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From the Editor

The *Excellence in Education Journal* is an open access, refereed, online journal that promotes and disseminates international scholarly writing about excellent practices in all aspects of education. Six years ago, this journal was founded with the goal of sharing these practices to benefit the education of children and adults worldwide. For this reason, there are no publications fees and the journal is available free of charge on the internet. Typeset and graphics are intentionally simple in order that the journal can be more easily accessed on a variety of devices worldwide to fulfill the mission of the journal.

This issue, we welcome several new reviewers: Dr. Dianbing Chin, Zhejiang Normal University, China; Dr. Changsong Niu, Zhejiang Normal University, China; Dr. Tonya Perry, University of Alabama at Birmingham, United States; Dr. Chitra Raju, Kongunadu College of Education, Tamil Nadu, India; Dr. Janine Wahl, Bemidji State University, United States; and Dr. Yanjun Zhang, Zhejiang Normal University.

I hope that the practices discussed in this journal will be helpful to you, our readers.

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Exploring the Impact of Extended and Early Practicum Experiences

Joy Meyers, Smita Mathur, and Susan Barnes

Abstract

Universities typically use one-day-a-week practicum experiences for novice preservice teachers, but in this pilot program they were placed with 20 cooperating teachers in elementary classrooms for five consecutive weeks. This article explores the impact of extended and early practicum experiences. Findings suggest the cooperating teachers had increased opportunities for their own professional development, observed growth in their preservice teachers, and witnessed direct benefits to their students, furthering the argument that there is room for improvement in traditional practicum models in teacher education programs. However, extended immersion experiences require close partnerships between schools and universities. To foster these partnerships, a collaborative mentoring model is proposed.

Keywords: teacher education, elementary schools, school partnerships

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Preparing elementary teachers who are fluent in working with an increasingly diverse student body is a complex educational endeavor. It requires partnerships between institutions of higher education and school districts (Gardiner & Shipley Robinson, 2010). Teacher education programs invest considerable effort working with local schools and teachers to provide meaningful practicum experiences filled with experiential opportunities for preservice teachers. Schools are equally vested in providing a context for high quality teacher education and appreciate the extra help busy teachers receive from energetic and enthusiastic preservice teachers. However, this mutually beneficial partnership is a complex educational enterprise that must be forged intentionally so that it yields positive outcomes for preservice teachers, cooperating teachers, and their students.

Practicum experiences provide preservice teachers opportunities to observe and learn about the complexities of the teaching profession. During this time, preservice teachers develop their teaching philosophy, learn about the diversity in students, and explore the connection between theory and practice. Thus, a quality practicum experience is essential (Beck & Kosnik, 2002). Quality practicum experiences have several components including: personally empowering transformational experiences (Caires & Almeida, 2005), consistent, frequent, authentic, and formative feedback (Marks, 2007), and strong mentoring relationships that foster empathy and emotional support (Blair, 1984).

Central to a high-quality practicum experience is apprenticeship with a quality cooperating teacher (Young, O'Neill, & Mooney Simmie, 2015). Research suggests that strong cooperating teachers have: mid-range teaching experience, strong collaborations with university faculty, experience with practicum supervision, a graduate degree in teacher leadership, and a deep understanding of content knowledge (Killian & Wilkins, 2009). In addition, they are able to articulate their teaching philosophies and their beliefs about education that shape their pedagogy

(Tolbert, 2011). Cooperating teachers are key to practicum experiences because they provide structure to the daily experiences of preservice teachers, model best practices in teaching and behavior management, and offer feedback on preservice teachers' behaviors, dispositions and content delivery (Zeichner, 2010). The roles and responsibilities of cooperating teachers change as the preservice teacher progresses through the teacher education program (Allen, Perl, Goodson, & Sprouse, 2014).

Theoretical Framework for High Impact Immersion Experiences

A successful teacher is a polymath (Breit, Elzinga, & Willett, 1996; Burton, 1992). A key goal of teacher preparation programs is to nurture individuals to be knowledgeable in core content, have a deep understanding of child development and family dynamics across diverse settings, exhibit empathy, and be able to successfully differentiate instruction to meet the needs of all children (Cochran-Smith et al., 2015). An educator must therefore develop the potential to view an event from multiple perspectives, integrate and synthesize a wide range of ideas, and then apply the knowledge judiciously in different situations in the interest of education and creating a more just society. Teacher preparation programs therefore focus on student engagement civically, socially, and cognitively in all aspects of a teacher candidate's education (Burton, 1992). Thus, some of the high impact best practices in preparing teachers include frequent student-faculty interaction in authentic learning environments, hands-on active learning, and consistent formative feedback from multiple sources (Kuh, 2009). The Association of American Colleges and Universities has listed 10 high-impact activities that are aligned to developing a polymath. These are experiential seminar experiences for novice college students, developing learning communities, writing intensive courses, undergraduate research, community based service-learning projects, internships, and capstone courses (Bass, 2012). These methods are impactful practices mainly because they afford the opportunity for college students to interact

with different stakeholders, experience diversity, and engage in deep reflection and synthesis of experiences. Teacher candidates are preparing for a professional future in challenging settings. Schools present a work environment that is people, labor, time, and effort intensive, as well as reflective of the demographic changes experienced nation-wide (Guarino, Santibanez & Daley, 2006; Vargas & Conlon, 2011). To yield the same high impact suggested by Kuh (2009), deeper immersion in schools is the pathway for developing the polymath qualities in a teacher.

The Council for the Accreditation of Educator Preparation (CAEP) holds Colleges of Education accountable for providing “effective and high quality clinical practice” to teacher candidates so that they can have an impact on K-12 education. CAEP envisions a collaboration between colleges of education and schools that provides the teacher candidate “clinical experiences of sufficient depth, breath, diversity, coherence, and duration” (CAEP Standard 2). There is a significant emphasis on depth, duration, and diversity. The emphasis is based on the understanding that education is a practice-based profession where content knowledge and the development of skills and dispositions are both important. Learning skills and developing dispositions of a teacher polymath are best achieved in classrooms through meaningful interactions with students, teachers, school staff and administrators, community members, and families. These interactions afford the opportunity to build trust, strengthen relationships with all stakeholders, and engage in authentic problem solving and assessment (Grossman, 2010; NCATE, 2010). This trust cannot be achieved through classroom-based traditional instruction alone. It must be strengthened by more immersive practices. Currently, teacher candidates attend practicum in schools one-day-a-week for 14 weeks each year. In addition, they have a 12-week student teaching experience in two different grade levels. This limited field experience is insufficient in meeting the CAEP standard. Immersion is not a new idea in education. Immersion-based programs to teach language arts (Nildicéia & Rosangela Sanches, 2016) and

cultural competency (Arnett & Mady, 2017; Whitt, Edison, Pascarella, Terenzini, & Nora, 2001) have demonstrated success across grade levels and countries (Kong, Hoare, & Chi, 2011). This High Impact Immersion experience advocates replacing four to six weeks of traditional university classroom instruction with consistent and daily immersion in schools where teacher candidates experience the benefits of a High Impact Practice (HIP) by deep immersion in elementary classrooms.

Traditional Practicum Experiences

The initial placement for novice preservice teachers occurs in the first year of the teacher education program when they typically spend one-day-a-week in classrooms and mainly focus on observing students, teaching practices, and classroom management strategies used by the cooperating teachers. In addition, they work on assignments associated with their university courses. The complexity of interactions during practicum between all stakeholders increases in small increments and eventually leads to spending full days in the classroom over several continuous weeks during student teaching. This gradual progression from observations to application of content during practicum is seen as a developmentally appropriate practice for teacher education. However, this gradual progression is time intensive (Lane, Lacefield-Parachini, & Isken, 2003).

In addition, traditional one-day-a-week practicum experiences have been critiqued because novice preservice teachers have limited opportunities to build significant relationships with cooperating teachers, students, and their families. Strong relationships extend beyond information sharing and allow the preservice teacher to connect with the practicum setting (Awaya et al., 2003). The traditional one-day-a-week model also limits the time the preservice teacher spends with the cooperating teacher. Thus, during their approximately 80–90 hours together during the 16 weeks, there may be few opportunities for the cooperating teachers to

provide consistent authentic and formative feedback (Kahan, Sinclair, Saucier, & Caiozzi, 2003). In addition, there is insufficient time together to build trust and clear channels of communication, that are essential in successful practicum experiences.

Typically, the novice preservice teachers also have limited interactions with university faculty during their time in schools because they are only there one day each week. Similarly, the cooperating teacher and the university faculty members in their traditional roles may not have opportunities to interact. Thus, communication between university faculty and the cooperating teacher is mediated by the preservice teacher and the role of faculty is limited to debriefing with the preservice teachers once they return to campus from practicum experiences. This lack of interaction between the two faculties can potentially lead to a disconnect between the routines and practices within elementary schools and content emphasized in higher education (Torrez & Krebs, 2012), often resulting debriefing discussions after practicum that are not contextualized or authentic in meaningful ways.

Residency Models

In response to these limited learning opportunities in a traditional one-day-a-week practicum experience, several school districts developed a residency model for teacher education (Coffman & Patterson, 2014). This model is based on developing a mutually beneficial partnership between institutions of higher education and school divisions in high-need communities. The residency model is typically offered to graduate students who immerse themselves in schools for a full year while simultaneously taking 10–15 credits of graduate level courses that are embedded within the elementary school sites. A teaching residency typically culminates in a full-time teaching position in the school division. During residency, the preservice teachers are expected to take full charge of a classroom, which in turn gives them several opportunities to integrate theory into practice. Residency models have gained prominence

because many high-needs schools are struggling to attract qualified teachers. Thus, a residency model for teacher preparation is seen as a way to recruit, prepare, and retain effective teachers in high-needs schools. Emerging evidence suggests that residency models are successful in hiring teachers from diverse backgrounds and in achieving high teacher retention rates (Berry, Montgomery, & Snyder, 2008). However, empirical evidence that supports the efficacy of teacher education residency models is limited. Furthermore, the residency model is not widely offered across the country to preservice teachers (Darling-Hammond, 2010).

High Impact Immersion Experiences: The Middle Ground

Four university faculty at a university in the Southeast recognized the limitations of the one-day-a-week practicum experience for novice teachers. They also acknowledged that a residency model was not developmentally appropriate or logistically possible for novice preservice teachers. Therefore, they developed a model termed High Impact Immersion Experiences (H.I.I.E.) that addressed the limitations of the traditional one-day-a-week and residency models. In the H.I.I.E. model, the novice preservice teachers spent five consecutive weeks in classrooms, starting three weeks after entering the teacher education program. While they were immersed in elementary classrooms, they met with university faculty on a weekly basis within the school setting instead of attending classes on campus.

