SPED-ING THEIR WAY: USING CONCEPT MAPPING TO ANALYZE REFLECTIONS OF PRESERVICE TEACHERS IN A SEPARATE SCHOOL

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Abstract. This paper presents a pilot study that implemented the use of concept mapping to analyze preservice teacher pre- and post-experience reflections (n=25), with the purpose of analyzing the experience in-depth, and applying the study design to enhance future program development. Concept mapping allowed visualization of meaningful connections, nuanced changes in understanding, and analysis of data in a unique way. Working in inclusive classrooms can be overwhelming and time consuming. A field experience at a separate school designed for students with EBD provided a hands-on experience for preservice teachers to hone their understanding of student engagement in both general education and special needs environments. With respect to preservice teacher training highlights from this pilot study were two-fold – (i) preservice teachers were able to appreciate the nuanced differences between general education and EBD classrooms, and (ii) preservice teachers recognized that student engagement requires attention and diligent preparation.

Keywords*:* Special Education, EBD, concept mapping, elementary teacher preparation

1 Introduction

Teachers in special education have historically experienced high rates of attrition (Brownell & Smith, 1993; Billingsley, 2004; Viadero, 2018). For teacher candidates who earn a dual certification in elementary and special education, one objective is to ensure they are prepared for both settings and hopefully reduce the chance of attrition. One way to accomplish this goal is to make sure they are exposed a variety of experiences, especially those relevant to their future career.

Though most students in special education receive services through general education, a small percentage receive their education in separate schools. These schools are sometimes designed to provide specialized services to a specific group of students (Hallahan, Kauffman, & Pullen, 2015). Since the continuum of services is fluid, it may be beneficial for preservice teachers to have some form of experience in this environment. Many preservice teachers are introduced to the various settings in which students with special needs receive service through books, articles, lectures, and discussions, but strong clinical preparation is critical (Darling-Hammond, 2014; Scheeler, Budin, & Markelz, 2016). It can be explained what to expect when a student is transitioning from a separate school back to a student's home school, but they can learn more in a short period of real life, possibly challenging, experience than from an explanation, a book, or a lecture (Kent & Giles, 2016).

The main goal of this pilot project was to provide an authentic experience designed to offer exposure beyond what they can gain in the university classroom which in turn will provide the resilience to remain in the teaching profession. The research questions answered by this pilot study are:

- How can concept mapping be used to effectively and efficiently analyze pre-service teacher field experiences?
- What are common themes regarding teaching EBD students articulated as part of this field experience?
- What are some unique themes that emerged from this EBD field experience?
- How can the findings from this EBD field experience guide pre-service teacher preparation?

2 Theoretical Framework

2.1 EBD and LRE

Preservice teachers who are working towards certification in elementary education and special education are taught to address the needs of not only the general population, but to meet the needs pf students who have disabilities in the high incidence areas. One group of students that many preservice teachers seem to feel apprehensive about teaching is students with emotional/behavioral disorders (EBD). Behavior difficulty is one of the most common reasons

teachers leave the field, even more so when the teacher is working with students diagnosed with EBD (Cancio, Albrecht, & Johns, 2013). Students diagnosed with EBD are serviced through various educational settings. Since the goal is to service students in the least restrictive environment (LRE), the continuum of service can be fluid and many of these students may move back and forth from a general education setting with services to pull-out, self-contained, and/or a separate school (Hallahan, Kauffman, & Pullen, 2015). Being able to manage behavior issues is a top concern for teachers (Reinke, Stormont, Herman, Puri, & Goel, 2011). Providing a variety of experiences may help alleviate this apprehensiveness and lead to a stronger retention of teachers.

