EXPERIENCES THAT SHAPE THE DEVELOPMENT OF INCLUSIVE INSTRUCTION IN PRESERVICE TEACHERS: AN INTERNATIONAL COMPARISON

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Abstract:

Preservice teacher education programs are vital in teachers' development of instructional practices for inclusive classrooms. In previous research, preservice teachers in Canada had higher scores on measures of experience with people with disabilities when compared to those in Germany. The current study investigated the proposition that differences existed because of experiences of inclusion in the respective countries. Participants were 18 Canadian preservice teachers from faculties of education in Ontario, Canada and 29 German preservice teachers from a Bavarian university. A Group Concept Mapping (GCM) technique was employed. Both groups identified Practicum Experiences, Education Program, Past Jobs, and Personal Life Experiences as contributing to the development of their inclusive practice. Only the Canadian sample identified Mentoring Relationships and Professional Development. Differences and similarities in teacher education programs are highlighted as possible contributors to the differences in Canadian and German preservice teachers' perceptions of experiences useful for shaping their instructional practice.

Keywords: preservice teachers, inclusive education, inclusive instruction, international comparison

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1. Introduction

The foundation of inclusive education is a belief that all students belong and are valued members of their neighbourhood school communities (Porter & Towell, 2017). Inclusive education promotes equity through respect for diversity. Since the issuance of the Salamanca Statement (UNESCO, 1994), governments globally have increasingly focused on the development of inclusive education systems. Educational settings that promote inclusion are more successful in achieving learning for all (Krämer et al., 2021), the ultimate goal of education. Teachers who have adopted inclusive teaching approaches are able to improve academic standards for all students over time (Jordan, 2018).

Inclusion is a human right-based approach to education where there is respect for diversity, and according to the Convention on the Rights of Persons with Disabilities, of which Canada and Germany are both signatories, "*all members of the learning community are welcomed equally…. All students must feel valued, respected, included and listened to*" (United Nations, 2016, p. 5). Although we agree with the understanding that inclusive education is about all students participating in the life of the school (see, for example, Ainscow, 2020), our research focus is related to students with disabilities because they are children who continue to be marginalized and experience exclusion from access to an equitable education (UNESCO, 2017). There are millions of students worldwide who are denied an education because of their disability or are still placed in classes separate from their peers (United Nations, 2016). Even when placed in regular classrooms, many students with disabilities do not participate optimally in the academic or social life of the classroom. As Florian (2019) notes, as long as we continue to think of some students at the margins who do not fit within the regular system, we will continue to provide those students whom we identify as needing something special with a deficient education. As a result, significant concerns remain about the capacity for schools to effectively support the diversity of learners present in schools, and the capacity for traditional educational approaches to support inclusion (Graham, 2020). For successful school inclusion, beginning teachers need to gain theoretical and practical knowledge that prepares them for their teaching practice (Florian & Black-Hawkins, 2011; Graham, 2020). Preservice teacher education programs are fundamental in developing beginning teachers' effective instructional practices for inclusive classrooms (Sharma, 2018).

Developing expertise in teaching is a gradual and multifaceted process, involving the acquisition of: (a) content and procedural knowledge, (b) skills and abilities, (c) a student-centered approach to instruction, and (d) professional self-awareness and understanding. Effective professional learning leads to improved practice, which in turn, leads to student achievement (Katz & Dack, 2013). Preservice teacher education programs begin this process, and have been identified as crucial in inclusive education (e.g., (Sharma, 2018; Slee, 2010). It is important to include all component skills of teaching expertise in the teacher education and training. Indeed, research that investigates teacher education programs have found, for example, that practicum experiences have been shown to influence their teaching (Harvey et al., 2008; Young et al., 2018). These

experiences during their initial education, where preservice teachers engage in practice teaching in schools, may help in developing all aspects of expertise highlighted by Katz and Dack (2013). Additionally, discussions with peers are important sources of information for preservice teachers especially within their coursework linking theory to practice (Tannehill & MacPhail, 2014). Understanding the specific experiences that contribute to the effective development of inclusive instructional practice for preservice teachers can influence the ways in which faculties of education provide such opportunities. We are aware that preservice teacher education programs with practicum support and course work in special or inclusive education are imperative in graduating teachers who are prepared for teaching diverse learners. However, what is underexplored are those specific experiences that contribute to the development of inclusive instructional practice; that is, the skills that are required to teach to the diverse learning needs of students. In the current research study, we asked preservice teachers what experiences had helped them develop their instructional practice for diverse learners. Specifically, we report on a Canadian and German comparison identifying similarities and differences in experiences reported by preservice teachers that contribute to their development of inclusive instructional practice.

