *locus of control* determine student outcomes and behaviours. In a multivariate meta-analysis investigating the evidence for self-efficacy for classroom management in relation to burnout, researchers found teachers with higher levels of self-efficacy for classroom management were less likely to experience the feelings of burnout (Aloe et al., 2013). Likewise, emotional exhaustion has been found to effect perceived self-efficacy in classroom management (Brouwers & Tomic, 2000).

Self-Efficacy, Job Satisfaction, and Burnout

Despite evidence that the level of teacher self-efficacy is a factor in the level of job satisfaction (e.g., Brouwers & Tomic, 2000; Viel-Ruma et al., 2010; Woolfolk, Hoy, & Burke Spero, 2005) and burnout (Aloe et al., 2013) felt among teachers, findings regarding levels of teacher self-efficacy have been inconsistent and highlight the variability of self-efficacy within and across individuals (Nuri, Demirok, & Direktör, 2017; Yüksel, 2014). Some researchers have noted changes in self-efficacy over time (Hudson-Baker, 2005; Main & Hammond, 2008; Woolfolk Hoy & Burke Spero, 2005). Putney and Broughton (2011) found efficacy to be a social construct that can be influenced and developed over time. Still, other researchers have noted no changes in self-efficacy over time (Chambers & Hardy, 2005). In addition, research findings continue to support early findings by Bandura (1986, 1997) that mastery experience and vicarious experiences influence self-efficacy and strategy selection and implementation (Al-Awidi & Alghazo, 2012; Klassen, Tze, Betts, & Gordon, 2011; Main & Hammond, 2008; Stewart, Allen, & Bai, 2011).

Despite the noted increase in research related to teacher self-efficacy (Klassen et al., 2011), an understanding of the issues facing beginning teachers is needed to inform teacher preparation programs by identifying additional support systems needed to promote teacher retention and facilitate an effective transition from preservice to master teacher (Romano, 2008). Furthermore, there is little research that focuses on the development of self-efficacy as a construct in flux (Yüksel, 2014) as opposed to a fixed, dichotomous variable (Putney & Broughton, 2011).

With novice teachers leaving the field at greater rates, second only to their colleagues with 20 or more years of experience (Goldring, Taie, & Riddles, 2014), it is imperative that we identify and address issues related to teacher attrition, specifically those related to classroom and behaviour management. Recommendations for research have included examining the impact of student teaching experiences on the acquisition of classroom management skills (Chambers & Hardy, 2005) and special educators' knowledge and perceptions of behaviour management and interventions (Reupert & Woodcock, 2010). Additionally, there is a critical need for teacher educators to understand the points in teacher development where self-efficacy beliefs are affected by the underlying sources of efficacy (*see* Bandura 1977; Pendergast, Garvis, & Keoh, 2011, Romano, 2008), particularly as it relates to issues of classroom and behaviour management.

As the diversity among students in classrooms across the U.S. continues to increase (U.S. Department of Education [USDOE], 2015a), the push for more inclusive classrooms, and federal mandates for achievement of all students (ESSA, 2015), the demands placed on all educators continue to increase. It stands to reason then, that students with behavioural needs who were once educated in more restrictive environments will spend more time in less restrictive general education classrooms alongside peers without disabilities (Sciuchetti, McKenna, Flower, 2016; USDOE, 2015b), instead of more restrictive settings such as self-contained classrooms designated only for students with particular disabilities. As such, it will be necessary for teachers to balance the demands of this special population while still meeting the needs of all other students in the classroom. The majority of studies exploring efficacy beliefs have been conducted with in-service teachers (Klassen et al., 2011). Self-efficacy research among preservice teachers has historically focused on experiences during student teaching and into the first year of teaching (e.g., Klassen et al., 2011) and among general education preservice teachers (e.g., Ma & Cavanagh, 2018, Pfitzner-Eden, 2016; Reupert & Woodcock, 2010). By exploring the

experiences of preservice teachers in the context of multiple field experiences, this study sought to address noted gaps in the current literature on preservice teacher self-efficacy (Chambers & Hardy, 2005; Reupert & Woodcock, 2010), and extend the focus to special education preservice teachers self-efficacy in the areas of classroom and behaviour management.