Students diagnosed with EBD have a history of low academic achievement, experience behavior considered abnormal, and are known to have difficulty developing and/or maintaining relationships (George, 2018; Hallahan, Kauffman, & Pullen, 2015). In order to provide the setting and educational opportunities for all students, specifically those diagnosed with EBD, behavior management is key. One program designed to help teachers to manage behavior and to promote educational progression is Positive Behavioral Interventions and Supports (PBIS) (George, 2018). PBIS is designed to use a school wide approach to prevent and/or change challenging behaviors in the context of the classroom through a school wide systematic approach using evidence-based practices (Sugai & Horner, 2006).

2.2   Concept Mapping

Concept mapping has been recognized as an effective process for identifying concepts and drawing connections between the concepts (Baugh, McNallen, & Frazelle, 2014; Butler-Kisber & Poldoma, 2010). This functionality of concept maps enables users to analyze various textual information and draw out main concepts and connections between them. Therefore, concept maps are often utilized to make meaning of participant interviews, identify key terms, and analyze learner understanding (Reitano & Green, 2013).

When considering learner-centered environments, such as special needs class experiences, nuanced understanding of themes and their relationships are critical to the efficacy of services rendered by teachers to their students. An analysis of the literature reveals that the strength of the concept mapping process is that it draws out/highlights relationships between key concepts and the nuances of concepts (Golightly & Nottis, 2017; Trent, Pernell, Mungai & Chimedza, 1998). Since, reliability is independent of the concepts used, the resulting analyses produce relationships that are meaningful, relevant to the study participants, and maintain the integrity of participant transcripts.

3   Methodology

3.1   Context of Study

Pre- and post-reflections from [n = 25] preservice teachers enrolled in a special education course during fall semester were analyzed using concept maps. These preservice teachers are pursuing a dual degree in Elementary Education and Special Education. Our study was based on the context that the presence or absence of concepts in preservice teacher reflections were closely predictive of future teacher behaviors in the classroom. Implicit attitudes can unconsciously trigger behaviors without awareness or intent – even more importantly reveal misconceptions which guide implicit attitudes. Authentic hands-on experiences on the other hand often alter teacher perceptions and contribute to conscious preparation for guiding diverse learners.

3.2   Planning

In partnership between a teacher preparation program and a local separate school designed to service students with EBD for elementary and middle school, preservice teachers were allowed the opportunity to volunteer. This group of preservice teachers was in their final semester before graduation with a Bachelor's of Science degree in elementary education and special education. Each came into this experience with approximately 400 hours practical experience in the general education classroom. The preservice teachers were randomly paired with preselected experienced teachers by the coordinator of the school. The experienced teachers and the preservice teachers were provided with the guidelines which outlined expectations, including observations, on-on-one tutoring, and small group instruction. The preservice teachers were charged with not only providing assistance to the teacher in charge,

but to observe the practices used to assist students to be more successful. Specifically, the preservice teachers were asked to observe the use of PBIS, cooperative learning, consistent and continuous monitoring and data collection, and other relevant strategies. They were also asked to observe and note student response to these strategies.

3.3   Analysis of Pre-Reflection

Preservice teacher pre- and post-reflections were analyzed in the following manner:

1. Individual concept maps were created from pre-service teacher reflections [both pre- and post-reflection].
2. CmapTools and manual coding were used in-tandem to identify the frequency of words and color coded to visually present the co-occurrence of common concepts from each pre-service teacher pre-, and post-reflection.
3. During this coding process, unique concepts which emerged between pre-service teacher reflections were also color coded with a different color.
4. A list of common and unique concepts was generated [refer Table 1].
5. Individual concept maps from different preservice teacher pre-reflections were then overlapped to provide a visual representation of common themes between pre-service teacher reflections and the propositional relationships observed from individual reflections.
6. Individual concept maps from different preservice teacher post-reflections were then overlapped to provide a visual representation of emerging unique themes between preservice teacher reflections and the propositional relationships observed in these reflections.