While we are unaware of previous research investigating cross country differences in the development of inclusive instructional practice, some research has focused on differences in teacher self-efficacy for inclusion (e.g., (Malinen et al., 2013; Miesera et al., 2021; Miesera & Gebhardt, 2018; Sokal et al., 2013; Walton & Rusznyak, 2013; Weber & Greiner, 2019). Malinen et al. (2013) investigated predictors of self-efficacy for inclusive practice in China, Finland and South Africa. While experience predicted higher self-efficacy in all 3 countries, different predictors were noted in each country. In China, the role of the teacher predicted self-efficacy differentially with special education teachers having higher self-efficacy for collaboration and regular education teachers having higher self-efficacy for managing behaviour. In comparisons of other countries with Canada, different results also have been found. Miesera and Gebhardt (2018) noted that Canadian preservice teachers had higher self-efficacious beliefs than German preservice teachers and more experience with people with disabilities. Sharma and Sokal (2015) found that while courses in inclusive education helped increase self-efficacy for both Canadian and Australian preservice teachers, Canadian teachers tended to become more apprehensive about teaching in inclusive classrooms. Differing educational contexts between countries may lead to varying teacher experiences that contribute to these effects. If such differences between countries can impact self-efficacy, perhaps similar differences might affect the development of their skillset for inclusive instructional practice.

2. Schooling System and Teacher Preparation

To understand how the experiences that preservice teachers report influence the development of their inclusive instructional practice, it is important to have a general

sense of the similarities and differences in the education systems for the compulsory education of children and youth and that of the teacher education programs for both Canada and Germany. Both countries have education systems that are organized by province (Canada) or state (Germany) rather than federal jurisdiction. As a result, we present the overview of Ontario, Canada and Bavaria, Germany as these are the jurisdictions in which the research occurred.

The key similarities in the education systems of Ontario and Bavaria are that both have compulsory free schooling until age 18 with the majority of students educated together in primary schools (Bayerische Staatskanzlei, 2017; Government of Ontario, 2021). Additionally, in concert with international efforts focusing on inclusive and equitable education in recent years, both Ontario and Bavaria have expanded their policies from inclusion based only on disability to an understanding that takes into account the various dimensions of diversity (i.e., disability, language, social living conditions, cultural and religious orientations, and gender). This change constitutes a significantly broader perspective on equity for all students, particularly those who have historically been marginalized or viewed as unsuccessful in the education system (Whitley & Hollweck, 2020, p. 298).

Key differences between the two education systems are apparent. Ontario's education system for students under 18 years is more integrated than that of Bavaria in that most students are educated together, regardless of diverse needs, with only a few separate schools for students with disabilities (Hutchinson & Specht, 2020). Within secondary schools (grades 9-12 beginning around age 14), there are different levels of courses for students with some directed towards university preparation and others towards preparing students for community college or the workforce immediately after secondary school. Students can choose courses from any level within the same school (Government of Ontario, 2021). In Bavaria, there are many educational programs that exist in different schools. Placement in these schools begins at age 10 to 11, with the course set in secondary schools for either an academic career (university degree through Gymnasium) or a more vocational orientation (vocational apprenticeship through Realschule or Hauptschule). Parallel to the general school system, Bavaria has a separate school system for all grades and different special education needs.

With respect to teacher education, university-level programs are mandatory in both countries to become qualified to teach in schools, and in-depth study of teaching methods are included in coursework. During their time in coursework, the 55-day school practicum experiences of Bavarian preservice teachers consist mainly of observations; personal teaching experience is limited. Following the granting of their degree, a two-year internship is required in which practical skills are acquired under the guidance of a mentor teacher, and at the end of this process they are qualified teachers. In Ontario, the teacher education program consists of course work at the university, interspersed with a total of 80 days of practicum comprising observations in the school, and creating and delivering lessons for students in the classroom under the guidance of their mentor teacher. Teacher candidates are qualified to teach at the end of their preservice teacher

education program. Additionally, although teachers are qualified to teach different grade levels in Ontario (K-6; 4-10 and 7-12), they see themselves as teachers of all students including those with disabilities. In contrast, Germany has a complex system of different schools. University training qualifies teachers to teach at one of six types of schools, depending on the age, qualification of the students, disability and development of the students.