This study was part of a larger study exploring the processes of knowledge construction and self-efficacy development among a cohort of preservice teachers exposed to a four-semester professional development sequence (PDS), consisting of strategically aligned coursework and field-based experiences during their teacher certification program. Specifically, this study explored preservice teachers' developing self-efficacy for classroom management over the course of their PDS. Analysis was guided by the following research question: What was the effect of a four-semester professional development sequence, consisting of strategically aligned coursework and field-based experiences, on preservice teachers' self-efficacy for classroom management over time?

Method

Given the limited nature of research related to the influence of multiple field experiences in special education on teacher candidates' (TCs') developing self-efficacy for classroom and behaviour management, we utilized an exploratory methodology to gain insights into TCs' developing self-efficacy. More specifically, we were focused on what TCs reported about their self-efficacy for classroom and behaviour management, to include changes over time, and self-reported training needs. Data were analyzed using descriptive procedures for survey data and constant comparative analysis procedures, guided by elements of grounded theory (Corbin & Strauss, 2008; Strauss & Corbin, 1990), for open-ended question responses. More specifically, open and axial coding was used to develop codes and identify themes across participants' responses to the open-ended question about training needs.

Context: Professional Development Sequence

The professional development sequence (PDS) was strategically designed to align coursework and field-placement experiences as part of the participants' preparation program. The PDS encompassed all the professional development courses and field-based training that lead to teacher certification and spanned four consecutive long semesters over the course of two academic years. The preparation program had been restructured earlier through the support of a grant from the U.S. Department of Education, Office of Special Education Programs (see Robertson, Garcia, McFarland, & Rieth, 2012 for a comprehensive overview of the restructured program). Table 1 provides an overview of the course sequence, field-based experience settings, and general descriptions of field experience expectations during each semester of the professional development sequence. Participants were in their respective placement for the duration of the semester, which was approximately 13 weeks. During *Total Teach*, participants were responsible for all teaching responsibilities including planning and delivering instruction, assessing and evaluating student performance, monitoring progress towards Individualized Education Plan goals, and communicating with families/caregivers.

PDS (Semester)	Course Work	Field Experience Setting	Time in Placement[1]
Intern I (Fall)	**Instructional, Management, Behaviour Sequence**	**General Education**	**2 days per week; teach at least 15 whole class lessons**
Inter II (Spring)	**Assessment and Instruction of Individuals with Autism and Developmental Disabilities Sequence**	**Early Childhood Special Education and Setting serving students with autism or developmental delays (e.g., Functional Life Skills)**	**2 mornings per week, per setting; small-group instruction**
Intern III (Fall)	**Assessment of Individuals with Mild/Moderate Disabilities Sequence**	**Resource classroom**	**2 days per week; small group instruction**
Student Teaching (Spring)	**Communication & Collaboration Sequence**	**One of the Settings from Intern I – Intern III Semester**	**5 days per week; gradually take on all teaching responsibilities, leading to a 3-week period of *Total Teach***

Table 1: overview of the professional development sequence

Overall, participants completed more than 1300 hours of field-based experiences over the course of the PDS. These experiences consisted of three practicum placements and a culminating student teaching semester. During the practicum and student teaching placements, students observed cooperating (host) teachers, implemented whole-group, small-group, and individual lessons, and conducted formal and informal assessments of students. Participants were observed by their cooperating teacher and university appointed supervisors. Both cooperating teachers and university supervisors provided participants with feedback on instruction to include classroom/behaviour management via face-to-face debriefing sessions and written observation forms.