	Theme	Common Concepts	Unique Concept
Pre-reflections [expectations]	Environment	Different from public school	Outside comfort zone
	Management	Plans are differentiated	Student interactions – peer relationships
	Teaching Strategies	Specific to student	Strategies for teaching in small groups
	Triggers	For students	Life skills vs academic skills
	Future Classroom	Learning to handle student issues	
	PBIS	Learn to utilize	
Post-reflections [expectations realized]	Environment	Safe and caring – Sensory Room; weighted blanket	Felt like a prison compared to a public-school environment
	Management	PBIS implemented	PBIS can also be beneficial in general education environment
	Teaching Strategies	Small group focus on activity not behaviors	Whole Brain Teaching (with HS students)
	Triggers	Important to recognize for individual students	Everyday terms can be triggers – understanding student backgrounds is important
	Future Classroom	Flexibility with diverse learners	Rewarding students for improvement not ability
	PBIS	Practice is key	
	Other Emerging Concepts	Patience and compassion required to guide All learners	Caring environment is necessary for student engagement
		Firmness does not mean harshness	Rules and protocols need to be clearly articulated and diligently implemented

Table 1: List of Common, and Unique concepts, that emerged from preservice teacher pre- and post-reflections.

Top concept map:

EXPECTATIONS
— TO —

BE A LEARNING EXPERIENCE

DISCOVER ABOUT THE SCHOOL

SEE TEACHER IN ACTION

TO BE ABLE TO

TAKE BACK TO CLASSROOM

TO

BETTER HANDLE STUDENTS IN CURRENT SITUATION

WITH

A SMALL GROUP

[HANDLE] WHOLE GROUP WITH DISABILITIES

Bottom concept map:

EXPERIENCE

IN — THIS CLASSROOM

PROVIDED — EXTRA TOOLS IN (MY) TOOLBOX

SHOWS — PREVIOUSLY EXPERIENCED ISSUES DO NOT COMPARE

IS ONE — NEVER OBSERVED IN CLASSROOM SETTING BEFORE

OBSERVED HOW TO — HANDLE DIFFERENT (STUDENT) PERSONALITIES I COME ACROSS

TO — ISSUES I HAVE COME ACROSS (HERE)

LEARNED — NEW STRATEGIES TO ADDRESS STUDENT BEHAVIORS

OBSERVED — THESE TEACHERS UNDERSTAND THEIR ROLE & PLACE

FOR EXAMPLE SAW — STUDENT WITH SPLIT PERSONALITY

COMBATIVE STUDENTS

IN — THESE STUDENTS' LIVES

GET — OUT OF CONTROL

THAT — TALKED BACK AND THREATENED TEACHER

SENT TO — SENSORY ROOM WITH PARA-PROFESSIONAL

AND — TEACHER HANDLED BOTH SITUATIONS DIFFERENTLY

TREATED WITH — COMPASSION AND FIRMNESS [BY TEACHER]