H.I.I.E. was inspired by the High Impact Practices (HIP) developed by George Kuh (2009). Research shows that HIP benefits students and faculty in specific ways (Alemu, 2015). For example, students who engaged in HIP found lasting value in their educational experiences and faculty who incorporated HIP into their coursework experienced similar feelings of fulfillment (Kuh, 2012). H.I.I.E. supports deep immersion in authentic learning environments, one of the HIP practices, and allows novice preservice teachers to witness and grapple with real-life issues.

The faculty recognized that H.I.I.E. would change the university and school partnerships because novice preservice teachers would be spending every day in the schools for five weeks. The faculty, all former classroom teachers, recognized that H.I.I.E. would also make the role of the cooperating teacher more complex. Unfortunately, in the research on teacher education, the voices of the cooperating teachers are heard only occasionally (Clift & Brady, 2005). Thus, in order to understand the impact of extended and early practicum experiences on school partnerships, we needed to understand the cooperating teachers' perceptions and experiences related to H.I.I.E.

Methods

The methodology and data shared in this article are part of a larger study that examined the impact of extended and early practicum experiences from all of the stakeholders' perspectives. However, the focus of this article is the impact of H.I.I.E. on school partnerships and highlights the voices of cooperating teachers.

Participants

Twenty elementary cooperating teachers participated in the H.I.I.E. initiative. Each teacher worked with one preservice teacher who was enrolled at the local university. The teachers taught preschool, kindergarten, and first grade. All teachers are White and 19 are women. Their ages ranged from 26–59 years. Five teachers had an undergraduate degree in Education, and seven had earned a Master of Arts in Teaching degree. The teachers had a wide range of teaching experience ranging from 7 to more than 22 years. Their class sizes ranged from 18–20 students.

Context

The cooperating teachers worked in one of five local elementary schools, all within five miles of the university in a rural area in the South-Central Region of Appalachia. Approximately

87% of the students in the participating classrooms benefited from the free and reduced lunch program. The number of native languages in the classes ranged from two to seven. The dominant languages were English, Spanish, Russian, and Kurdish. Students’ racial or ethnic backgrounds corresponded to the city’s demographic patterns. See Table 1 for specific ethnic and demographic data.

Table 1
Demographics of Students at Participating Schools

School	Number enrolled	Limited English proficiency	Immigrant	Refugee	First year in US school	Latino/Latina	White	African-American	Other ethnicities
A	499	46%	13%	2%	5%	48%	43%	6%	<1%
B	548	48%	8%	1%	2%	59%	29%	11%	2%
C	447	61%	17%	3%	4%	52%	35%	11%	0%
D	463	42%	11%	2%	3%	36%	49%	11%	0%
E	532	49%	8%	2%	2%	54%	39%	6%	0%

Note: Totals do not include preschool students. Immigrant students are defined as those who were not born in the United States (US) and have been in the US schools for less than three years. First year in the US students are those who are new to US schools this school year and does not include Kindergarten. Refugee numbers are unofficial numbers provided by the district office and not a field reported in published reports.

Data Collection

Data were collected from the cooperating teachers using structured open-ended interviews, written reflections, and journals maintained by the researchers.

Structured open-ended interviews. Of the 20 cooperating teachers, 14 consented to participate in the interviews. Each interview was conducted in person by a trained research assistant or faculty member. Participants were provided the interview questions ahead of time to ensure complete and thoughtful responses. The interviews occurred after the H.I.I.E. implementation in the last three weeks of the semester. The interviews asked questions related

to: a) demographic data including age, ethnicity, teaching experience, and classroom structure; b) impact of H.I.I.E. on their own teaching practice; c) impact of H.I.I.E. on their students; d) impact of H.I.I.E. on preservice teachers; e) suggestions to improve the quality of the H.I.I.E. initiative. All interviews were audio recorded and transcribed by a professional service.

Weekly written reflections. During the H.I.I.E. program, cooperating teachers shared written reflections with the research team. They were provided reflection prompts that solicited information on a specific aspect of the H.I.I.E. experience. In addition, the cooperating teachers were encouraged to share other thoughts and offer their perspective on their own experiences each week. Given that cooperating teachers are extremely busy, the reflections were optional. In week 1, 14 cooperating teachers submitted written reflections; in week 2, responses were received from 13 cooperating teachers, in week 3, 11 cooperating teachers responded, and in week 4, eight written reflections were received.

Field notes and journals maintained by researchers during visits to the schools.

University faculty visited the schools each week and met with the cooperating teachers during H.I.I.E. Journals and field notes were generated during this time by the faculty researchers. During weekly meetings, faculty shared their journals with other participating colleagues. The discussions were audio-recorded and professionally transcribed.

Data Analysis

Analysis of these multiple data sources followed a three-phase process (Miles & Huberman, 1994). During the data reduction phase, data were analyzed to identify patterns and scrutinized for emerging themes. Research assistants then shared the themes with the participants and requested feedback. In the data display phase, the coded data were organized into compressed visual displays to illustrate the outcomes of the data reduction phase. During the third phase of drawing and verifying conclusions, the coded data, as well as the visual display of

these data, were further analyzed for similarities and differences in perceptions of the cooperating teachers. Interpretations were made about the cooperating teachers' perceptions of H.I.I.E and the themes were then shared with the participants to enhance descriptive and interpretive validity of findings and reduce researcher bias.

Findings

In this section, we highlight the impact of extended and early practicum experiences on school partnerships, specifically focusing on the cooperating teachers' perceptions of the H.I.I.E. pilot program. The data revealed that the cooperating teachers believed that H.I.I.E. offered several unique opportunities for all involved, including their own development as teachers, the growth of their preservice teachers, and the learning of the students in their classrooms. Within each broad theme, several sub-themes were evident and are described in the narrative that follows.

Perceptions of H.I.I.E. and Their Own Development as Teachers

Time for metacognitive reflection. The data revealed that the preservice teachers played a role in helping the cooperating teachers reflect on their own teaching. Yvonne, a preschool teacher, talked extensively about this in an interview:

Any time, you know, you've got someone in your classroom, it makes you think about everything you do and why you do it. And like I said, it makes you go back and reevaluate yourself, and, you know, am I doing this the best way? Am I reaching every student? Because you want to present the best you can when you are being a model for somebody. So, I think anytime you have anyone in your room, you want to make sure you are doing it the right way.

Yvonne desired to provide a strong example for the preservice teacher, and to do that she had to reflect on her teaching and the decisions she was making in the classroom. Unlike other

practicum settings, where the preservice teacher is only there a few hours a week, the H.I.I.E. experience gave the cooperating teachers a reason to reflect daily as they explained their thinking to the preservice teachers in their classrooms. Katie, a first grade teacher added, “I feel like it also helped me reflect when I said to her, ‘Oh, yes, so you do have these 100 things you want to include in a lesson, but you have to pick 4 or 5. You have to include what you think is the most beneficial.’” For Katie, having the preservice teacher in her classroom every day helped her reflect and verbalize her decision-making process as she prioritized concepts to include in lessons. Katie also shared that talking to the preservice teacher daily helped her think more critically about what she was doing in the classroom.

In addition to reflecting on their current teaching practices, in the interviews, the cooperating teachers also shared how much they learned from the preservice teachers placed in their classrooms. Naomi, a kindergarten teacher, discussed how the preservice teachers had a lot to offer even if they did not have previous teaching experience. “Having someone fresh in here, they can bring ideas in that I haven’t thought about.” Another cooperating teacher shared, “I mean, it makes me think about myself as a teacher. Okay, this is what I usually do, but that is a good idea. I might try that next time.”

Reflecting on different models of practicum. Some of the cooperating teachers had both H.I.I.E. students and traditional one-day-a-week practicum students in their classroom. Sarah, a preschool teacher, saw a clear difference between the two models of practicum and shared these thoughts:

I think that the students [referring to the preservice teachers] having the experience of a whole month within the classroom setting is very valuable in learning what it is truly like being a teacher. They are able to see the students on good days and on bad, and get the feel for what it is like to teach 8am–3pm five days a week and then need to finish other

work and duties on top of this.

Several of the cooperating teachers mentioned the benefit of having this experience so early in the education program. One shared, “This experience gives them a good picture of what is ahead with student teaching. They will take what they learned here and be able to apply it even more then.” Another teacher said, “These early experiences are very valuable in preservice teachers' education. Seeing real happenings will help them make more sense of what they are studying at [the university]. Educational theories come to life at an elementary school.” A first grade teacher said, “I think it’s definitely helped her [the preservice teacher’s] education. I feel like she really got a sense of what goes on in the life of a classroom teacher.” This feeling was echoed by several other teachers, one sharing:

I think the more time they can spend in the classroom and not just one day a week, but being in here every day for five weeks allows them to see what every day is like. It allows them to see good days. It allows them to see bad days.

Erika, a preschool teacher said:

I think definitely when they are in here day to day, it gives you a better picture of everything that goes on in the classroom. You are seeing every component. You see transitions and schedule changes. Just the everyday routine and rigor that you have to go through. I think it is very eye-opening. If you are here for just a couple of hours you don’t see the whole picture.

One teacher remarked, “My favorite part of it was the five weeks that she came every day. I thought that was so awesome. I wish I had that when I went to school.” Another cooperating teacher, reflecting on her own teacher education, said “I would have LOVED an experience like this. I feel like to have so much hands-on experience so early in the teacher education process is invaluable.”

Perceptions of H.I.I.E. and Preservice Teachers' Growth

Authentic and formative feedback. A key role of cooperating teachers is to provide authentic and formative feedback that is timely, specific, and constructive on various aspects of the preservice teacher's behaviors, skills, and dispositions. In traditional models, college professors, university supervisors, and cooperating teachers have limited opportunities to observe preservice teachers in action, and therefore their feedback is often limited.

During H.I.I.E, because the preservice teacher spent significant time in the classroom engaged in a wide range of activities, it created a context for the cooperating teachers to offer immediate and ongoing feedback. In addition, the cooperating teachers had the opportunity to observe how their feedback was received and applied. For example, Layla, a kindergarten teacher, noticed within the first week of H.I.I.E. that her preservice teacher needed assistance understanding classroom boundaries in terms of what materials and supplies she could have access to in the classroom. The preservice teacher also struggled to appropriately implement the classroom discipline policy. This created dissonance in the classroom which provided Layla an opportunity to offer feedback and strategies that the preservice teacher could use to align herself with classroom priorities. Through candid conversations with the preservice teacher, Layla was able to offer concrete examples of behaviors she frequently observed and her reaction. She then invited the university professor and the preservice teacher to share their perspectives. Through a process of shared negotiation, the cooperating teacher, the preservice teacher, and the university professor arrived at acceptable boundaries and behaviors that were aligned to the preservice teacher's learning objectives, but also respected the cooperating teacher's teaching philosophy. H.I.I.E. created the context for frequent observations and extended conversations unlike typical one-day-a-week practicum experiences where misalignment could be ignored. In addition, it opened channels of communication between preservice teachers, cooperating teachers, and

university faculty.

