TEACHING PEACE FROM THE INSIDE OUT:  
A MINDFUL WHOLE CHILD APPROACH

Author:  
Maureen Hudson

Faculty Sponsor:  
Blythe Hinitz,  
Department of Elementary and Early Childhood Education

ABSTRACT  
The present international comparative study examined the extent to which mindfulness meditation and movement practices can support peace education in young children. A pilot mindfulness-based peace curriculum was implemented at 1) Howley School Preschool and Child Care Center in Trenton, New Jersey, with two preschool classes of children ages 3 and 4 and 2) Sekolahku MySchool in Yogyakarta, Indonesia, with one Kindergarten class of children ages 5 and 6. Authentic assessment was used to determine changes in students’ thinking and behavior as a result of the curriculum intervention. These tools included children self-portrait drawings, teacher observations and student oral and signaled response output. It was found that young children in Trenton and Indonesia demonstrated increased awareness of sensations in the body and increased awareness of the presence of others. Children in Indonesia also demonstrated increased pro-social behavior. Differences between the two sites and developmental appropriateness across cultural contexts are discussed. Implications for future work in mindfulness and peace education for young children are also outlined.

INTRODUCTION  
In an ever-changing and increasingly interconnected world, it is more critical than ever that children develop the capacity to connect with the self and others. Mindfulness, the awareness and acceptance of the present moment without judgement, is a cultivated practice of patience and kindness that may support this skill development. Mindfulness is a recent trend in early and elementary education practice. In part, this is because mindfulness provides “bite-sized” opportunities for awareness by creating space to slow down and take in sensory information (Moreno, 2017). Previous work has centered on establishing the theoretical framework and backing for mindfulness in young children as well as the impact of mindfulness training for teachers on teacher and student well-being (Hartigan, 2017). The unique present work takes a different, more student-centered approach. It assesses changes in children’s own conceptual understanding as reflected in their creative and oral output.

A comparative international analysis of a mindfulness and compassion-based pilot program for young children was conducted at two sites: Howley School Preschool and Child Care Center in Trenton, New Jersey and Sekolahku MySchool in Yogyakarta, Indonesia.

REVIEW OF THE LITERATURE  
The theoretical underpinning of this pilot curriculum addresses the intersections of various current trends in educational research and practice including peace education, mindfulness-based interventions, the whole child approach to learning and authentic assessment of young children.

MINDFULNESS AS A METACOGNITIVE TOOL FOR CHILDREN  
Mindfulness is a secular practice with its roots in Buddhist psychology. According to the Buddhist cognitive theory, supported by contemporary Western neuroscience, each perception has a “feeling tone” that is labeled or judged by the mind as good, bad or neutral (Grabovac et al., 2011) and activated by other affective measures. Each sensory experience is influenced by a layered emotional response.
dependent on past experience. Neuroscientific theory believes that the mind is triggered into a state of “initial orientation” followed by a stimulus which is labeled as good or bad (Davis-Siegel, 2015). When the mind has become habituated to routine sensory perceptions, these judgments become more subconscious and the mind is more likely to label a situation with its initial orientation and then wander. This is important because our thoughts can become our identity (Ergas, 2017). Meta-awareness or the awareness of one’s own experience can interrupt the habituated process of thinking. Mindfulness is a skill that can support the development of this moment to moment awareness. This skill, which is a blind spot in most school curricula (Ergas, 2017), is actually developmentally appropriate for children as it known that children can innately experience contemplative states (Hart, 2003). Thus it is proposed that with support, children can re-establish connection with the self and others through mindfulness practice.

Literature findings have shown that a consistent, developmentally appropriate mindfulness practice in elementary students can enhance overall well-being because students take ownership of their own growth and development (Semple et al., 2005). Mindfulness is associated with improvements in working memory, attention, academic skills, social skills, emotional regulation and self-esteem (Napoli et al., 2005). Mindfulness is also associated with improved impulse control and decreased emotional reactivity to challenging events (Thompson & Gauntlett-Gilbert, 2008). One particular program of mindfulness-based kindness curriculum with preschool students found improved pro-social behavior and self-regulatory skills (Flook et al., 2015). The current research surrounding mindfulness as a metacognitive tool is promising but there is little empirical data on young children, particularly preschool aged children.

ACTIVATING ACROSS THE DEVELOPMENTAL DOMAINS THROUGH MINDFULNESS AND MOVEMENT

The whole child approach to teaching involves activating across developmental domains including cognitive, physical, affective and social to create meaningful student-centered learning experiences (Weeks, 1931; Easton, 1997). This approach recognizes that the different aspects of child development intersect and support one another. Mindfulness and gentle yoga practices are inherently whole-child focused and are a developmentally appropriate outlet for youthful energy (Mendelson et al., 2010). It is also important to acknowledge that there is no physical pre-requisite to mindfulness-based interventions other than the ability to breathe, making mindfulness accessible to all students and all bodies (Hyde, 2012).

Peace curricula also address whole-child development through tiered awareness. The Montessori Peace Education framework teaches peace by working across the levels of self, community and world. The Montessori approach fosters peace at these three inter-related levels: self (reflection and self-awareness), community (interpersonal relationships and openness) and global (cultural consciousness) (Montessori, 1949).