CONTINUED — TEACHING LESSON

RE-FOCUSED

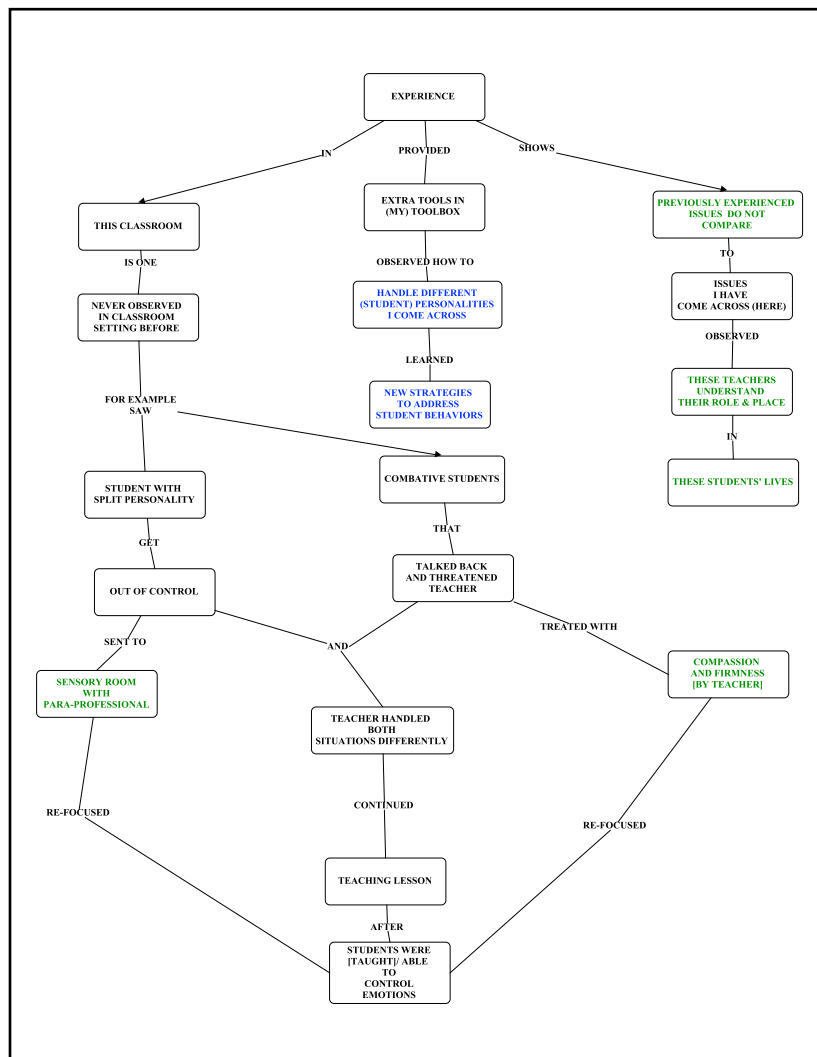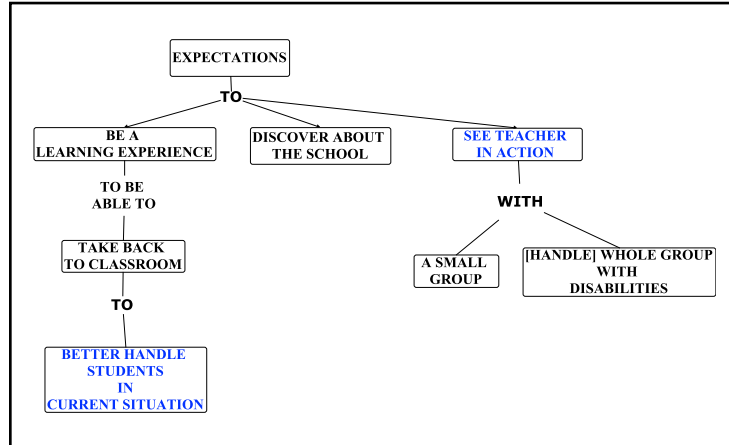AFTER — STUDENTS WERE [TAUGHT]/ ABLE TO CONTROL EMOTIONS