In another instance, Patricia, a first grade teacher, shared that because of the structure of H.I.I.E, where she mentored the preservice teacher on a daily basis over an extended period of time, she was able to give feedback to the teacher candidate multiple times a day.

I debriefed with the teacher-candidate each morning about the class, what happened the day before, and what the plan is for the upcoming day. I ask her how things went for her when she is given an activity to do and ask if she has any questions.

The cooperating teachers valued having short but frequent conversations with the preservice teachers which provided them opportunities to give frequent and immediate feedback and learn how their students were progressing. Tammy, a preschool teacher said:

I like to give feedback in glows (positive) and grows (needs improvement). My practicum student and I talked every day and we discussed what I would like her to work on with a particular group and then she would share with me how they did during that lesson or activity at the end of the day.

Feedback also occurred in additional settings as described by Katie, preschool teacher, “We have team meetings each Tuesday morning where we discuss what we're doing in preschool and give any feedback on lessons or activities. This is a good, safe time to ask questions and provide feedback.”

H.I.I.E. opened opportunities for administrators to provide feedback to the preservice teachers as well. An assistant principal observed a preservice teacher interacting with a student having a temper tantrum in the hallway and used that as a teaching moment for the preservice teacher. Later she met with the preservice teacher to offer encouragement as well as critical feedback on the observed interactions.

Build and demonstrate capacity as future teachers. Novice teachers are typically expected to observe and try simple tasks with children in a traditional one-day-a-week practicum. However, preservice teachers in H.I.I.E. successfully handled complex teaching and behavior management challenges, allowing them to build and demonstrate capacity as future teachers. The cooperating teachers were able to facilitate this growth by providing opportunities and offering support immediately or later that same day. For example, the novice preservice teachers had the opportunity to work independently with students in small groups during H.I.I.E. They also intentionally planned and implemented multiple lessons in collaboration with their cooperating teachers. Robbie, a cooperating teacher, said that the preservice teacher, “planned and prepared a kindergarten craft and writing prompt for the children.” Another shared, “During the first week of H.I.I.E., I felt confident enough to allow her to work with all of the small groups for our class.”

The preservice teachers, because they participated in the classroom every day, also played an important role in supporting cooperating teachers’ instructional goals. One cooperating teacher said:

She has followed through on plans I have created for improving skills during reading and math rotations. She was able to give me feedback using a simple checklist or by telling me about any problems students had with the activities. Often, the preservice teacher was called upon to work with children with special behavioral challenges or take charge if the cooperating teacher was out of the classroom.

This level of responsibility is unusual for preservice teachers in a typical one-day-a-week practicum experience. A cooperating teacher shared, “I was out two days while she was here and she did a great job of keeping my students in their routine, working on classroom management and was a big help to the substitute teacher in my classroom.” During H.I.I.E., the preservice

teachers also had unique opportunities such as accompanying the cooperating teachers on home visits. This shared experience was beneficial for all involved as discussed by a cooperating teacher:

This [the home visit] provided an insight into this child's life outside of school. I think we both found the visit to be very eye opening. The child is performing well in school, but the mother seemed dysfunctional. We also shared the meeting with another teacher, as she has the sibling.

Another cooperating teacher said, “It is good for these future teachers to see the reality of classrooms.” This cooperating teacher realized that the H.I.I.E. experience was not only helping her logistically support her students, it was giving the teacher candidate a “sneak peek” into what it will be like in her own classroom one day.

H.I.I.E. provided, even within the first couple of days of the immersion experience, the opportunity to engage in more complex tasks and develop confidence and competency, which in turn built capacity within the preservice teachers.

Perceptions of H.I.I.E. and Impact on Students

Individualized instruction. It is a well-established fact that elementary teachers have complex jobs and are simultaneously inundated with multiple demands. The demands not only originate from the students and their families, but also from steadily increasing testing and reporting requirements. Teaching takes on additional complexities when teachers are serving children who live in poverty or are at high-risk for academic failure. The cooperating teachers found H.I.I.E. provided much needed daily support which resulted in more time for small groups, additional one-on-one instructional time, and specific support for English language learners.

Pam, a preschool teacher, shared in an interview that during H.I.I.E. she was able to use three small groups for instruction for the first time because she had support for each group. Another

cooperating teacher remarked, “It [H.I.I.E.] has allowed for me to be more intentional in my small group planning because I can have her [the preservice teacher] lead and teach small group activities.” Having the extra set of hands was especially helpful in some classrooms where the cooperating teachers had little support. “She [the preservice teacher] is able to take small groups and make learning more meaningful for all since we do not have full time assistants. The needs in my classroom are great. It is hard to manage it all by myself.”

The preservice teachers also supported the cooperating teachers with classroom management. Jackie, a kindergarten teacher said, “It just helps having two extra eyes in the room.” Another said, “It's been nice to have an extra set of hands! Especially in preschool, where the children require more one-on-one attention.”

Support for high needs students. In addition to being able to facilitate small groups and assist with classroom management, the cooperating teachers also talked about the benefit of H.I.I.E. for their students in terms of supporting the needs of particular students. One cooperating teacher said:

Each day during reading, she met with two of my new students who were also struggling learners to give them extra support or to help them learn things that the other students in my classroom had already been taught at this point in the year.

The daily presence of the preservice teachers took some of the pressure off the teachers.

Katherine explained:

Sometimes she would help the children who needed support sounding out their words when they're writing, or, for example, some days she would take my student that's gifted out in the hall and work with him on some extension things. She was just there to help the children however they needed it, and two teachers are always better than one, so of course it helped them.

As stated earlier, the population of the school district the university partnered with for H.I.I.E. is incredibly diverse. Part of this diversity is the result of the United States government designating this community as an official refugee resettlement site. While not all immigrants are officially classified as refugees, about 75 students with this status enter the local school system each year. School personnel refer to those who have come to the United States recently as newcomers. The data revealed that in addition to working with students one-on-one during H.I.I.E. to support students academically, the preservice teachers also helped students whose first language was not English. A first grade teacher shared:

I have four newcomers in my classroom. One is from the Congo; he speaks French. One is from Guatemala; he speaks Spanish. Another is from Iraq; he speaks Arabic. My fourth one is also Spanish-speaking. Just having another person to meet in small groups, to spend time with children who don't speak English has been really wonderful.

This sentiment was often repeated in the data from the cooperating teachers. Newcomers arrive at all times during the school year. A cooperating teacher discussed this during an interview.

In our school system, we are often faced with challenges when children arrive in our classroom from other countries with no English. The students usually react in two ways: scared, quiet, not a behavior problem or demanding, loud, with behavior issues. My candidate was able to help me with one of my difficult newcomer children. She often sat with him, worked with him, and gave him one-on-one attention. This helped immensely.

In another example, a kindergarten teacher said, "It can be challenging to meet the needs of children who speak multiple languages as well as the other 16 English-speaking students." The benefits of H.I.I.E. extended beyond providing academic support to include nurturing students' social-emotional needs, especially those experiencing multiple risk factors in their

home environments. The consistency of having the preservice teachers there every day mattered to some of the students. Theresa explained, “We have some kids that really come from different home environments and their adult trust level isn’t always the greatest. I think the more they [the preservice teachers] are in here, the more they begin to feel comfortable with those adults.”

Discussion and Implications

Overall, the school partners, specifically the cooperating teachers, concluded the H.I.I.E. initiative, intentionally providing preservice teachers with an intense and early field placement experience, was valuable to preservice teachers, their students, and to themselves. They saw that this experience was worthwhile because it offered preservice teachers opportunities to gain significant and authentic hands-on experience early in their teacher training, try out strategies and assess them critically, and develop dispositions that would help them be successful teachers. Furthermore, the cooperating teachers shared that they felt H.I.I.E. helps prepare teachers to work in high-needs settings by providing them with more opportunities to get to know students.

In a review of the literature, Clark, Triggs, and Nielsen (2014) outlined the role of cooperating teachers in teacher education. The roles they highlighted overlapped with many of the qualities of the H.I.I.E. cooperating teachers including: providers of feedback, gatekeepers of the profession, modelers of practice, supporters of reflection, gleaners of knowledge, purveyors of context, agents of socialization, abiders of change, and teachers of children.

Mentoring a novice teacher takes time, something cooperating teachers often lack, especially in traditional models. Immersion programs, such as H.I.I.E., offer extended opportunities for achieving long-lasting and transformational learning for novice teachers. However, the job should not be left to the cooperating teacher alone. The mentoring model for H.I.I.E. requires deeper collaboration between the cooperating teacher, college faculty, and school administrators. As the faculty analyzed the data and listened to the needs of the

stakeholders in our study, a solution emerged. We labeled this the Three-Legged Mentoring Model because strength and stability comes when all three stakeholder groups, university faculty, school administrators, and cooperating teachers all contribute to supporting preservice teachers.

Leg 1: University faculty. Deeper involvement by university faculty is needed regardless of whether preservice teachers are engaged in traditional one-day-a-week models of practicum or alternatives like H.I.I.E. Given that cooperating teachers are incredibly busy, the sole responsibility of planning and providing feedback should not rest on their shoulders. University faculty can and should be actively involved in the process which extends their roles beyond creating assignments for preservice teachers to complete in practicum. However, in order to have university faculty involved in supporting cooperating teachers, universities must allow time for deeper involvement in the schools.

Leg 2: School administrators. The role of building leaders, especially principals, may not be immediately evident, however, they play a key role in the H.I.I.E. approach. Not only do they identify cooperating teachers who have the requisite teaching experience, but they also know the teachers who have the temperament and dispositions to take on the added responsibility of working with and nurturing novice preservice teachers during this pivotal time in their professional development. Administrators can also advise teacher education programs about pre- and post-practicum experiences that would provide the wrap-around support for the experience. These experiences may include orientation and debriefing meetings for cooperating teachers and release time or compensation for time spent working with the university faculty. Furthermore, school administrators can be directly involved with the preservice teachers by providing onsite authentic feedback.