3. Current Study

We report on a comparison of the experiences reported by preservice teachers to be important for developing inclusive instructional practices in Canada and Germany. Previously, Miesera and Gebhardt (2018) found that preservice teachers in Canada had higher scores on measures of attitude, efficacy, and experience with people with disabilities when compared to a German sample. They suggested that the disparities may be related to differences between the experiences of inclusion. The current study investigates this proposition further. These two countries were chosen for comparison because, on the one hand, the organization of the education system is similar and, on the other hand, different understandings of inclusion shape implementation. While Canada has already been practicing the broad understanding of inclusion in society and school for decades and thus theoretically lives an inclusive culture, Germany is still at the beginning of developing a broad understanding of inclusion (Kimmelmann et al., 2022). Historically, inclusion in Germany was understood within a narrow perspective that focussed only on ability and, in part, is still understood and reflected in practice today. Societal challenges such as immigration, are still not understood as part of social inclusion, but rather as the integration of people with other cultural roots. With respect to disability, because of the differences in the school systems, contact with people with disabilities in Germany is limited in society and at school. This contrast creates different spaces of experience for each individual and especially for prospective teachers in Canada and Germany. Our research question is whether the experiences that contribute to the development of inclusive instructional practice reported by Canadian preservice teachers are similarly understood by German pre-service teachers?

4. Method

We employed Group Concept Mapping (GCM), a method which utilizes multidimensional scaling and hierarchical cluster analyses to create a visual representation of the ideas generated using interviews (Kane & Trochim, 2007). This method has been used in many disciplines such as education (Nowicki et al., 2014), mental health (Winseman et al., 2015), public health (Guichard et al., 2017) and social work (Brown et al., 2015). In discussing the use of this method with researchers, Kane and Rose (2018) share that it is a useful method when one desires the voices of the participants. A GCM methodology necessitates a group of participants to sort the

statements that were generated from the interviews. Utilizing the voices of those with the knowledge, opinions, and experiences allows group wisdom that can lead to understanding and informed action, thus setting GCM apart from other methodologies. This mixed method allows us to qualitatively use the voice of preservice teachers to determine what experiences they see as improving their instructional practice in the individual interviews but also in the collective minds of the group of preservice teachers with the quantitative analysis. The visual output of the quantitative analysis allows researchers to see the connectedness of the ideas for the group rather than an individual as is typically the case with other concept mapping techniques.

4.1 Participants
We used three different samples of participants. Sample 1 comprised participants who were interviewed at the end of their preservice teacher education programs. Samples 2 and 3 were the participants who sorted the interview statements and are involved in the comparison between the German and Canadian samples.

Sample 1
Fifty-one (82% women; 18% men) preservice teachers in Canada were interviewed about the experiences that influenced their inclusive instruction while teaching in inclusive classrooms. All participants (M_{age} = 32.04 years, SD = 6.24) were enrolled in a post baccalaureate program for certification as a teacher and were interviewed at the end of the program.

Sample 2
Eighteen preservice teachers (87% women; 13% men) from faculties of education in Ontario, Canada participated. Their ages ranged from 23 to 31 years. They were qualifying to teach in the elementary and secondary education systems. Sample 2 sorted the statements from the interviews that were completed by Sample 1.

Sample 3
Twenty-nine preservice teachers (67% female; 33% male) from a large educational university in Bavaria participated. Their ages ranged from 21 to 40 years. The German participants were preservice teachers in the master's program for vocational teaching. As with Sample 2, Sample 3 participants were tasked with sorting the statements from the interviews that were completed by Sample 1. Samples 2 and 3 exceed the 10 participants required for GCM (Kane & Trochim, 2007).

4.2 Materials
A brief questionnaire was used to gather the participants' demographic information. This included participants' age, gender, and the school grades/levels they were preparing to teach. We provided the definition of *diverse learners* used in the present study ("we want you to think about experiences related to students who could be identified with a

disability and their inclusion in a general education classroom"). Canadian participants from Sample 1 answered the question *"What experiences have influenced the instruction that you use in diverse classrooms?"* Prompts were used to encourage elaboration of responses if necessary, such as reminders about whether course work and practicum experiences, professional learning opportunities (e.g., Professional Development days, workshops, seminars, readings) or personal experiences outside of school (e.g., experiences with friends or family members, community experiences) had influenced their instructional practice.

4.3 Procedure

Data collection occurred after receiving ethical review from our respective institutions. In keeping with standards of ethics, all participants provided voluntary informed consent. The goals and procedures of the study were explained. In addition, participants were told that their data would be kept confidential and anonymous and that they had the right to withdraw at any time for any reason and without penalty.