Placements were assigned by university personnel based on PDS semester and classroom availability in one of two neighboring districts. All placements were in one of two large school districts, one urban and one suburban, that served diverse student populations. The urban district served a student population that included 61% Hispanic, 25% White, 9% African American, 3.5% Asian or Pacific Islander, and 2% students who identified as two or more races (Statewide Data, 2013). Sixty-three percent were classified as economically disadvantaged (students qualifying for free or reduced lunch), 27% met criteria as English learners, and 10% were served in special education (Statewide Data, 2013). The suburban district served a student population that included 45% Hispanic, 25% White, 19% African American, 8% Asian or Pacific Islander, and 3% students who identified as two or more races (Statewide Data, 2013). Fifty-three percent were classified as economically disadvantaged (students qualifying for free or reduced lunch), 20% met criteria as English learners, and 10% were served in special education (Statewide Data, 2013).

Participants

Participants were recruited from an all-female cohort of 23 preservice teachers enrolled in a dual certification (elementary and special education) program at a large Southwestern university in the United States. The cohort members were informed of the purpose of the study

during the orientation for the Intern I semester of the PDS. Thirteen members of the cohort consented to participate in the study yielding a 56.5% response rate. Of the 13 preservice teachers who consented to participate, 100% completed the first four surveys and 77% (n = 10) completed the final survey.

Instrumentation

A 29-item Likert-type survey was developed to obtain information about preservice teachers' self-efficacy for classroom and behaviour management. The survey instrument was adapted, with permission, from the Behaviour Management Self-Efficacy Scale (Main & Hammond, 2008) and the Teacher Efficacy in Classroom Management and Discipline Scale (Emmer & Hickman, 1991). All items from the Behaviour Management Self-Efficacy Scale (Main & Hammond, 2008) were included, with one item modified for the purpose of this study. Specifically, item 14 (*I am able to explain the rationale, program components, operation, and evaluation of the behavioural techniques I use*) was broken down into four stand-alone survey items. We were interested in evaluating participants' self-efficacy for each of the components (rationale, program components, operation, and evaluation) as they related to behaviour techniques used. After reviewing individual items and reported factor analysis categories, items were omitted from the Teacher Efficacy in Classroom Management and Discipline Scale (Emmer & Hickman, 1991) if they were factored as locus of control only and referenced home environments, parents, or peers (n = 7); were factored as external influences only (n = 5); related to general teaching efficacy without explicit reference to behaviour or discipline (n =4); factored as locus of control only and did not explicitly reference behaviour or discipline (n = 1); or, if an item was not reported (n = 1). After accounting for overlap between items in the existing measures, omitting items that were not relevant to the foci of this study, and creating one new item, the final instrument consisted of 29 items using a 5-point Likert-type response format ranging from strongly disagree to strongly agree.

In addition to the Likert-type items, participants completed 13 open-ended questions related to their knowledge of classroom management practices and field placement experiences. Total time needed to complete the instrument was approximately 30 minutes. The university's Institutional Review Board reviewed and approved the surveys, as well as the research procedures. Using Cronbach's alpha, the reliability of the self-efficacy scale was determined to be 0.905. This article reports on findings from the Likert-survey and one open-ended question related to an expressed need for additional experiences in the area of classroom and behaviour management: *Pertaining to classroom management, what do you feel that you need additional knowledge and/or training in? Explain your answer.* Directions for the questionnaire directed participants to explicitly indicate if their response was that no additional knowledge and/or training was needed.

Procedures

The survey instrument was administered at five different points in time over the course of the two-year professional development sequence. The first administration of the survey occurred at the beginning of the first semester (BOS I) of the professional development sequence. Each subsequent administration was conducted within the final two weeks of each semester of the

professional development sequence, to include the end of the first (EOS I), second (EOS II), third (EOS III), and fourth (EOS IV) semesters. A total of five surveys were administered to each of the 13 participants. All participants (n = 13) completed each of the first four survey administrations (i.e., BOS I, EOS I, EOS II, EOS III). The final survey was completed by 77% (n = 10) of participants.