Leg 3: Cooperating teachers. Learning is a two-way street. The target beneficiary of immersion practica is the preservice teacher. However, our research shows that there is a

profound spillover effect on the cooperating teachers. There are several opportunities for in-service learning for the cooperating teacher built into the immersion experience. The H.I.I.E. initiative created a context for deep reflection for the cooperating teachers. They were also required to be more explicit about their teaching philosophy, preferred behavior management strategies, lesson planning, and implementation in order to transmit this information to the preservice teachers on a daily basis. Additionally, since the preservice teachers were new to the profession, they had many questions which often stimulated a more authentic problem-solving learning environment. In the one-day-a-week model, there is less time for reflection and feedback, so the pressure to make those days at school meaningful is greater.

Conclusion

School partnerships play a central role in teacher education, and it is imperative that faculty in colleges of education work with cooperating teachers to structure meaningful preservice practicum experiences. In this article, we have shared the findings from our study of the H.I.I.E. pilot program and the cooperating teachers' perceptions of this initiative. Through the process of asking the cooperating teachers for their feedback, we learned that more support is needed if we want this model of practicum for preservice teacher education to reach its fullest potential. Additionally, cooperating teachers need professional development opportunities and incentives to provide consistently high quality practicum experiences to future teachers. With future implementations of H.I.I.E., we plan to put into practice the Three-Legged Mentoring Model so that all stakeholders can contribute substantially to support preservice teachers.

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The Investigation of the Learning Style Preferences and Academic Performance of Elementary Students with ADHD

Stephanie Jannine Sfrisi, Sandra Deemer, Deborah Tamakloe, and Ojoma Edeh Herr

Abstract

This study investigated the learning style preferences of students with ADHD in elementary schools and how these preferences affect their academic performance, as measured by the Elementary Learning Styles Assessment Tools (Dunn, Rundle, & Burke, 2007). The results showed that students with ADHD in this study prefer a quiet and warm classroom with traditional furniture. In addition, results also showed that when students with ADHD are taught using their learning preferences, they tend to make academic gains. A three month follow-up assessment showed that academic performance improved for students whose teachers incorporated students' learning preferences into their teaching. Curriculum implications for practice are discussed.

Keywords: Learning style preferences, academic performance, ADHD

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Traditionally, successful students earn good grades, perform well on standardized tests, complete classwork and homework promptly, tend to have fewer disciplinary problems and are less likely to repeat grade levels (Loe & Feldman, 2006). Over the years, studies have shown that there is a correlation between early academic success in elementary school and future academic success in higher grade levels (Mullis & Jenkins, 1990). Yet, some studies on academic achievement in Language Arts and Mathematics have shown that some students are not appropriately internalizing the necessary skills to be successful in the school setting (McClelland, Morrison & Holmes, 2000). The majority of the students who struggle with internalizing the skills needed to be successful in schools are students with Attention Deficit and Hyperactivity Disorder (ADHD). Identifying each student's learning style preferences and tailoring instruction to those preferences may be one way to strengthen academic success of students with ADHD.

Literature Review

ADHD and Academic Performance

There have been many studies suggesting that students with ADHD often experience academic difficulties in spite of having average to above average intelligence (Hinshaw, 1992a; Semrud-Clikeman, Biederman, Sprich-Buckminister, Lehman, Faraone, & Norman, 1992). In fact, as many as 80% of students with ADHD show some sign of academic performance difficulties (Harris, Friedlander, Saddler, Frizzelle & Graham, 2005). Some examples of these difficulties, as presented by Harris and colleagues, include inconsistent classwork and homework completion, poorer quality work, and not following through with instructions; often these difficulties result in lower grades.

In 2011, the Centers for Disease Control and Prevention (CDC) stated that approximately

one out of ten students (ages 4 to 17) in the US were diagnosed with ADHD. This is a big problem and requires professionals to explore many options that can help these students to be successful. Many studies on students with ADHD have focused on stimulant medication as a form of treatment that could aid in focusing them and positively influence their academic and social outcomes (Ritchers, Arnold, Jensen, Abikoff, Conners, Greenhill, Hechtman, Hinshaw, Pelham & Swanson, 1995). Pelham, Wheeler and Chronis (1998) noted that though 70% to 80% of students with ADHD respond positively to stimulant medication, the positive effects are related more to calming students' impulsivity and inattention and not in fostering academic achievement. Many of these authors have argued that although stimulant medication can enhance productivity, it often does not necessarily have great effect on the cognitive abilities needed for academic success. Very few studies have been done to examine other options to support students with ADHD and specifically research is lacking as to whether using learning style preferences in instructing students with ADHD would improve their academic performance.

Learning Style Preferences and ADHD

Dunn and Dunn (1990) define learning style as "the way in which individuals begin to concentrate, internalize, and retain new and difficult information" (p. 353). Research has shown that when school-age students are taught in their preferred learning styles, attitude towards school improves and academic achievement often increases while discipline problems decrease (Carruthers & Young, 1980; Dunn, 1981; Hodges, 1982; Hodges, 1983, and Lynch, 1981). Zapalska and Dabb (2002) noted that how well a person learns new information is impacted greatly by how the information is presented and thus internalized. A study by Pizzo (1981) on 64 sixth graders showed that when students were matched to their learning style preferences, they showed higher reading scores at the statistically significant level of .01. Findings from a study by Brand, Dunn and Greb (2002) on elementary students with ADHD, in grades three through

six, showed that younger elementary students (third and fourth grades) seemed to prefer bright lighting and earlier in the day for learning while older elementary students (fifth and sixth grades) prefer lower lighting and the afternoon for learning.

The Learning Style Preferences provided by Dunn and Dunn (1990) and used in this study, have five main stimuli; each of these stimuli has its elements that affect learning. The five stimuli of learning style are: Environmental, Emotional, Sociological, Physiological and Psychological Processing.

Environmental stimuli focus on the senses with the elements of sound, light, temperature and design. For example, some students prefer quiet in order to learn, while others may prefer some type of background noise. Some students prefer bright light to concentrate, while others may prefer a softer or more focused light. Emotional stimuli focus on the students' mental state with the elements of motivation, persistence, responsibility and structure. For example, some students are motivated by intrinsic means while others may be motivated by extrinsic factors. Sociological stimuli focus on how students relate to others with the elements of alone, with a friend, in a group, with adults, and a variety of elements. For example, some students prefer to work alone, while other students may prefer to work with others. Physiological stimuli focus on strengths within the student like elements of perceptual mode, mobility, intake, and time of day. For example, perceptual learning relates to how a student prefers to learn (auditory, visual, tactile and/or kinesthetic). Psychological stimuli relate to how students' brains function with elements of global or analytic and impulsive or reflective. For example, some students prefer a summary of material at the beginning of instruction, while other students may prefer a step-by-step sequence of information, building upon each concept as they go (Hawk & Shah, 2007).

The interest for this study originated from the work done by Loe and Feldman (2006). Loe and Feldman suggested that students with ADHD showed significant academic

underachievement, poor academic performance, and educational difficulties. Though there is extensive research indicating that ADHD negatively impacts academic achievement, most of these studies focused on reducing the problematic behaviors within the classroom setting and not on improving academic achievement (Loe & Feldman, 2006). Examining ways to improve academic achievement, such as investigating the role of learning style preferences of students with ADHD is needed to help bridge the gap between these students' intelligence and their academic achievement potential. Since early academic success sets the framework for continued academic success later in life, it is imperative to teach students with ADHD effective techniques in elementary school so that they can use these techniques in future academic endeavors.

Theoretical Framework for the Present Study

We know that students with ADHD often learn differently from their peers without ADHD. In addition, we know that when students with ADHD are actively engaged with the material, they tend to be more interested in what they are learning, which improves their focus, attention, and retention of the skills learned. This in turn is likely to improve academic achievement. Therefore, when teachers deliver instructions using students' preferred learning styles, students would be more likely to actively engage with the material, which could lead to higher academic achievement.

This study was designed to investigate the learning style preferences of students with ADHD in the elementary school and whether these preferences would help with their academic performance. Finding students' preferred learning styles early, during the elementary school years, will provide additional useful tools to teachers to use in preparing these students for the more challenging academic work of secondary and post-secondary institutions.

Method

Participants

Prior to working with students, the signed consents were received from schools and parents/guardians. The schools agreed to participate only if their teachers were given the results of students' learning preferences so that they could incorporate them in their teaching. The consent was given for the six students to participate in this study. However, on the day of data collection, only five of the six students were present. The five participants were all males who were diagnosed with ADHD Combined type. The participants' grades ranged from third through sixth, with the majority (3) in third grade. The other two participants were in fourth and sixth grades. The ages of the participants ranged from eight to eleven years old. The participants attended public school in two school districts. The one school district with three participants is urban and the second district with two participants is suburban. All the participants were required to meet the following criteria: 1. Participants were diagnosed with ADHD with medical records confirming the diagnosis. This was to ensure that all the participants were officially diagnosed with ADHD. 2. Participants had to attend public schools. Students in private schools were not included in this study. This was to ensure that the context of learning was similar across participants.

The three-month follow-up data were only obtained from two of the five participants from the urban school. The teachers of these two participants modified their teaching to address the learning preferences of these students.

Instrumentations and Materials

The materials for this study included the medical records to verify the participants' diagnoses, the academic records to verify the participants' performance, and the three learning style assessments. The three learning style assessments were administered to the participants by

one of the researchers. The three learning style assessments are: The Elementary Learning Style Assessment created by Dunn, Rundle and Burke (2007), The Clue to You assessment created by Burke and Dunn (1998), and What's Your Learning Style assessment by Pennsylvania Higher Education Assistance Agency (2011). The Elementary Learning Style Assessment consists of three sets of 25 questions, which were administered electronically to the third and fourth grade participants. While the Clue to You assessment, consists of five sets of questions with 21 elements of learning, and was administered electronically to the sixth grade participant. The third assessment, What's Your Learning Style, consists of 20 questions, and was administered electronically to all participants.

The online Elementary Learning Style Assessment questions were asked by the researcher in three ways: 1) What is the participants' preferred element? 2) What is the participants' non-preferred element? 3) What element does not matter to the participants? After the participant completes all three sets, a report detailing their preferences is generated at the end. The Clue to You questions were asked in the same manner as Elementary Learning Style Assessment and the report compiles similar data at the end of the assessment. What's Your Learning Style assessment focus on students' different preferred learning modality (auditory, visual, and kinesthetic). At the end of this assessment, a percentage is calculated/generated in each category: visual, auditory and kinesthetic for each student.