A GCM technique was employed (Kane & Trochim, 2007). Group concept mapping involves the creation of a structured conceptualization through a 6-step process: (1) identify participants and research questions. For this study, we asked Sample 1, the Canadian preservice teachers, what experiences had helped them develop their instructional practice for diverse learners; (2) transcribe Sample 1 participants' interviews, remove redundant statements, and record unique statements resulting in 93 unique statements; the unique statements were translated to German. (3) return these statements to participants. Each participant reviews all the responses to the same question and sorts them into groups that make sense to them. These participants must be from the same population as those who were interviewed (i.e., preservice teachers at the end of their education program), but not necessarily the same sample. For this study, we utilized Samples 2 (Canadian preservice teachers) and 3 (German preservice teachers); (4) apply statistical analyses to the participants' groupings of statements, and decide on the optimal number of concepts (explained in the results section); (5) label the concepts after reviewing labels provided by participants in the sort task (presented in the results section); (6) create a computer-generated data point map identifying the relationships among ideas within a given thematic cluster and show the position of each cluster within the overall structure (presented in the results section).

Statements within each cluster of the concept maps were compared to determine the similarities and differences between Canadian and German preservice teachers for experiences that contribute to inclusive instructional practice.

5. Results

In this section, *Steps 4 through 6* (Kane & Trochim, 2007) of GCM are detailed. We used the Concept Systems® Group Wisdom™ software to analyze the data (step 4), label the
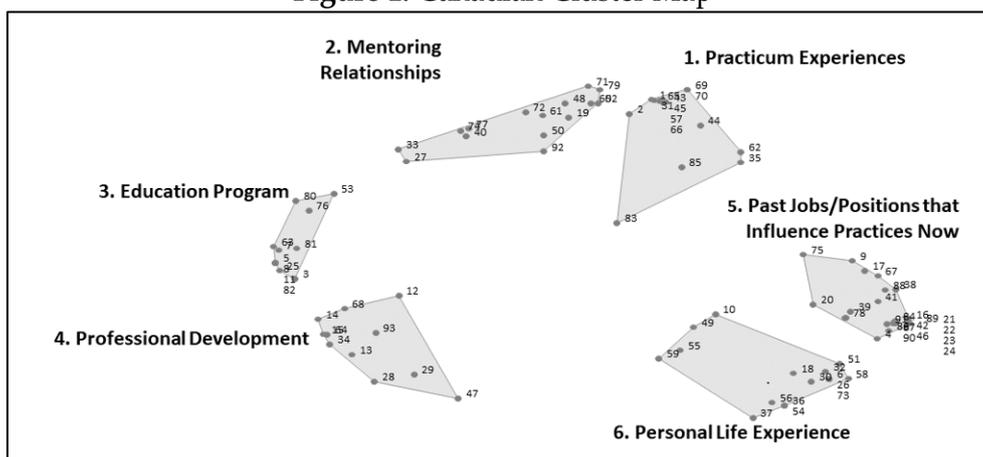
concepts (step 5), and create a computer-generated map (step 6) for each of the Canadian and German participants who sorted the statements (samples 2 and 3, respectively).

Multidimensional scaling was used to analyse the similarity matrices. This analysis determines the proximity of the individual data points or statements to one another on a two-dimensional coordinate grid or data point map. Statements that are close together on the map are more conceptually related and were frequently sorted together (Kane & Trochim, 2007). The Kruskal's stress value was used to determine the fit between the way participants sorted the statements and the resulting point map. Stress values range from 0 to 1, where a lower value indicates less stress on the model and a better fit. Next, hierarchical cluster analysis was used to group the individual data points (i.e., statements) into clusters. Each cluster represents statements that were commonly grouped together by the participants and that are conceptually similar.

5.1 Canadian Sample

The analysis resulted in a stress value of 0.17, meaning the map was a very good representation of the data. To select the number of clusters in the final solution, the investigators examined the conceptual meaning of the cluster themes and the statistical bridging values in different solutions (Kane & Trochim, 2007). A six-cluster solution (see Figure 1) revealed the following themes: Practicum Experiences; Mentoring Relationships; Education Program; Professional Development; Past Jobs/Positions that Influence Practices Now; Personal Life Experience. Each of the 6 clusters contained 16 to 24 statements, with an average bridging value between 0.15 and 0.58, which was a very good representation of the data.