Data Analysis

Descriptive analysis and inferential statistics were employed for the analysis of survey data. Utilizing a similar approach to Main and Hammond (2008), cut-off scores for high and low self-efficacy levels were established and based on a normal distribution of responses (i.e., one standard deviation above the mean for high self-efficacy and one standard deviation below the mean for low self-efficacy). High and low self-efficacy cut scores were calculated for each survey administered. Due to sample size, t-tests were used to explore the potential impact of field experiences on reported self-efficacy. Additionally, descriptive analysis was employed for analysis of the open-ended question response. Utilizing elements of a grounded theory approach (Glaser & Strauss, 1967; Strauss & Corbin,1990), we reviewed all open-ended question responses through an iterative coding process. This process allowed codes and themes to emerge from participant responses to open-ended questions. More specifically, we employed an iterative process (Corbin & Strauss, 2008) of open and axial coding to determine themes across participant responses. First, approximately 50% of the data were reviewed and coded. After this initial iteration of coding, another 20% of the data were reviewed using codes derived during the first iteration. This process was repeated several times until all data were coded using the 14 established codes. Once all data were coded, responses were reviewed again to identify connections, or relationships, across multiple open-codes. This secondary level of analysis resulted in the development of four axial-codes, or themes. All open-codes were then collapsed by theme.

Findings

Self-efficacy

As noted previously, the distinction between high and low self-efficacy was set at one standard deviation (SD = 0.45) below the mean (M = 3.57) based on the pre-professional development sequence survey administration (BOS I; Main & Hammond, 2008). Respondents with a mean of less than 3.12 were determined to have low levels of self-efficacy at BOS I, whereas those with a mean of 3.12 or greater were said to have high levels of self-efficacy. At BOS I, it was determined that 92% of the preservice teachers had high levels of self-efficacy (M = 3.57; SD = 0.45). Although the percentage of participants reporting high levels of self-efficacy remained the same at EOS I when compared to BOS I, participants reported higher levels of self-efficacy overall (M = 3.88; SD = 0.32). This was statistically significant $t(12) = 3.43$, $p < 0.05$, g = 0.78, 95% CI [0.63, 0.93]) when compared to BOS I levels. Statistically significant differences in the level of self-efficacy were also noted at EOS II (M = 3.90; SD = 0.47; $t(12) = 2.43$, $p <$ 0.05, g = 0.71, 95% CI [0.53, 0.89]), EOS III (M = 4.02; SD = 0.35; $t(12) = 3.86$, $p < 0.05$, g = 1.11, 95% CI [0.95, 1.26]), and EOS IV (M = 4.31; SD = 0.59; $t(9) = 3.68$, $p < 0.05$, g = 1.40, 95% CI [1.19, 1.61]), respectively, when compared to BOS I levels. Table 2 provides an

overview of the percentage of participants with high levels of self-efficacy based on group mean scores at each survey administration.

Data Point	High	*M*	(*SD*)
BOS I (*n* =13)	**92.3**	**3.57**	**(0.45)**
EOS I (*n* =13)	**92.3**	**3.88**	**(0.32)**
EOS II (*n* =13)	**84.6**	**3.90**	**(0.47)**
EOS III (*n* =13)	**84.6**	**4.02**	**(0.35)**
EOS IV (*n* =10)	**90**	**4.31**	**(0.59)**

Note. BOS = beginning of semester; EOS = end of semester; n = number of participants; M = mean; SD= standard deviation

Table 2: percentage of participants with high levels of self-efficacy based on group mean scores

Post-hoc analyses of survey responses were conducted to identify categories within which participants rated themselves highest and lowest in relation to self-efficacy for classroom management in relation to their perceived ability, knowledge, and belief in the notion that influences other than the teacher determine student outcomes (henceforth referred to as locus of control; Emmer & Hickman, 1991). For this analysis and reporting purposes, survey items were clustered into three categories: ability, knowledge, or locus of control. Items categorized as ability were items in which participants were expected to rate themselves on the extent to which they perceived their capacity, means, or skill to engage in a specific task or action (e.g., "I am able to make my expectations clear to students."). Items categorized as knowledge were items in which participants were expected to rate themselves on the extent to which they perceived that they possessed a theoretical or practical understanding, or an awareness of a specific action, strategy, or technique (e.g., "*I know the types of rewards used to keep students involved*."). Items categorized as locus of control were items in which participants were expected to rate themselves on the extent to which they perceived that they could influence a student's behaviour despite student characteristics, or external influences or events (e.g., "*If a student doesn't feel like behaving, there's not a lot teachers can do."*). Items reported are followed by group mean scores for the individual item at various survey administrations.