Since all the assessments are based on the participants' preferences, there is no right or wrong answer. The Elementary Learning Style Assessment and the Clue to You assessment provide a spectrum scale of preference for each category (strong preference, preference, depends, preference and strong preference). The "What's Your Learning Style"? provides a percentage score for auditory, visual and kinesthetic preferred learning modalities.

Design

This study used online data collection-based tools to assess students with ADHD. This method of data collection was used to ensure that all participants follow similar protocol during assessment. The study involved five participants whose schools and parents gave consent and who were present on the day of the data collection.

All of the participants were assessed individually so that their answers were reflective of their preferences and not influenced by other students' preferences. The majority (3) of the participants were in third grade. One participant was in fourth grade and the fifth participant was in sixth grade. To protect their identity, the participants were assigned letters for identification, such as Student A, Student B, etc. During the data collection, Student A was in 4th grade, Students B, D and E were in 3rd grade, and Student C was in 6th grade. Students A, B, D and E were assessed using the Elementary Learning Style Assessment and Student C was assessed using the Learning Style: The Clue to You, as appropriate to their grade levels.

The final phase of data collection was a three-month follow up review of the two participants' academic performance. This review was done after the teachers modified their teaching to address the learning preferences of these students. The three-month follow up review was conducted to examine the effects of learning preferences on participants' academic performance in Language Arts (LA) and Math. The participants in the three month follow up data collection were Student A and Student C. These students' school requested the results of the study to enable their teachers to incorporate the students' learning preferences in their teaching. The schools for the remaining participants (Student B, Student D, & Student E) requested the results of the study, but did not want their teachers to incorporate the students' learning preferences into their teaching at that time.

Student A was in 4th grade and his learning preference was a structured, warm and quiet

classroom environment, with non-traditional furniture. Student C was in 6th grade and his learning preferences were cooler temperatures with bright lighting in the classroom environment with traditional furniture.

Procedure

Data Collection

All participants were assessed on the What's Your Learning Style tool to determine their preferred learning modality. Four participants in third and fourth grade were assessed on the Elementary Learning Style and the one participant in the sixth grade was assessed on the Learning Styles: The Clue to You.

During the assessment, all participants were interviewed individually in a testing location provided by the individual school and within the school building to avoid distractions. Before the interview and after a brief greeting, each participant was told that the purpose of the interview was to gather information on their preferred learning environment and preferred learning modality (auditory, visual, and kinesthetic). The modality was explained to the participants in the language they would understand. For example, auditory was explained as “a person who likes to learn by hearing”, visual was explained as “a person who likes to learn by seeing”, and kinesthetic was explained as “a person who likes to learn by moving around.” The interviewer followed a scripted protocol provided in Pennsylvania Higher Education Assistance Agency (PHEAA, 2011), What's Your Learning Style survey (<http://www.educationplanner.org>) and the prescribed guideline provided in Dunn & Dunn Online Assessments (www.learningstyles.net). The interviewer slowly read each of the 75 questions in the Elementary Learning Style Assessment to each student. Students were tested individually and each student was asked to choose between two stories: 1) a circus story, or 2) a pirate story. Once a student chooses a story, that story theme is continued through the next two sections of the

Elementary Learning Style Assessment. Each question is repeated three times throughout the test to assure response consistency. Each student responded to each question using a multiple-choice answer format. Each possible response includes a picture image that is representative of the answer. The use of words and pictures provide response options in the style of individuals' preference and preferred modality.

When a participant finished each of the stories, the interviewer thanked him before moving to the next stories. This format was followed throughout and participants were thanked for their involvement in the study.

Results

The scores for all the three types of assessment used for this study were independently generated upon submission. The scores for the Elementary Learning Style Assessment and The Clue to You ranged from strong preference to no preference in each element. For this study, "it depends" responses are considered as no preference. The modality assessment generated percentage scores in Auditory, Visual and Tactile of each student.

Learning Styles Preference

The results of the Learning Styles Preferences are as follow. Three participants had strong preferences for warm classroom environment and one participant had a strong preference for a cooler classroom environment when learning. Though one participant had a strong preference for bright lighting in the classroom, the majority of the participants (4) did not have a preferred lighting preference in the classroom. Three participants had strong preference on the structure of the classroom. This means that these students strongly prefer structure in order for learning to occur. Four participants had a strong preference for being motivated by others while learning.

All participants had strong preference for learning in pairs/groups. Three participants had

strong preference for learning new materials with an authority figure such as a teacher. Three participants had strong preference for learning material in a variety of ways when learning new materials. However, two participants had no preference on how they learned new materials. Four participants had strong preference in favor of learning new materials in the afternoon, while one participant had mild preference in favor of learning new material in the morning. Four participants had strong preference to be reflective on their answers before they speak. The results are presented in Table 1 below.

Table 1
Percentage of Participants Learning Styles Preference by Stimuli

Learning Styles Preference	Preference	No Preference
Classroom Environment	80	20
Learning Motivation	80	20
Work Preference	90	10
Learning Time Preference	80	20

Note: There were five participants total in this study. Preference is either strongly for or strongly against. No Preference means that it does not matter either way.

Instructional Presentation Preference

The percentages generated for the instructional presentation preference are as follows. Overall, students in this study reported that their instructional presentation preference are Visual and Tactile, with the mean of 34%. Individual score ranges from 20% to 45% for Visual and 25% to 40% for Tactile. The average mean for Auditory is 32% with score ranges from 25% to 40% respectfully. Though the mean scores for visual and tactile learning style is the same (34%), the highest scores are in Visual learning style where two students scored 45% each as their preference for presentation materials. The highest score for tactile learning style is 40% scored by three students. The highest score for auditory learning style is 40% scored by one student. The results are presented in Table 2 below.

Table 2

Percentage of Participants Instructional Presentation Preference by Modalities and Overall

Instructional Presentation	Student A	Student B	Student C	Student D	Student E	Overall
Auditory	25	30	40	35	30	32
Visual	35	45	20	25	45	34
Tactile	40	25	40	40	25	34

Discussion

The findings of this study are discussed in terms of learning preference, modalities, three month follow-up and implications for instruction.

Learning Preference

Overall, the results showed that most (80%) of students with ADHD in this study prefer a quiet and warm classroom with traditional furniture. The majority (80%) of the students prefer to be motivated by others instead of self-motivating. Participants showed a preference that tasks be broken into multiple steps with specific guidelines and/or taking breaks while completing tasks. Afternoon was the preferred time of day (80%) for the participants in this study to learn new material. However, 20% of them favored learning new material in the morning. All (100%) of the participants preferred to work in pairs/groups. In addition, 80% of them had strong preference in working with authority such as teachers and para-educators.

Modalities Preference

The results of this study showed no significant overall differences of instructional presentation modalities for students with ADHD; however, there are individual differences. For example, students B and E favored visual modalities (45%) while students A and D favored tactile (40%) modalities. However, student C has dual modalities of auditory and tactile (40% each).

Three Month Follow-up Gains

The preliminary results of this study were made available to schools that requested them. Two teachers from one school (Urban) who have two students (Student A & Student C) in their classes (in agreement with the school proper authority), decided to differentiate their teaching methods to accommodate these students' learning preferences. Student A's learning preference was a structured classroom environment, with non-traditional furniture and that room was warm and quiet. Student A was motivated by others, preferred to learn in the afternoon, with tasks presented in multiple steps, using hands on approach. Student C's learning preferences was a classroom environment with traditional furniture and cooler temperatures with bright lighting. Student C was motivated by others, preferred to learn in the afternoon, with instruction to be visually presented with images.

The academic performance (in Math and Language Arts) of these two participants improved significantly for the marking period that their learning preferences were considered. The increase in students' grades were as follow: Student A had an average grades of D/D+ in Math and Language Arts (LA) for the first three marking periods. However, after adapting the teaching method to match this student's preferred mode of learning, his grade for the fourth marking period in Math was improved to a B and a C+ in LA. Similarly, Student C was performing below expectation in both Math and LA. His average grades for the first three making periods were F/D-. However, after adapting the teaching method to match Student C's preferred mode of learning, his grade for the fourth marking period in Math was a C+ and C in LA. Though the sample size is small, it is appropriate to suggest and in agreement with the past studies (Harris, Friedlander, Saddler, Frizzelle & Graham, 2005) that when students with ADHD are actively engaged with the material and their learning preferences are addressed, they tend to be more interested in what they are learning, which most likely improves their academic performance.

Implications for Instruction

The literature review for this study shows that some of the students who struggle internalizing the necessary skills to be successful in school settings are students with Attention Deficit and Hyperactivity Disorder (ADHD). It is also evident that students with ADHD often learn differently from their peers without ADHD. Knowing the importance of early academic achievement and how it serves as a predictor of future academic achievement, the professionals need to be more creative in meeting all students' needs in the classrooms.

Results of the current study suggest that the educators need to utilize multiple strategies and varied learning styles in teaching students in their classrooms with different learning needs. Educators can incorporate kinesthetic learning styles that allows students to get up and move around while they learn new information. Students can also be allowed to act out stories as another way of incorporating movement into lessons.

Students with ADHD learn best when they know what to expect and when to expect certain activities. Though changes may occur, it is best to inform students of these changes as far in advance as possible. Another finding for this study was that students with ADHD prefer to be given wait time before having to respond to a demand. Giving the students more time to process the information and think about their answers might help them feel more confident and respond correctly.

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Mind Maps in Classroom Teaching and Learning

Evangelin Arulselvi

Abstract

Mind Mapping is a learning technique which uses a non-linear approach that encourages the learner to think and explore concepts using visual-spatial relationships flowing from a central theme to peripheral branches which can be inter-related. The new millennium is being called the Millennium of the Mind, and Mind Mapping is becoming widely accepted in schools, industry and government. The great advantage of a Mind Map is that it literally "maps" the way a person's brain sees and creates connections; once mastered, it brings incredible clarity and ease to decision-making process, using all of the ways the brain processes information - word, image, logic, number, rhythm, colour and spatial awareness, so that the person is literally thinking with his or her whole brain. Because of these benefits, the use of Mind Mapping holds promise as a technique to aid students in learning.

Keywords: Learning technique, organized information, effective approach, tool of understanding, visual symbol.

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Introduction

Creating an environment that engages students in the learning journey is always challenging and not always easy. A Mind Map is a visual diagram used to record and organize information in a way which the brain finds captivating and easy to process. Thoughts, ideas or facts are laid out around a central theme so that a person can clearly 'see' their flow across different levels. Unlike linear methods for recording information, a Mind Map does not rely on large amounts of written text but instead uses lines, symbols, key words, color and images all according to simple, brain-friendly concepts. The technique was invented and popularized by author and expert Tony Buzan in the 1970s and is now used worldwide in business, at school or at home.