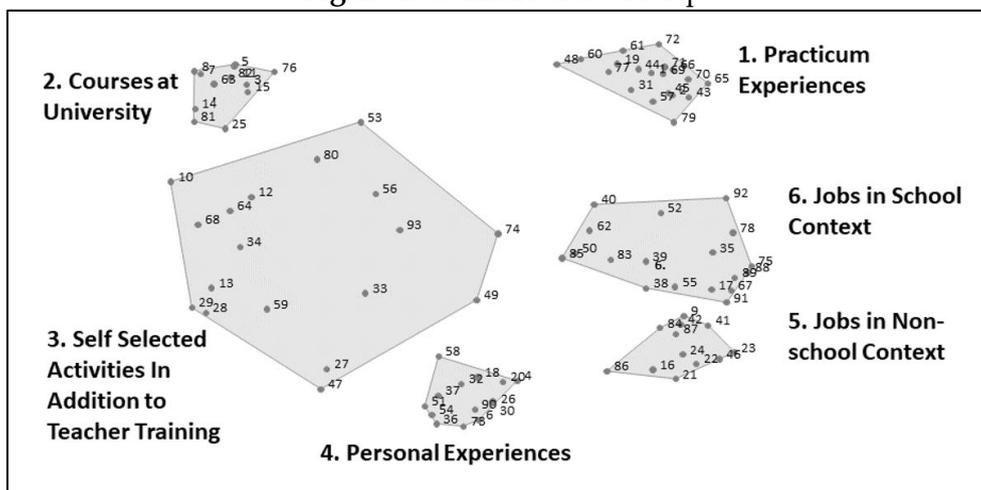**Figure 1:** Canadian Cluster Map

5.2 German Sample

The analysis resulted in a stress value of 0.19, meaning the map was a very good representation of the data. As with the Canadian sample, the investigators examined the conceptual meaning of the themes and the bridging values in different solutions. A six cluster solution emerged (see Figure 2): Practicum Experiences; Courses at University; Self-selected Activities in Addition to Teacher Training; Personal Experience; Jobs in a

Non-School Context; and Jobs in a School Context. Each of the 6 clusters contained 12 to 19 statements; 5 of 6 clusters had an average bridging value between 0.13 and 0.33, a very good representation of the data with an outlier cluster 3 having a bridging value of 0.82.

Figure 2: German Cluster Map

5.3 German-Canadian Comparison

Upon initial inspection, there are similarities as to how the clusters were sorted and labelled by the Canadian and German samples (see Table 1). When comparing the ways in which the two groups clustered the statements in greater depth, interesting patterns emerge.

Table 1: Statements and Clusters by Country

German Cluster	Statement and Number for Reference on Cluster Figure	Canadian Cluster
Practicum Experiences	1. 7 weeks of practicum with the same student.	Practicum Experiences
Practicum Experiences	2. A 3 week practicum in a behavioural program.	Practicum Experiences
Practicum Experiences	31. Hands on experience that the practicum gives you.	Practicum Experiences
Practicum Experiences	43. In most recent practicum I have many different students with many different learning needs.	Practicum Experiences
Practicum Experiences	44. In my practicum I taught a student with significant vision loss.	Practicum Experiences
Practicum Experiences	45. I had several students in second practicum who had ADHD.	Practicum Experiences
Practicum Experiences	57. My first practicum experiences with an autistic child.	Practicum Experiences
Practicum Experiences	65. Placement in practicum within the developmentally delayed classroom.	Practicum Experiences
Practicum Experiences	66. Practicum class with many learning different needs.	Practicum Experiences
Practicum Experiences	69. Relationship with the students during practicum.	Practicum Experiences

Practicum Experiences	70. Relationships with parents of the students in practicum.	Practicum Experiences
Practicum Experiences	19. Being in the classroom during practicum and observing different teachers.	Mentoring Relationships
Practicum Experiences	48. Learning from what my mentor teachers were doing in the classroom to include diverse learners.	Mentoring Relationships
Practicum Experiences	60. My second mentor teacher was really into the inclusive classroom approach and, she encouraged me to consider them in my lessons.	Mentoring Relationships
Practicum Experiences	61. Observations of education assistant in practicum.	Mentoring Relationships
Practicum Experiences	71. Relationships with the special education teacher during practicum.	Mentoring Relationships
Practicum Experiences	72. Seeing the collaboration between educators in practicum.	Mentoring Relationships
Practicum Experiences	77. Talking to mentor teachers or administrators about different strategies.	Mentoring Relationships
Practicum Experiences	79. The associate teacher in practicum used to be a special education resource teacher	Mentoring Relationships
Courses at University	3. A child development course as part of the teacher education program.	Education Program
Courses at University	5. A course in the teacher education program on creating healthy, safe, and supportive learning environments.	Education Program
Courses at University	7. A learning support class in the teacher education program.	Education Program
Courses at University	8. A mental health literacy course during teacher education program.	Education Program
Courses at University	11. A socio-emotional learning course in teacher education program.	Education Program
Courses at University	25. Course on assessment and evaluation during teacher education.	Education Program
Courses at University	63. Our instructor did a good job of giving us an idea of how we could have an inclusive classroom and teach to both ends of the classroom.	Education Program
Courses at University	76. Talk through scenarios in a teacher education university course with hints of what you might do in the future.	Education Program
Courses at University	81. The knowledge and strategies I was given in my classes.	Education Program
Courses at University	82. The special education course during teacher education program.	Education Program
Courses at University	14. A workshop at the university on behaviour management with great tips to helping students want to learn and getting them on your side.	Professional Development
Courses at University	15. A workshop on student anxiety and the IEP process.	Professional Development
Self-selected Activities	27. Discussion with my peers on how assessment and evaluation doesn't have to be top down.	Mentoring Relationships
Self-selected Activities	33. Having the opportunity to discuss challenges in including different learners.	Mentoring Relationships
Self-selected Activities	74. Speaking with E.As and advice from E.As.	Mentoring Relationships
Self-selected Activities	53. My colleagues and the educators in the teacher education program.	Education Program