Overall, participants rated themselves highest on items related to ability and knowledge prior to starting the professional development sequence (BOS I). Following the first semester in the field (EOS I), participants again rated themselves highest on items related to ability and knowledge. At the conclusion of their first year in the professional development sequence (EOS II) and each subsequent semester (EOS III and EOS IV), participants rated themselves highest on items related to ability, followed by knowledge. Among the highest scored items, those classified as locus of control were consistently rated lower than items in other categories (i.e., ability and knowledge) across all semesters. The following items related to ability were scored highest among participants across semesters: "*I am able to make my expectations clear to students.*" (BOS I, *M* = 4.15; EOS II, *M* = 4.38); "*I am able to use a variety of non-aversive techniques (e.g., voice modulation, facial expressions, planned ignoring, proximity control).*" (BOS I, *M* = 4.15; EOS II, *M* = 4.38; EOS III, *M* = 4.46; EOS IV, *M* = 3.92); "*I can communicate to students that I am serious about getting appropriate behaviour.*" (EOS I, *M* = 4.38); and, "*I am able to self-evaluate my own teaching and classroom management skills, and use the results constructively.*" (EOS IV, *M* = 3.92). The following knowledge items were scored highest among participants across semesters: "*If a student in my class becomes disruptive and noisy, I feel assured that I know some techniques to redirect him/her quickly.*" (BOS I, *M* = 4.15; EOS II, *M*

= 4.31); "*I know the types of rewards to use to keep students involved.*" (BOS I, *M* = 4.15; EOS I, 4.38); "*I know what routines are needed to keep activities running efficiently*." (EOS III, *M* = 4.31); and, "*I know and can implement methods and procedures to assess the function of a student's behaviour.*" (EOS III, *M* = 4.31; EOS IV, *M* = 3.75). The following locus of control items were rated the highest: "*When I really try, I can get through to most difficult students.*" (BOS I, *M* = 3.62; EOS III, *M* = 4.08; EOS IV, *M* = 4.08) and "*If a student doesn't feel like behaving, there's not a lot of teachers can do.*" (EOS I, *M* = 4.00; EOS II, *M* = 4.08).

At BOS I, participants rated themselves lowest on items related to locus of control. Following the end of their first semester in the professional development sequence (EOS I) and each semester thereafter (EOS II, EOS III, EOS IV), participants rated themselves lowest on items related to knowledge, followed by locus of control. The following locus of control items were scored lowest among participants across semesters: "*If students aren't disciplined at home, then they aren't likely to accept it at school.*" (BOS I, *M* = 2.62; EOS I, *M* = 3.04; EOS III, *M* = 3.54; EOS IV, *M* = 2.92) and "*There are some students who won't behave no matter what I do.*" (EOS II, *M* = 3.08; EOS III, *M* = 3.54). The following knowledge items were scored lowest among participants across semesters: "*Sometimes I am not sure what rules are appropriate for my students.*" (BOS I and EOS IV, *M* = 2.92, respectively); "*I know and can implement methods and procedures to assess the function of a student's behaviour.*" (EOS I, *M* = 2.46); and "*I don't always know how to keep track of several activities at once*." (EOS II, *M* = 3.08; EOS III, *M* = 3.08). One ability item was consistently rated the lowest across survey administrations: "*I can keep defiant students involved in my lessons*." (BOS I, *M* = 2.92; EOS I, *M* = 2.46; EOS II, *M* = 3.04; EOS III, *M* = 3.08; EOS IV, *M* = 2.92).