Mind Maps are built around several key elements which have been proven to play an important role in unleashing thinking capacity. Mind Mapping provides an effective approach for promoting better understanding in learning and training. Its flexibility also means that it possesses several uses when teaching. Mind Maps (or similar concepts) have been used for centuries, for learning, brainstorming, visual thinking and problem solving by educators, psychologists and people in general. People have been using image-centered radial graphic organization techniques referred to variably as mental or generic mind maps for some areas.

The term "Mind Map" was first popularized by a British psychologist and author Tony Buzan but the use of diagrams that visually map information using branching and radial maps traces back centuries. These pictorial methods record knowledge and model systems, and have a long history in learning, brainstorming, memory, visual thinking, and problem solving by educators, engineers, psychologists, and others. Buzan (1993) argues that traditional outlines rely on the reader to scan left to right and top to bottom, while what actually happens is that the brain

will scan the entire page in a non-linear fashion. He also used popular assumptions about the cerebral hemispheres in order to promote the exclusive use of Mind Mapping over other forms of note taking.

A Mind Map is a diagram used to visually organize information. It is hierarchical and shows relationships among pieces of the whole. It is often created around a single concept, drawn as an image in the center of a blank page, to which associated representations of ideas such as images, words and parts of words are added. Major ideas are connected directly to the central concept, and other ideas branch out from those. Mind Maps can be drawn by hand, either as rough notes during a lecture, meeting or planning session, for example, or as higher quality pictures when more time is available. Mind Maps are considered to be a type of spider diagram.

In a Mind Map, the hierarchies and associations flow out from a central image in a free-flowing, yet organized and coherent, manner. Major topics or categories associated with the central topic are captured by branches flowing from the central image. Each branch is labeled with a key word or image. Lesser items within each category stem from the relevant branches. Mind Maps consist of frameworks of concepts connected either in a radial, hierarchical, linear, or nonlinear manner. A typical mind map is a visual representation of a central main topic from which nodes, sub nodes, groupings, branches or areas are classified with the goal of representing semantic information. This learning technique promotes greater creativity for all learners. Besides using plain text and words, use of colors, images, symbols, codes, lines, and other dimensions throughout the map aid in conceptualization. Buzan (1993), the inventor of Mind Maps, claimed that Mind Mapping is vastly superior to traditional note-taking methods. Mind Mapping uses the full range of left and right human cortical skills, balances the brain, and taps into the alleged 99% of a person's unused mental potential, as well as intuition.

Mind Mapping was developed as an effective method for generating ideas by association.

In order to create a Mind Map, one usually starts in the middle of the page with the central theme/main idea and from that point one works outward in all directions to create a growing diagram composed of keywords, phrases, concepts, facts and figures.

Mind Mapping can be used for assignments and essay writing especially in the initial stages, where it is an ideal strategy to use for thinking. It can also be used for generating, visualizing, organizing, note-taking, problem-solving, decision-making, revising and clarifying a university course topic, so that the instructor can get started with assessment tasks. Essentially, a Mind Map is used to ‘brainstorm’ a topic and is a great strategy for students.

Related Literature

The value of Mind Mapping is noted throughout the literature. One teaching and learning strategy that has recently emerged in higher education as a means to support student critical thinking is the nonlinear learning technique of Mind Mapping (Pudelko, 2012). The radiant structure of a Mind Map with explicit branches promotes associations. The use of color for different categories can also make more powerful associations (Driscoll, 2000). It has been determined that if students are offered control over their map constructions, the maps have a positive impact on student achievement because they embody meta-cognitive models with certain structures (Mona & Khalick, 2008).

The use of emphasis in a Mind Map, for example with thicker main branches and larger printing, can also foster recall of information. The focus on using single key words can foster more expansive connections and confining the entire Mind Map to a single piece of paper allows one to see the entire picture at once and perhaps stimulate additional associations. Friedrich (1995) counts this method as one of the information processing strategies with which information is permanently stored in memory by sophisticated processing.

In his study on the improvement of critical thinking skills, Carl Savich (2009) noted that

the focus on critical and independent thinking was an effective way for teachers to maximize the engagement of the students in his class. Specifically, Savich utilized role-playing and simulations to convey material to the students - a process which required all students to be engaged in a more critical manner of thinking. Savich concluded that his inquiry method of teaching allowed even the least confident students in his class to feel connected to the material, which in turn allowed them to see “the bigger picture” of history. In the same manner, Thinking Maps allow for students to feel more connected to the material, as it forces them to map out their thought process on paper, which leads to an increase in connections between content and experience.

Goodnough and Woods (2002) discovered that students perceived Mind Mapping as a fun, interesting and motivating approach to learning. Several students attributed the fun aspect to the opportunity to be creative when creating Mind Maps through a great deal of choice in colour, symbols, key words and design. Drawing upon this idea, Al-Jarf (2009) investigated the impact of using Mind Mapping software on EFL freshman students’ acquisition of English writing skills. The findings revealed that the written work produced by students using Mind Mapping included more relevant detail and better organized and connected ideas than the work of the control group. Mind Mapping raised the performance of students at all levels of ability as they became more efficient in generating and organizing ideas for their writing. The students also displayed a positive attitude towards using Mind Mapping as a pre-writing activity.

Buzan (1993) has always been passionate about using key words in Mind Maps rather than phrases or a collection of words. Buzan states that a key word is essentially a word that will trigger as much relevant meaning as possible. By using key words in a Mind Map, a student opens up his or her thinking and stimulate his or her mind to dig deeper and see greater detail on thoughts that were previously vague. This can be a difficult process when the key word is

trapped in a sentence. It is also far easier to remember single words and striking headlines than to remember long sentences.

How to Draw a Mind Map

According to Buzan (1993), a Mind Map should be drawn on blank paper that is larger than standard 8 ½ by 11 inch paper. The rationale behind using a large sheet of paper is that it allows the student the opportunity to break away from the boundaries established by standard sized paper. The medium for drawing the Mind Map is usually colored pens or pencils. Students begin by drawing an image in the center of the paper that reflects the central theme, or topic, of the Mind Map which is to be created. By placing this central image in the center of the paper, it allows the students 360 degrees of freedom to develop their Mind Maps. Next, the student draws main branches with key words extending from this central image. The branches represent different categories which the student perceives as being relevant to the content of the key concept of the mind map. From these main branches, sub-branches are created:

- Place the central theme/main idea or controlling point in the center of the page. It may be easier to place the page on the side, in landscape orientation, which is easier for drawing purposes.
- Use lines, arrows, speech bubbles, branches and different colors as ways of showing the connection between the central theme/main idea and ideas which stem from that focus. The relationships are important, as they may form essay paragraphs.
- Avoid creating an artistic masterpiece; draw quickly without major pauses or editing. Chances are, the first idea was fine and placed in the direction or on the branch you thought made the most sense. It is important in the initial stages of mind mapping to consider every possibility, even those you may not use.

- Choose different colors to symbolize different things e.g. choose blue for something that must be incorporated in the paper, black for other good ideas, and red for the things that need need to research or check confirmation from a tutor/ lecturer. Try to remain consistent so that better reflection on the mind map can occur at a later stage.
- Leave some space on the page. The reason for this is that one can continue to add to the diagram over a period of time. If A4 sized paper feels too small, may A3 be used.

Classroom Application

The adoption of Mind Maps in teaching has grown recently due to the benefits of using Mind Maps to learn and the availability of free online Mind Mapping software. Using Mind Mapping for lesson planning can help teachers or trainers identify a logical plan or teaching route and increases recall of the subject matter. This can boost teaching confidence and facilitate the smooth running of programs. As a pedagogical tool, the visibility of Mind Mapping provides an effective approach for promoting better understanding in students. Its flexibility also means that it possesses several uses in the classroom.

Boyson (2009) asserted that using Mind Mapping for lesson planning can help teachers or trainers identify a logical plan or teaching route and increases recall of the subject matter. This can boost teaching confidence and facilitate the smooth running of programs.

Researchers, Goodnough and Long (2002), found Mind Mapping to be a useful strategy for introducing new concepts, providing a whole-class focus for a large research project, assessing learning of individuals and offering greater choice in how people chose to complete assignments and projects.

D'Antoni and Pinto Zipp (2005) recommend that educators incorporate Mind Mapping into their curricula since it is easy to use and involves no cost. There are several options for utilizing the technique - 1) pre-lecture format – integrating concepts from assigned readings prior

to review by instructor; 2) post-lecture format – integrating concepts from assigned readings and material previously reviewed by instructor; and 3) case presentations.

While researching the applications of Mind Mapping in executive education, Mento et al (1999) observed that a number of executive students made clear and compelling presentations using only a transparency of their Mind Map, without fumbling about with notes. These students were able to handle challenging questions with confidence. Their ability to handle the presented material in such an effective way was attributed to better recall of the information because it had been captured and stored in an integrated, radiating manner rather than linearly. Students could internalize it better because it was their unique representation of the information.

Planning

A teacher must design her class curriculum for the school year or planning an assignment timeline. Mind Maps gives her a clear and visual overview of what needs to be covered. Mind Maps are the perfect tool to create structure and organization of a topic. By using Mind Mapping to plan her teaching, a teacher can reduce the amount of notes she takes into clear, concise plans which are easy to follow. She can also use a Mapping software tool, using which she can make organized teaching plans even easier, as she can access all of her notes, files and education website links from within one Mind Map.

Teaching

Mind Maps are ideal for teaching and presenting concepts in the classroom as they provide a useful focus for students, delivering an overview of the topic without superfluous information. Online Mind Maps can be used in class to brainstorm and generate discussions. This will encourage students to participate but also to fully understand a topic and its nuances by creating connections between ideas. Perfect for introducing a new subject in a way which is accessible and easy to follow, Mind Maps are an excellent way to present concepts and ideas. A

teacher can be sure to keep her students engaged and amazed as her branches smoothly animate to show her next point. Mind Maps that have been created online can easily be printed and shared with students as handouts. Notes in the Mind Map can be built on by students in class.

Classroom presentation is a brilliant way to develop student's communication skills. However, students can easily become bored listening to others present. Mind Maps act as visual information providers and encourage the audience to engage with the material that is being presented. Mind Maps have been embraced in the realm of education as a learning tool which help students reinforce knowledge by making connections between different areas and delving in-depth into an area.