Self-selected Activities	80. The Inspiration of some of my colleagues that I went through my degree program with and some of their ideas and their own experiences and suggestions.	Education Program
Self-selected Activities	12. A summer institute in diversified education: teaching to differentiated instruction, universal design for learning.	Professional Development
Self-selected Activities	13. A website where they teach spec ed.	Professional Development
Self-selected Activities	28. Doing my own readings and research.	Professional Development
Self-selected Activities	29. Familiarizing self with the IEP process and how IEPS are made and what kinds of accommodations I need to incorporate.	Professional Development
Self-selected Activities	34. I go to conferences and workshops.	Professional Development
Self-selected Activities	47. Keeping a journal and reflecting on things to develop my personal philosophy.	Professional Development
Self-selected Activities	64. PD day experiences around Math.	Professional Development
Self-selected Activities	68. Professional development about restorative justice.	Professional Development
Self-selected Activities	93. Workshop for supporting special needs kids in the classroom.	Professional Development
Self-selected Activities	10. A recreational activities class from the kinesiology faculty for individuals with disabilities.	Personal Life Experience
Self-selected Activities	49. Learning to sew in a class with people that already knew how to sew.	Personal Life Experience
Self-selected Activities	56. My experience as a student influenced my approach to diverse learning.	Personal Life Experience
Self-selected Activities	59. My psychology background in early childhood development like learning disorders, disabilities.	Personal Life Experience
Personal Experience	4. Personal experiences as in-home summer child care provider.	Past Jobs
Personal Experience	20. Being part of the Remembrance Day committee.	Past Jobs
Personal Experience	90. Working with Big Brothers and Sisters.	Past Jobs
Personal Experience	6. A family friend who has special needs.	Personal Life Experience
Personal Experience	18. Being exposed to other parents with other kids.	Personal Life Experience
Personal Experience	26. Cousins with learning disabilities with reading and writing.	Personal Life Experience
Personal Experience	30. Friends who were high on the autistic spectrum.	Personal Life Experience
Personal Experience	32. Having my own kids gave me an interesting perspective on how children develop and how different they can be.	Personal Life Experience
Personal Experience	36. I have a learning disability and I also have ADHD so those two things combined have allowed me to better understand my student.	Personal Life Experience
Personal Experience	37. I have an anxiety problem [and] that's definitely affected some of the decisions I make in the classroom.	Personal Life Experience
Personal Experience	51. Living abroad and travelling.	Personal Life Experience
Personal Experience	54. I had an IEP growing up.	Personal Life Experience

Personal Experience	58. My high school had a "Best Buddies" program.	Personal Life Experience
Personal Experience	73. Someone in my family with Down Syndrome.	Personal Life Experience
Jobs in a Non-school Context	9. A placement in a home that had mentally and physically disabled people.	Past Jobs
Jobs in a Non-school Context	16. As a martial arts instructor for like 10 years I spent a lot of time working with exceptional kids.	Professional Development Past Jobs
Jobs in a Non-school Context	21. Coaching figure skating and kids.	Past Jobs
Jobs in a Non-school Context	22. Coaching for the Special Olympics.	Past Jobs
Jobs in a Non-school Context	23. Coaching gymnastics.	Past Jobs
Jobs in a Non-school Context	24. Coaching kids who have certain needs and disabilities.	Past Jobs
Jobs in a Non-school Context	41. I worked in in a detox centre.	Past Jobs
Jobs in a Non-school Context	42. I've had to teach flute lessons and so I've learned that everyone learns different.	Past Jobs
Jobs in a Non-school Context	46. Instructor in swimming lessons.	Past Jobs
Jobs in a Non-school Context	84. Tutoring for a young man after he aged out of school.	Past Jobs
Jobs in a Non-school Context	86. Volunteer as an instructor in a therapeutic riding organization for many years.	Past Jobs
Jobs in a Non-school Context	87. Worked in the community centre with autistic children.	Past Jobs
Jobs in a School Context	35. I had two students who both had an E.A. there with them.	Practicum Experiences
Jobs in a School Context	62. Observing a student with severe physical disability have conversations in her own way with her classmates.	Practicum Experiences
Jobs in a School Context	83. Time making lesson plans.	Practicum Experiences
Jobs in a School Context	85. Using digital technology in the classroom.	Practicum Experiences
Jobs in a School Context	40. I was able to talk things through with the resource department about how I should adapt my lessons for certain things.	Mentoring Relationships
Jobs in a School Context	50. Listening to the students.	Mentoring Relationships
Jobs in a School Context	52. My associate teacher has very specific differentiated instruction.	Mentoring Relationships