RE-FOCUSED

Figure 1. Comparison concept maps for PT 1 showing common concepts between (top) pre- and (bottom) post-reflection [in blue] and unique emerging understanding [in green].
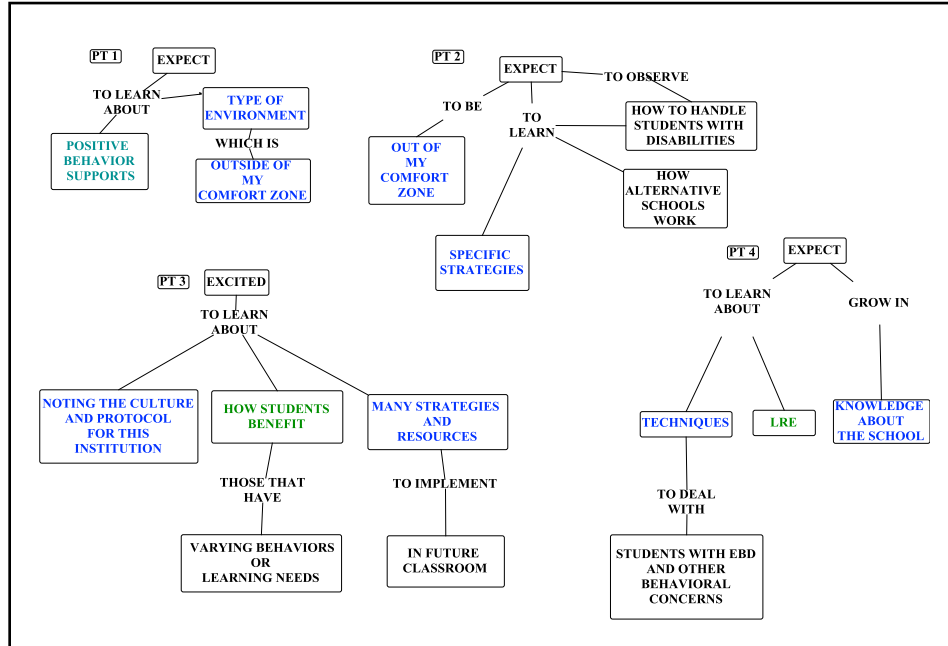
Figure 2. Concept overlaps from pre-reflection cmaps of 4 different preservice teachers showing common expectations (in blue) and emerging themes (in green).
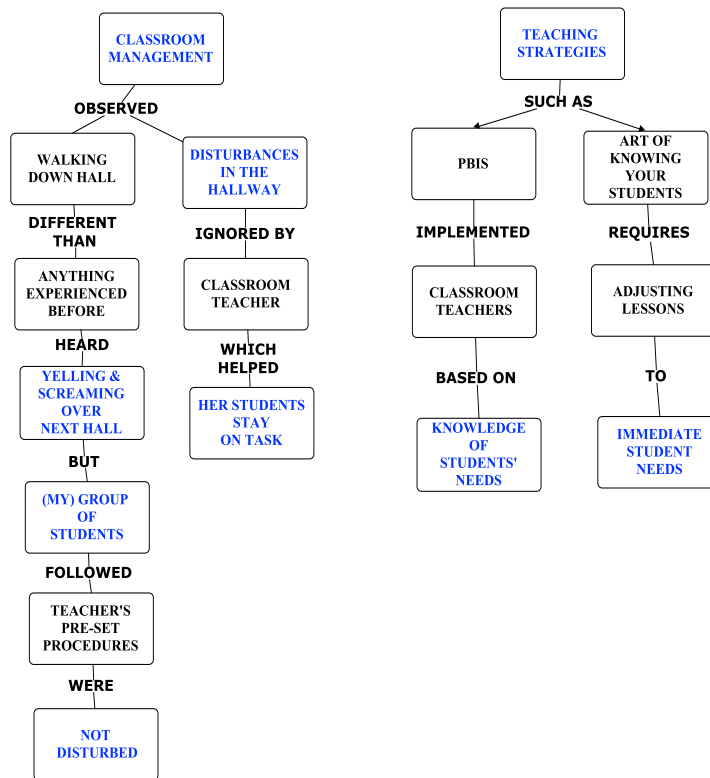

Figure 3. Concept map from several preservice teacher post-reflection cmaps suggesting common understanding regarding: (i) classroom management, (ii) Teaching Strategies; and (iii) Student behavior based on teacher expectations.