A great way to use Mind Maps for assessment is to ask students to express their ideas about a topic in a Mind Map before and after a class. Students will retain the information better and it will also reassure teachers that students remember and understand the knowledge. It is important to assess knowledge at the beginning of a topic and after to monitor students' understanding. Mind Mapping is a key tool for this concept, of preview and review/pre and post learning. Mind Maps encourages students to express ideas, from special needs and highly gifted students, and provides an accurate barometer of topic adoption.

A Mind Map is an excellent tool for collaborating with others to develop plans or implement key projects. It allows one to harness the input of all members of a group in a dynamic and creative way. When used for group brainstorming sessions, Mind Mapping enhances critical thinking and co-operation as well as providing a solid basis for collaborative problem-solving.

Using Key Words

Buzan (1993) has always been passionate about using key words in Mind Maps rather than phrases or a collection of words. He states that a key word is essentially a word that will

trigger as much relevant meaning as possible. So by using key words in a Mind Map, one opens up his or her thinking and stimulates the mind to dig deeper and see greater detail on thoughts that were previously vague. This can be a difficult process when the key word is trapped in a sentence. It's also far easier to remember single words and striking headlines than to remember long sentences.

Research on note-making and note-taking conducted by Howe (1970) revealed that key word notes personally made or given to students were far more effective in terms of the understanding and recall they engendered than complete transcript notes or sentence summary notes. He points out that by trying to choose a word to most appropriately convey a subject, we are forced to think more actively than if we are just copying or gathering information. The discipline of selecting a key word helps to focus the mind on the analysis and processing of the subject whereas there is a tendency to slack on our thinking while using sentences. All in all, using key words turns note-taking into a selective process which minimizes the volume of words written down and maximizes the amount recalled from those words.

Mind Maps are based on associations and connections. Once ideas are displayed in Mind Map form, patterns of thought can be easily examined revealing similarities and linkages between information in different parts of the map. By encouraging people to link apparently different ideas and concepts in this way, Mind Mapping actually promotes divergent and highly creative thinking.

Using Colours

Using colour makes the Mind Map far more interesting to look at and therefore much more engaging. It is an element of fun and it makes learning more enjoyable and also induces thinking activity. Having different coloured branches on the Mind Map will help to differentiate the different themes, topics and ideas and the colours are used to classify. Coloured Mind Maps

stimulate the memory and are easier to recall. Colour tends to be processed by the right side of the brain and instead of using single colour, the multi coloured Mind Maps stimulate the brain more. Colours make Mind Maps more effective and doing a Mind Map in 'monotone', as Buzan likes to refer it as monotonous, will still give tremendous benefits. Psychologists have documented that colour helps us to process and store images more efficiently than colourless (black and white) scenes and remember them better as a result.

There are several research studies that demonstrate the value of colour. For instance, a study conducted in the realm of business by Xerox Corporation and International Communications Research in 2003 uncovered the following results from participants:

- 92% believe colour presents an image of impressive quality.
- 90% feel colour can assist in attracting new customers.
- 90% believe customers remember presentations and documents better when colour is used.
- 83% believe colour makes them appear more successful.
- 81% think colour gives them a competitive edge.
- 76% believe that the use of colour makes their business appear larger to clients.

Using Symbols and Icons

It has been said that a picture is worth 1,000 words. A symbol or icon, attached to a topic within the mind map, can convey much more meaning and context, which can be quickly understood by the brain. Symbols and icons are also a powerful way to categorize the contents of the map, Icons and images stimulate associations and creativity.

Mind Mapping emphasizes visual imagery so, to get the best out of the technique, it's highly recommended that one add fun and descriptive pictures, drawings, symbols and doodles to the Mind Maps. Using imagery stimulates the brain's visualizing capacity which brings enormous creative benefits and enhances the memory's storing and recalling capabilities.

Words and images together make Mind Maps a rich visual medium for creative expression. The Wharton School (1981) completed a study that proved the benefits of utilizing visual elements in presentations and tightly integrating them with words. By comparing visual presentations with verbal presentations, the results were vastly in favour of visualizations. Presenters who used visual language were perceived by the audience as more effective than those using no visuals – they were clearer, more concise, more interesting, more professional, more credible and better prepared. Icons add clarity and contextual meaning to topics and can be quickly understood by the brain. These small visual symbols such as ticks, crosses, circles, triangles or more detailed and descriptive symbols etc., reinforce the benefits of using imagery in the maps.

Research On Using Images

According to Anglin, Hossein and Cunningham (2004), our ability to remember images is far better than our memory for words. This picture superiority effect is validated by our research. Haber (1970) also supports the value of imagery. Haber showed his subjects a series of 2,560 photos. Later, subjects were shown 2,560 pairs of photos and asked in each case to identify which photo had been in the original group. The success rate for this test averaged between 85% and 95% showing that humans have an almost photographic memory when it comes to the recognition of pictures. McArdle (1993) found that adding visuals like maps or photos to a presentation increases the amount of retained information by as much as 55%.

Various Uses for Mind Mapping

- For taking notes in a lecture and listening for the most important points or keywords.
- For showing links and relationships between the main ideas in your subject.
- For brainstorming all the things already known about an essay question.
- For planning the early stages of an essay by visualizing all the aspects of the question.

- For organizing ideas and information and making it accessible on a single page.
- For stimulating creative thinking and creative solutions to problems.
- For reviewing learning in preparation for a test or examination.

Benefits of Mind Map

To achieve higher levels of concentration and creativity, together with greater organization and more concise communication, mind mapping might be an effective strategy for you to consider. The benefits of mind mapping are many and varied. It is giving an overview of a large subject/broad topic and allowing one to represent it in a more concise fashion. It is encouraging one to see the bigger picture and creative pathways. It is enabling one to plan/make choices about the selection of resource material one has for an assignment and where one is going to place it. It provides one with a more attractive and enjoyable form for the eye/brain to look at, muse over and remember. Mind maps are effectively used by these people.

The following might find mind maps useful:

- Parents wanting to aid their child's learning.
- Teachers looking to improve teamwork and communication in the classroom.
- Writers wanting to create original stories, articles and joke.
- Project managers wanting to present their ideas clearly to their team.
- Consultants and advisors trying to visualize their clients' situations.
- Entrepreneurs wanting to create a dynamic business plan.
- Marketers exploring potential avenues for promoting a product or service.
- Collaborative teams working on a project together.
- Event planners wanting to organize every aspect of an event.
- Students studying for exams, wanting to boost their learning capacity.

- Trainers preparing and presenting their materials using Mind maps which make their job easier and much faster.
- Brain storming in which more thoughts are generated and appropriately assessed.

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**Forty Years Towards School Inclusion in the United States:
Lessons Learned and the Promise of the Future**

Thomas Neville

Before there were children with disabilities in typical schools in North America, there was only hope and need. Before the creation of highly specialized plans of education, individualized instruction techniques, methods of differentiating group instruction or regulations mandating the adherence to government regulations, there were only families, children with disabilities and institutions.

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Preamble

In 1948, Joseph and Elizabeth Calabrese walked with their two sons to their local neighborhood school to register them for the first grade. The Calabreses and their two sons, Larry and Don, were turned away. Children with disabilities were not welcome at that school, or at few others. Larry and Don were thought to be incapable of learning, unable to grow, and unable to take advantage of typical schools or community life. The only options for care or assistance were the institutions, ready and willing to keep the two boys apart and away from the neighborhood, family, and home community for the rest of their lives. The Calabreses refused to institutionalize their sons, and they built a place for Larry and Don to attend school. It was called Laradon Hall (Laradon Hall, 2013). For 1949, when education for children with disabilities was an impossible dream, this was a radical change from warehousing people with disabilities in institutions. This superbly bold move later came to represent a part of the problem that we live with today in trying to build an inclusive society, and we can learn valuable lessons about how we might proceed from here.

Historic and Historical Change

The history of inclusion in the United States has moved along a rough continuum from institutions towards fully inclusive schools, although the reality and promise of true inclusive education in the United States remains a distant dream held by advocates, change agents, and reformers. Important mileposts along the way included a bold movement of parents (Minnesota Council on Developmental Disability, 2017a) in the 1950's and 1960's. As the civil rights era made powerful steps towards advancing the human, legal, and political rights of women, minorities and other marginalized groups, we were able to apply the lessons learned for social and political action from these reformers, and apply a strong social justice platform to advance the position of people with disabilities. This resulted in the disability rights movement (Syracuse

University, 2013) of the 1970's, 1980's, and 1990's and even up to today. Although this movement has primarily been led by people with physical disabilities, the effectiveness of their campaigns towards accessibility, anti-discrimination, and consciousness-raising among the citizenry have not been lost on other groups of people with disabilities and their advocates and supporters. In particular, this movement towards civil rights led to laws to support both great hopes for a society where all people belong, as well as the need to create space within our society so that everyone can contribute. Section 503 of the Rehabilitation Act of 1973 (United States Department of Labor, 2017) called for all federally funded buildings to be accessible for people with disabilities, including all publically funded schools. The Education for All Handicapped Children Act of 1975 (United States Department of Education, 2017) was the first law to mandate the rights of children with disabilities and guarantee a free and appropriate public education. The education act was updated and titled The Individuals with Disabilities Education Act of 1989 (Wikipedia, 2017) in order to enhance effectiveness. In 1990, the Americans with Disabilities Act (United States Department of Justice, 2009) was passed in order to prohibit discrimination on the basis of disability. These laws demonstrate both progress and a strong intention, but they do not tell the complete story as the struggle toward inclusion in the past 40 years is both gifted with effective teaching practices (Land, 2017) and also burdened with bias and assumption (Anti-Defamation League, 2017) carried forward from times of eugenics mindsets (Eugenics Archive, 2017) and mass institutionalization.

We have also learned to apply learning technologies and empirically based methods in typical inclusive settings for the most positive outcomes. In the 1970's, Dr. Marc Gold combined science and humanity in his Try Another Way (MCDD, 2017a) methodology, which is known today as Systematic Instruction. Dr. Gold started from a firm understanding that, "The behaviors our children show are a reflection of our incompetence, not theirs" (MCDD, 2017a). This

fundamental truth is the nominal starting place of inclusive education today. To presume competence in typical classrooms with typical students allows for the application of methods that work (Biklen, 2013). Correct methods in incorrect settings results in unwanted and unintentional outcomes – a simple fact that has been consistently ignored and trivialized by many parties.