Jobs in a School Context	92. Working with the special education resource teacher forming accommodations and fulfilling accommodations.	Mentoring Relationships
Jobs in a School Context	17. Being a teacher in the north.	Past Jobs
Jobs in a School Context	38. I think the biggest thing for me was I taught abroad twice	Past Jobs
Jobs in a School Context	39. I volunteered at an elementary school targeting students with low literacy level so it helped me to figure out the phonetics of English.	Past Jobs
Jobs in a School Context	67. Previously worked as an EA in the schools with special needs students.	Past Jobs
Jobs in a School Context	75. Supply teaching in the Quebec schoolboard.	Past Jobs
Jobs in a School Context	78. Teaching a program called "Adapted Aquatics" working with the students with exceptionalities.	Past Jobs
Jobs in a School Context	88. Worked on an isolated First Nations Reserve where probably like 80% of my students had FASD.	Past Jobs
Jobs in a School Context	89. Working with a child with Autism who was non-verbal.	Past Jobs
Jobs in a School Context	91. Working with people with different disabilities and ages.	Past Jobs
Jobs in a School Context	55. My developmental service worker diploma.	Personal Life Experience

Items labelled as practicum experience (cluster 1) by the German sample were sorted as either practicum experience (cluster 1) (e.g., *In most recent practicum I have many different students with many different learning needs; Relationship with the students during practicum*) or mentoring experiences (cluster 2) (*e.g., Relationships with the special education teacher during practicum; Talking to mentor teachers or administrators about different strategies*) in the Canadian Sample. In the German sample, there was no specific cluster for mentoring. As can be seen in cluster 6 in the German sample, the other items that the Canadian students sorted as practicum experiences were sorted as jobs in the school context (*e.g., Observing a student with severe physical disability have conversations in her own way with her classmates; Time making lesson plans*).

In the German sample, courses at University (cluster 2) overlapped with the Canadian clusters of education program (cluster 3) (e.g., *A child development course as part of the teacher education program; A mental health literacy course during teacher education program*) and professional development (cluster 4) (e.g., *A workshop at the university on behaviour management with great tips to helping students want to learn and getting them on your side; A workshop on student anxiety and the IEP process*). The German sample did not have a cluster referred to as professional development. For the most part, the courses at university overlapped with the Canadian statements rated as the education program. The 2 statements that the Canadian sample identified as professional development tend to cluster nearer to the side close to education program (see Figure 1) indicating that some of the sample also sorted these statements as part of the education program cluster.

The least stable cluster for the German sample was the one identified as self-selected activities in addition to teacher training (cluster 3). For the Canadian sample, these statements clustered in 4 different themes: 3 within mentoring relationships (cluster

2), 2 within education programs (cluster 3), 9 within professional development (cluster 4), and 4 within personal life experience (cluster 6). Comparatively, all but 2 of these experiences are outside of coursework in the teacher education program and those two related to discussion with colleagues or the university professor rather than specific aspects of the work. In the Canadian sample then, these statements were sorted more discretely, reflecting different categories of those experiences that are outside of teacher training (i.e., mentoring, professional development, and personal life).

The German cluster of personal experience (cluster 4) consisted mainly of statements that Canadians also sorted as personal experience (cluster 6) (*e.g., Having my own kids gave me an interesting perspective on how children develop and how different they can be; Someone in my family with Down syndrome)*. A couple of statements that Canadians labelled as past jobs (cluster 5) may not have been labelled that way by the German sample because they referred to specific programs in Canada that may not have translated well into German (e.g., Remembrance Day and Big Brothers/Big Sisters)

In the German Sample, two clusters for jobs were created. One was jobs in a non-school context (cluster 5) and the other, jobs in a school context (cluster 6). The jobs in a non-school context were comprised of statements that Canadians had classified as past jobs (cluster 5) (e.g., *I've had to teach flute lessons and so I've learned that everyone learns different; Coaching gymnastics*). Jobs in a school context were statements that Canadians identified as past jobs (cluster 5) (*e.g., Working with a child with Autism who was non-verbal*), mentoring relationships (cluster 2) (*e.g., My associate teacher has very specific differentiated instruction*), personal life experience (cluster 6) (*e.g., My developmental service worker diploma*) and practicum experiences (cluster 1) (*e.g., Time making lesson plans*). Upon further inspection, all of these statements could refer to school context. Once again, it appears that the Canadians were being more discrete in how they clustered the experiences.