Need for Additional Training

At the end of each survey administered, participants were asked to self-report any needs for additional experiences in the areas of classroom and behaviour management. Specifically, participants were asked the following: *Pertaining to classroom management, what do you feel that you need additional knowledge and/or training in? Explain your answer.* Analyses of responses yielded 14 codes. These codes were collapsed into four themes: general experiences, instructional planning and programming, behaviour planning and instruction, and no identified needs. Table 3 provides an overview of the percentage of participant responses by theme, code, and survey administration.

Theme	Code	BOS I (*n* = 14)	EOS I (*n* = 15)	EOS II (*n* = 16)	EOS III (*n* = 12)	EOS IV (*n* = 12)
General Experiences	Everything	36	-	6	8	-
	Practice	-	20	6	8	8
Instructional Planning and Programming	Academics	-	20	-	-	17
	Classroom Setup	-	7	13	-	-
	Monitoring/Data Collection	7	-	6	-	8
	Timing/Pacing	7	7	-	-	-
Behaviour Planning and Instruction	BIPs	-	7	-	-	8
	Discipline	-	7	6	-	-
	EBPs/Strategies	36	13	25	42	25
	Extreme Behaviours	14	13	25	17	17

	High School Students	-	-	**13**	-	-
	Do not know	-	**7**	-	-	-
No Identified Needs	**Nothing**	-	-	-	**17**	**17**
	No Response	-	-	-	**8**	-

Note. *n* = total number of coded responses; BOS = beginning of semester; EOS = end of semester; BIPs = Behaviour Intervention Plans; EBPs = Evidence-based practices.

Table 3: percentage of responses related to areas of self-identified need for additional training

Prior to beginning the professional development sequence (BOS I), most responses (50%) were related to behaviour planning and instruction, followed by general experiences (36%) and instructional planning and programming (14%). Most participants (36%) identified the need for instruction related to specific evidence-based practices and strategies and general experiences with everything related to classroom management, respectively. Another 14% of participants indicated needs related to addressing extreme behaviours (e.g., aggression, self-injury). Few (7%) participants indicated a need for additional training related to timing and pacing of lessons or collecting and monitoring data, respectively.

Following the first field placement (EOS I), most participants (40%) reported behaviour planning and instruction needs, followed by needs pertaining to instructional planning and programming (34%), general experiences (20%), and no identified needs (7%). Participants reported needs related to academics (i.e., content area methods instruction; 20%), a general need for additional practice (20%), specific evidence-based practices and strategies (13%), and extreme behaviours (13%). Additional needs noted at the end of EOS I included: behaviour intervention plans (BIPs), timing/pacing of lessons, setting up the classroom/rules, disciplining students (7%, respectively). Some participants (7%) noted that they did not know what they needed.

At EOS II, most participants (69%) indicated needs for training related to behaviour planning and instruction, while others noted needs for instructional planning and programming (19%) and general experiences (12%). More specifically, 25% of participants expressed the need for instruction in addressing extreme behaviours and specific evidence-based practices and strategies, respectively. Additional needs noted by participants at EOS II included: setting up the classroom/rules and working with older students who exhibit challenging behaviours (13%, respectively). Few participants indicated a need for training in everything, a general need for additional practice, collecting and monitoring data, and disciplining students (7%, respectively).

At EOS III, 59% of participants' responses indicated needs for training related to behaviour planning and instruction, with additional responses categorized as no identified needs (25%) or a need for general experiences (12%). More specifically, 42% of participants indicated the need for training related to specific evidence-based practices and strategies. An additional 17% of Participants, respectively, either noted needs related to addressing extreme behaviours or that they required no additional training (i.e., reported "nothing"). Few participants indicated a need for everything or additional practice (8%, respectively). The remaining participants at EOS III (8%) provided no response.