Reflections of a Mother and Educator on 40 Years of Change-Agentry

Elizabeth Calbrese had the benefit of a mother’s love, combined with years of operating a residential school designed for her sons and occupied by hundreds of other children with disabilities. The residential school, which she founded so many years ago for her sons, had served as the school for many hundreds of children with disabilities over her long career as an educator and administrator. It continued on as an “institution for life” as some children grew up and stayed, living their whole lives there, a lifetime both congregated and segregated, apart and away. After 40 years, Mrs. Calabrese retired from her labor of love, and was able to reflect on all that was learned. She said, "I learned more sitting here (in my home), by myself, then I did in all those years of working at Laradon Hall...I couldn't learn then- I was too busy doing"(Calabrese, personal communication, 1992).

Those are the words of Elizabeth Calabrese as she sat in her living room in 1992 (note that all subsequent quotations are from Elizabeth Calabrese are personal communication, 1992). Forty-four years after the Denver Public Schools turned away the sons of the Calabreses, Mrs. Calabrese and I sat together and reflected on what her life was like and what she would have done differently to design desirable futures for Larry and Don. I was curious about what her initial vision was as she worked to establish a segregated school in 1949. I knew the practical reason, but needed to know what her dreams were at the time, what she thought “could be” for people with disabilities. I knew her husband Joe as a tough and driven man with heart. I can imagine that the words of the Denver Public Schools administrator, “I am sorry, but we simply

don't have any place for your sons," were enough to put Joe on a quest. He was truly a man not to be denied. When Mrs. Calabrese was asked what her big intentions were in establishing Laradon Hall, "I don't know" was her quick and firm reply. She thought for a while, and added "If they could play with other children they would get better...I don't think we knew what we were doing, ...but I had some ideas from my own childhood playing with kids at home."

I pressed Mrs. Calabrese for a heartfelt vision, something she truly yearned to accomplish with this venture. "I did not have any idea about a dream or vision...I worked too hard...After a while, my vision was to get out."

When asked if she could travel back to 1949, would she do it again, a firm "no" was the answer that came, swift and sure. She clarified, "Neither Larry or Don were happy with Laradon Hall...When I ran it I could not fend for them...I was too busy feeding this kid or cleaning that kid." It was obvious that Elizabeth Calabrese had given her life and her heart for children from many families. I asked her what she would do if she considered only the needs of her sons. "I would have quit Laradon Hall and taken care of my boys at home. Larry never wanted to go to Laradon...he did not like doctors...and loved his home"

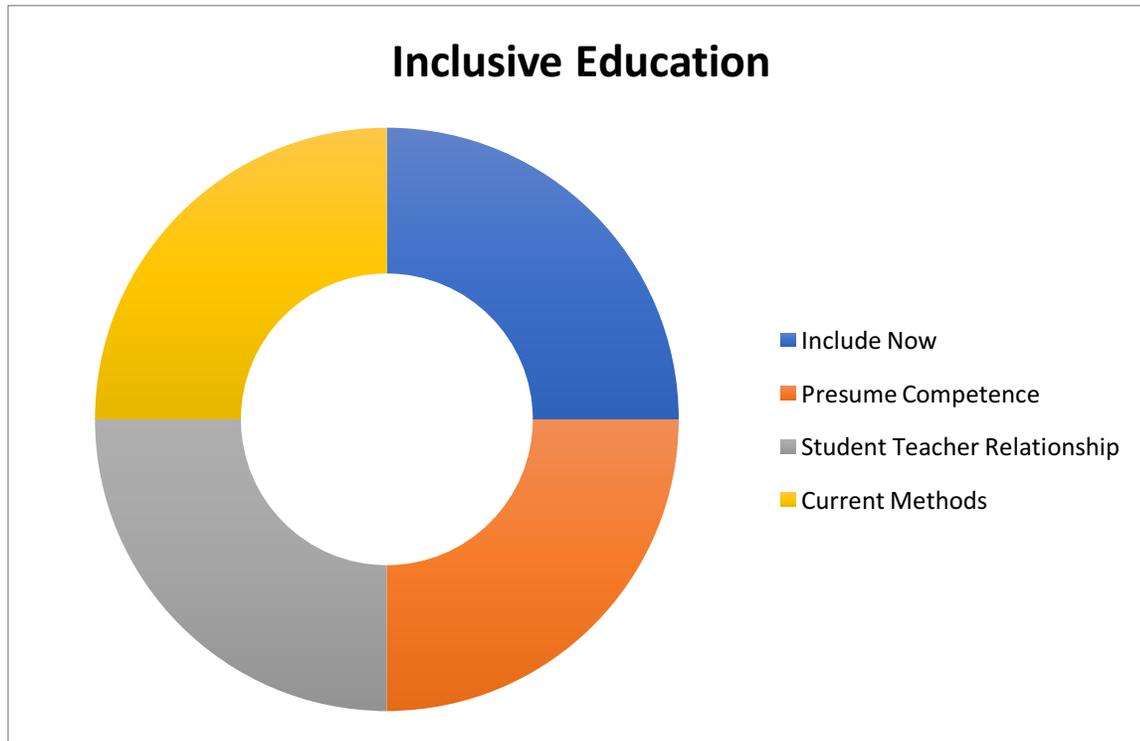
Elizabeth Calabrese did just that a few years before Larry died. "The doctors said Larry had six months to live and I should put him in a nursing home...I refused, took him home and he lived for seventeen years after that." Elizabeth went on to explain that Larry required twenty-four hour care. "Larry took twenty-four hour care but it was the people we hired to help that wore me out...they didn't love him and couldn't do it right."

The Lessons from Our Past

One powerful lesson which could be learned if we choose in the years since 1948, is that technical strategies and methods are only effective in the long-term when applied within the places of typical community – regular schools, workplaces, neighborhoods, houses of worship,

and places where people recreate. The idea of a “preparation for inclusion” or “readiness for inclusion” is viable only in theory. Once removed from ordinary classrooms, children with disabilities seldom return to community life. Decreases in knowledge, social competencies and friendships are common outcomes of exclusionary educational and social settings.

Our US laws in support of the full participation of people with disabilities in everyday life came with high hopes of meeting the needs of all people. In 1975, there was great celebration as the Education for All Handicapped Children Act (EAHCA) was passed. Empowered advocates and families marched to the schools and demanded they open their doors and welcome their children into the classroom. In some ways, these hopes have been realized. But as regulations were developed from the laws, negative bias and assumption crept in to re-create modern forms of institutionalization and exclusion. Today’s advocates, teachers, administrators, and families can guard against this within today’s inclusive school environments. Four clear directives and a few pedagogical methods work together to guide the most successful inclusionary practices of today. These four directives, taken together, result in the best chances for true inclusivity and child growth. Taken separately, their impact is weakened.



- 1) Do it now and in ordinary settings
- 2) Presume competence
- 3) Rely on a strong teacher-student relationship as a basis for responding to the individual ways that each child learns
- 4) Use current methods as transformational to what is being done now with what must be done to educate all children together

Current Methods – A Few High-Value Examples

Differentiated Instruction

As put forth by Concordia University (2018), differentiated instruction as a model requires teachers to be flexible in their approach to teaching and adjust the curriculum and presentation of information to learners, rather than expecting students to modify themselves for the curriculum. The capacity to teach students from varying backgrounds, knowledge, and learning styles in the same classroom is the foundation of differentiated instruction. These methods provide the support that students with disabilities require, and form the building blocks of a transformational classroom.

Universal Design for Learning

Universal Design for Learning (UDL) is a set of principles for flexible curriculum development that give all students vast opportunities to access rich learning. It provides a format to create instructional objectives, methods, materials, and assessments that can be customized and adapted for each student depending on their individual needs (Center for Applied Special Learning, 2017). Presenting information in varied ways, allowing for flexibility in how students can express what they have learned, and keeping all students engaged and challenged in learning means that students with widely divergent backgrounds, cultural and linguistic traditions, intellectual and physical disabilities and giftedness can all benefit from what is offered within the UDL framework.

Direct Instruction

All children can and do learn when the instruction is efficient, effective and systemic (National Institute on Direct Instruction, 2013). Direct instruction emphasizes face-to-face or small group instruction with skills broken down into units or sequences and taught with deliberation. The history of direct instruction can be traced from the work of Dr. Gold in Try

Another Way (MCCDD, 2017a). Direct instruction also creates an environment supportive of peer teaching.

Peer Teaching

Peer teaching or peer learning has roots that can be traced as far back as Socrates, and was strengthened through the work of Paulo Freire. When students teach each other the teacher-directed method is no longer required as the primary implementer of pedagogy.

Co-Teaching

When two teachers with different pedagogical skill sets work in partner-pairs, the quality of instruction and supports for students with disabilities increases. Effective Co-Teaching (TeachHub.com, 2017) has a set of strategies and classroom environments that accommodate each student as well as the goals of UDL.

One Last Essential: The Importance of Understanding Natural Distribution

A final essential component that underlies all of the above is understanding and using the knowledge that we possess about how human beings tolerate and accept ‘difference’. If we understand the social theory that underlies the innate human desire to ‘push out’ those who are seen as different in a negative way, we can capitalize on the dynamics that we know ‘work’ to cause acceptance. There is much to be said and learned from social theory in this regard, but one lesson may stand above all others. Human beings seems to be ‘hard-wired’ to tolerate and accept the amount of ‘difference’ that naturally occurs amongst our species. Therefore, we must avoid violating the natural distribution if we are to maximize the changes for acceptance of people with disabilities. This translates as follows: If there approximately 2% of the population experiences severe intellectual disabilities, our schools and classrooms are likely to be able to successfully integrate 2 children with significant disabilities into every group of 100 children. My daughter’s school, where 300 students are educated, will probably be able to most successfully integrate

about 6 children with severe intellectual disabilities. This is a simple fact of human behavior, one that we can capitalize on the ‘stack the deck’ for success.

Conclusion

The inclusion movement in the United States was led by hopes and guided by needs. The work of creating a legal framework was critical to the implementation of inclusive education, but has never held all the answers to working successfully towards an educational framework that includes all children together. As children begin to become important and valued members of their neighborhood schools and typical classrooms, methods of delivering learning emerged and developed as part of the science of education. The lessons of 40 years have shown that children benefit most when they remain in typical settings supported by teachers who know them and see the competence of each. We have seen the best classrooms developed through systemic processes of serving the child with a disability and make use of evolving teacher competence to transform schools. We know that these things must be done together and consciously in order to normalize inclusive education and prevent the influences of the narratives of disability bias.

Much remains to be done, despite the progress that has been made. By and large, children in the United States who have significant disabilities continue to be segregated within typical schools in a host of “special needs” classrooms. And yet, we have promising tools and methods, which can be powerfully combined to move us towards the vision that Mrs. Calabrese, might have had for Larry and Don.

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