In summary, the data point maps for both samples showed a good representation of the data. With the exception of the German cluster, (i.e., "self-selected activities in addition to teacher training"), the clusters were sorted with great similarity between participants within each of the two countries. For the most part, the Canadian and German samples viewed the statements that would influence their instructional practice similarly. The greatest difference appeared to be in the identification of mentoring and professional development within the Canadian sample which were attributed elsewhere for the German sample. Additionally, the German sample referred to self-selected activities outside of teacher training as experiences that were not related to course work in their teacher education program.

6. Discussion

The results of this research have implications for understanding the experiences of pre-service teachers that support the acquisition of effective inclusive instructional practices. This study is unique in that we used the words of the preservice teachers to help us

understand experiences that contribute to their development of inclusive instructional practices, and provided their grouping of factors that we can focus on in teacher education in both countries. Although the statements were interview data from a Canadian sample, both Canadian and German preservice teachers experienced no difficulties sorting the statements into categories that made sense for them, and that provide insight into those experiences that contribute to the development of inclusive instructional practice.

What is of particular interest in this research is the comparison of the two samples and reasons for seeing differences in the conceptualization of the clusters. As was discovered with the sorting, personal life experiences, coursework at university, past employment, and practicum experiences were all listed as ways in which the experiences clustered together in both samples. These similarities imply that people in both countries understand these experiences similarly. Practicum experiences were sorted as either practicum or mentoring relationships in Canada; but broadly, both could be seen as experiences that exist within the school context. It could be that Canadians sorted their statements more discretely because their practicum consists of actual teaching in a classroom which has not occurred for students in the German sample at this time of their education. Recall from the explanation of the differences, that German students do not have that experience until they are in their internship. It could be that they did not identify mentoring relationships because it is not something that they have experienced from colleagues or teachers in the schools. In order to understand if such experiences are sorted based on program experience, it may be necessary to speak with them during their internship. Similarly, courses at university for the German sample did include the same items as the Canadian sample, except for two experiences describing workshops. These two experiences were sorted as professional development in the Canadian sample. Again, perhaps given that the German students are not yet thinking of themselves as teachers in the classroom, they do not see courses at university as distinct from workshops in which they may enroll. Two clusters that are quite varied between the samples are *self-selected activities in addition to teacher training* and *jobs in a school context*. The *self-selected activities* had a high bridging value which indicates that the German sample did not sort them with great consistency.

Overall, the key differences in sorting may be because of the perspective of the participants. While the Canadian sample already view themselves as teachers because their practicum consists of engaging in the work of a teacher, the German sample may still see themselves as students. The collegial aspect with other teachers in the schools is not in their mindset and they would, therefore, not view mentoring as an experience that they encounter at this time in their path to being teachers. We believe that this difference highlights the need for preservice teachers to begin to view themselves as professionals when they enter their teacher education programs. Given that preservice teacher education programs are crucial in the development of inclusive education practice broadly (Miesera et al., 2021; Miesera & Gebhardt, 2018; Sharma, 2018), thinking of oneself as a professional from the start of one's teacher education program may provide

an opportunity to learn from all experiences within the program and perhaps how prior life experiences influence practice. To investigate this claim, future research could take the experiences of the Canadian preservice teachers and have them sorted by those finishing their internship in Germany. In addition, a cross national study asking Germans about their experiences could then be sorted by Canadians to see how they view those experiences.

In conclusion, preservice teachers report many experiences that they draw upon to assist in the development of their inclusive instructional practice. This skill is important for teaching in the inclusive classrooms. Much research has focused on how efficacious preservice teachers feel for teaching in inclusive classrooms, but not necessarily on how they developed the instructional practice that might promote that efficacy. Preservice teachers should use their previous and current experiences within their programs to support their reflection and professional understanding of what it means to be a teacher in inclusive classrooms. Teacher education programs can build on this new understanding to support the implementation of inclusive instruction in Canadian and German schools.

Conflict of Interest Statement
The authors declare no conflicts of interest.

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