At EOS IV, 50% of participants indicated needs for training related to behaviour planning and instruction, while others noted needs for instructional planning and programming (25%) or did not identify needs (17%). Few participants reported needs pertaining to general experiences (8%). As with previous survey administrations, most participants (25%) indicated the need for

training related to specific evidence-based practices and strategies. Similar to findings at EOS III, participants identified a need for additional training related to extreme behaviours (17%), indicated that no additional training was needed (17%), or identified academic training needs (17%). An additional 8% of participants, respectively, indicated needs related to BIPs, additional practice, and collecting and monitoring data.

Discussion

As noted previously, this study explored the potential impact of a four-semester long PDS, consisting of strategically aligned coursework and field-based experiences, on participants' developing self-efficacy for classroom and behaviour management. This study demonstrated that certain changes were observed in participants' sense of efficacy as they progressed through the PDS. Findings indicated statistically significant changes in mean self-efficacy levels at the end of each placement semester when compared to levels at the beginning of the PDS. Overall mean self-efficacy scores increased at the end of each placement semester when compared to BOS I scores. In addition, participants consistently rated themselves highest on items related to ability and lowest on items pertaining to knowledge and locus of control. Furthermore, participants consistently reported additional training needs in the areas of extreme behaviour, evidence-based practices, and a general need for additional practice at the end of each placement semester.

This study supports previous findings that self-efficacy changes over time and may not remain constant (Pfitzner-Eden, 2016; Yüksel, 2014). Similar to the findings of Chambers and Hardy (2005), the percentage of participants with high levels of self-efficacy remained the same at the end of the first semester of the PDS (EOS I) when compared to BOS I levels. By the end of the first year of the PDS (EOS II), this percentage decreased. It should be noted that the first PDS semester placement was in a general education setting with the second placement split among a pre-school program for children with disabilities (PPCD) setting and a Functional Life Skills setting. It is possible that participants questioned their self-efficacy for classroom/behaviour management following their first PDS field placement semester in special education settings (i.e., PPCD and Functional Life Skills) where students frequently exhibit more challenging behaviours. At the end of the PDS (EOS IV) the percentage of participants with high levels of self-efficacy increased from the end of the first year in the PDS (EOS II). These findings support previous findings in which participants indicated higher levels of self-efficacy post-placement (Hudson-Baker, 2005; Main & Hammond, 2008; Woolfolk-Hoy & Burke-Spero, 2005).

Similarly, these findings echo self-efficacy research which highlights the impact of mastery experiences on the development of self-efficacy (Al-Awidi & Alghazo, 2012; Bandura, 1977; Main & Hammond, 2008; Stewart, Allen, & Bai, 2011). This is to say that as participants gained more field-based experiences over the course of their PDS, both with students who exhibited challenging behaviours (e.g., EOS II) and cooperating teachers implementing strategies to address those behaviours, their self-efficacy levels increased. Additionally, while engaged in field-based experiences at the start of the PDS, participants noted very general needs, with many identifying needs for additional training in 'everything'. Over time and exposure to a variety of placements, students, and teachers, participants began to identify more specific areas of need (e.g., extreme behaviours, older students, BIPs). It is likely that these field experiences provided new experiences and challenges that disrupted participants' preexisting beliefs, thus challenging them to reassess their perceived capabilities, knowledge, and training needs (Yüksel, 2014).

It should be noted that participants persistently reported the need for additional training in specific evidence-based practices and strategies across the PDS. This is particularly disconcerting considering that throughout the PDS, coursework was strategically aligned with their field placement settings and the students served therein. Although participants persistently noted the need for instruction in specific evidence-based practices across all survey administrations highlighting their awareness that such practices exist, it also reinforces the idea that the gap between research and practice remains an ongoing concern (Burns & Ysseldyke, 2009; Gable, Tonelson, Manasi, Wilson, & Park, 2012) and provides further evidence that the gap is not narrowing (Cook & Odom, 2013; McKenna, Shin, & Ciullo, 2015; Sciuchetti et al., 2016). Is this a gap between research and practice? Students receive instruction in evidence-based practices but they feel they need additional training?