4   Results

The main findings which emerged from analysis of the pre- and post-concept maps [n = 46] were six-fold in nature: (i) shift from the general to the specific; (ii) complexities of teaching; (iii) broader understanding of diversity within the classroom; (iv) students are individuals not labels; (v) connections to behaviors in general education classrooms; and (vi) student engagement requires special attention and preparation. A clear shift from the general to the specific was observed, i.e. in understanding student behavior, how to better engage students, and how to connect student emotional well-being to the learning environment [Figure 3]. The pre-reflection maps indicated that the preservice teachers were expecting something different from what they had previously experienced in public school classrooms [Figure 1 & 2]. Post-experience at the separate school, the reflections suggested the critical value of being flexible as a teacher – to be able to balance differentiated strategies for individual students, while maintaining classroom rules and protocols. One of the key ideas that preservice teachers were able to walk away with was that all students are individuals and not mere labels. They were able to re-connect unique student behaviors they had observed in general education classrooms to the emotional well-being of those students and recognize that as future teachers they need to pay close attention and prepare to engage all learners in their classroom. Beyond being able to observe the implementation and practice of PBIS and other specific teaching strategies, the broader understanding of dealing with diversity in the classroom is the most beneficial aspect of this field experience. The post-reflections indicated a deep grasp of the complexities of the teaching environment and a positive mindset towards implementing strategies invested in student learning (Figure 3).

5   Conclusion

Concept maps generated from preservice teacher reflections provided a unique insight into the possible long-term impact of such immersion experiences in the preparation of preservice teachers. Analysis of preservice teacher reflections suggested that this pilot study was an eye-opening experience for these preservice teachers and allowed them to move beyond the general understanding of student [mis-]behavior to a more specific understanding of how to deal with EBD in the classroom. In addition, this field experience also provided the participants with strategies to use with non-EBD behaviors in the general education classroom thereby providing the tools for better classroom engagement in their future classrooms.

The comparative use of concept mapping along with manual coding made the process of coding the concept maps and concept mining more reliable. The use of concept mapping pre- and post-reflections in combination afforded a unique opportunity to uncover unique nuances that lend themselves to authentic field experiences. This pilot study suggests the importance of experiential learning and authentic immersion experiences for teacher preparation. The analysis of pre-service teacher reflections indicate that this group of participants will be better suited for teaching in inclusive environments.

The following vignettes from preservice teacher post-reflections provide an example of the degree to which this experience impacted our preservice teachers:

After my Elam visit, it has provided me with a new outlook on what extremes belong and don't belong in the classroom. Before writing a student off in the future, I will consider what accommodations I can make to assist the student. There are many strategies and accommodations that are easy and available for me to implement, so why not do everything I can to benefit my students.

I feel as though I have extra tools in my toolbox to be able to handle the different personalities and situations that I will come across. Being at [the separate school] for a time, puts my class and the students I have worked with in perspective for me. I feel as though the "issues" I have come across does not compare to what I have seen the past 2 times I have visited [the separate school]. I DO know that the teachers that I have come in contact with at [the separate school] defiantly know and understand their role and place in these students lives.

I think sometimes as general education teachers, we often feel as if EVERY student has to be engaged and fully attentive to the lesson. Some students can doodle and still be paying full attention. Some students need to get up to stand in the back of the room for a few minutes. All in all, I think it's just most important to be flexible. As teachers, our main goal is to meet the needs of ALL learners wherever they are at!

In today's world of heterogeneous student populations and increase in inclusive classrooms, learning to deep-dive into special needs environments provides preservice teachers with unique training components - strategies for engaging all learners (both general education and special education). Given the promising results from this pilot study - the next steps for our program is to continue to incorporate diverse and challenging immersion experiences and train preservice teachers to create their own concept maps prior to beginning their reflections. The objective of using concept mapping to capture their initial ideas is to guide preservice teachers to gain a deeper insight into their own understanding and provide a richer field experience. From a program lens, data analyzed from preservice teacher concept maps suggests a rich and nuanced understanding of engaging students in the classroom, which is critical for teacher success. The process of concept mapping their exposure to diverse learners should assist our preservice teachers build *a nuanced toolkit* thereby affording them the resilience to stay in the teaching profession and become teacher-leaders in the long term.

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