Implications and Future Directions

Researchers have documented that novice teachers leave the field due to difficulties with classroom and/or behaviour management (Meister & Melnick, 2003; Melnick & Meister, 2008; Romano, 2008). With teachers leaving the profession at alarming rates (Aud et al., 2011), it is critical to identify and proactively address the factors leading to this attrition. Therefore, the findings from this study have implications for teacher preparation programs.

In order to prepare preservice teachers to meet the varying demands of classrooms serving increasingly diverse student populations, multiple field experiences are imperative. As demonstrated by the findings of this study, participants' levels of self-efficacy decreased following their first special education placement setting (EOS II). It is possible that preservice teachers need multiple opportunities, in a variety of settings, to engage with students and increase their perceived self-efficacy for classroom management. Although participants in this study were engaged in multiple field experiences over the course of a four-semester PDS, they indicated a need for more classroom practice at the end of each field-based experience, including at the conclusion of student teaching. As such, teacher training programs should look to identify opportunities for multiple field-based experiences, prior to a culminating student teaching semester. These field-based experiences should be introduced early in the participants' program and continue throughout their course of study. Furthermore, teacher preparation programs must provide explicit instruction in evidence-based practices (Berry, 2011; Sciuchetti et al., 2016). With participants still noting the need for additional training in evidence-based practices at the end of student teaching, a concerted effort is needed to ensure that the accurate information pertaining to evidence-based practices is disseminated widely into the field through a variety of channels (e.g., the internet, practitioner journals; Sciuchetti et al., 2016).

Additionally, findings from this study offer insights into the development of preservice teachers' perceived preparedness to address issues of classroom/behaviour management. Teacher preparation programs might incorporate measures of preservice teacher self-efficacy, particularly in the area of classroom/behaviour management, during the course of field-based professional development in an effort to identify and target needed experiences and/or content area instruction to strengthen participants' perceptions of ability before moving into the profession. Future research might explore the effects of using self-efficacy measures to drive instructional and field-placement decisions to enhance the preparation of participants to meet the demands of the field.

Although the findings from this study indicated that group self-efficacy scores changed over the course of multiple field experiences as part of the participants' professional

development sequence, additional research is needed to support these findings. Replication of this study using more participants, or a group design with participants in programs with more and fewer field experiences, has the potential to support the findings that overall self-efficacy increases with additional field experiences.

Additionally, future research might utilize qualitative methods to explore preservice teachers' identified needs in the area of classroom/behaviour management. Findings from such research can enhance teacher preparation programs by allowing program managers to identify potential gaps between course offerings, instructional content, and field-based opportunities to link theory to practice.

Furthermore, researchers might conduct longitudinal studies that follow preservice teachers from preparation programs into the early years of teaching and throughout their teaching careers. The results of such studies have the potential to identify critical features of both preservice teacher preparation programs and in-practice experiences that foster the development of self-efficacy. Findings from such studies may also lead to the identification of additional support systems needed to promote teacher retention and facilitate an effective transition from preservice to master teacher, a noted gap in the current literature (Romano, 2008).

Limitations

The study explored the development of preservice teachers' knowledge of and self-efficacy for classroom management across multiple field placement experiences. Generalizability of the findings is the primary limitation due to the small sample size, participant selection criteria, lack of alternate group receiving same instruction without the practicum placement, and variability of placement settings within each data collection period. First, findings should be interpreted with caution due to the small sample size. Despite a return rate of 56.5%, 13 preservice teachers consented to participate in the study, with 77% completing all survey administrations. The participant selection process further limits the generalizability of the findings, in that participants were selected based on specific criteria as part of a cohort in a specific program offered at a particular institution. Great variability exists in teacher preparation programs across the country and the world, therefore the generalizability of the findings is limited. Additionally, though participants progressed through the PDS at the same rate, each participant was placed in his or her own setting, exclusive of other participants. The variability in cooperating teachers, grade levels, classroom and campus demographics, and other site-specific variables may have influenced the experiences of individual participants, further limiting the generalizability of the findings.

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