John Dewey’s educational philosophy reflects and intersects the attitudes of mindfulness by acknowledging that education should be student-centered and meaningful for the individual (Dewey, 1974). Good teaching invites student-centered participation through well-planned activities that feed into the larger curriculum. The activities are fluid within each school site because interactions between adults and students change within each lesson. The larger curriculum changes as a result of the culture as well. This philosophy of student-centered learning is at the heart of the whole-child learning approach through mindfulness.

AUTHENTIC ASSESSMENT WITH YOUNG CHILDREN

The prevalence of mindfulness-based interventions in classrooms globally has increased dramatically over the past several years. This reality creates a call to action to create and implement authentic assessment to appropriately assess the quality and impact of such programming.

For young children in the pilot program intervention, the basic definition of mindfulness is simplified as: awareness with compassion or awareness with acceptance. Awareness is defined as everything we experience including: what we hear, see, smell, taste and touch as well as occurrences in the internal body including felt emotions, sensations and thoughts. The meaning of compassion is
twofold: 1) to recognize the suffering in others and 2) to take action to help (“The Compassion Instinct”, 2004). For children, this means acceptance. It involves encountering each moment of mindfulness with a sense of ease and clarity. Over time, this includes encountering relationships with the self and others in the same way. Mindfulness programming thus intends to focus on how children become aware of their own experience and their relationship to others.

One significant tool to assess this interpretation of the internal experience is through arts-based assessment. Drawings by young children are useful for interpreting their mental experience. It is believed that children’s reality is the outcome of their own mental construction (Piaget, 1954) and the eccentricities in children’s drawings are a result of their unique mental experiences. The size of objects drawn reflect the relative importance to the child, regardless of actual physical position in time and space (Lasky & Mukerji, 1980). Thus, children’s drawings can be used as a way of interpreting their perceived experiences.

According to Lowenfeld and Brittain (1975), the approximate developmental stage for three to seven-year old children’s drawing is called intellectual realism. Children in this stage draw what they know rather than what they actually see. This is because symbolism is important to the child (Lasky & Mukerji, 1980). Lowenfeld’s stage aligns developmentally with Piaget’s preoperational thought, during which the child uses words and images to represent objects (Piaget, 1954). In their drawings, children tend to represent their own experience more than that of the subject itself. Drawings can provide an appropriate outlet for children’s mental processing and serve as an assessment piece for tracking development.

Another useful tool in assessing children’s internal understanding of connection between self and others is student output. Student output is a motorized expressive activity that reflects the internal processing of some stimulus (Charlesworth, 2017). Thus, students’ responses to a stimulus, which could be a question, activity or story, reflects the result of their own internal processing. This output could be oral responses or signaled response. Signaled response is the use of parts of the body to communicate answers (Tekene, 2008). This alternative response approach is especially accessible to all learners.

The constructivist theory of learning suggests that the child learns through interactions between thoughts and the environment (Feeney et al., 2013). This situates the student and teacher as working together in the learning process to facilitate growth and development. The teacher must actively work to engage students in the learning process. The depth, breadth and relevance of student responses is useful information to reveal the state of this relationship.

SELF-AWARENESS IN YOUNG CHILDREN
Self-awareness is emerging as a critical skill for development in early childhood. This is because having a strong, flexible identity and diversity awareness are increasingly more important for children to be able to navigate a more interconnected and heterogeneous world. Children’s own understanding of who they are must be intersectional with respect to a spectrum of elements, including race, gender, nationality, culture and more.

Children are constantly receiving and interpreting information regarding who they are and they should be. It is necessary to provide children with the tools to navigate and make sense of their world. Mindfulness has the potential to be a tool for self-awareness because it creates opportunities for full attention and presence to the moment to moment experience. Mindfulness has been shown to create the potential for self-awareness in elementary students (Lawlor, 2014; Wall, 2005). However, little empirical data exists to support existence of this as an outcome of mindfulness-based interventions in early childhood settings.

EMPATHY IN YOUNG CHILDREN
The capacity to connect and recognize the humanity in others is another critical skill in an ever-changing world. Current research on empathy in children centers around two main outcomes: perspective-taking and pro-social behavior. Perspective-taking refers to the ability to guess how another person is thinking or feeling. Pro-social behavior can be characterized by sharing [dividing up or bestowing], helping [act of kindness, removing distress] or cooperation [working together to reach a goal]. It has been shown that
mindfulness supports pro-social behavior in young children (Flook et. al., 2015). Mindfulness training for teachers has also been shown to improve their students’ pro-social and on-task behavior (Jennings et al., 2011). However, little empirical data exists to suggest that mindfulness can impact young children’s ability for perspective taking.

**METHODS OF ASSESSMENT**

*Arts-based assessment* was used to evaluate the impact of the mindfulness-based curriculum on the children’s understanding of the self (Piaget, 1954). A self-portrait assessment was conducted before and after the full curriculum implementation. Each drawing was interpreted by 1) overall impression including size of people and placement on the page, 2) omissions of body parts and 3) child’s verbal or signaled identification between him/her/their self and the drawing. This method has been used in children’s art therapy to determine the relevance and importance of various objects to the child (Furth, 2002). The pre and post drawings were comparatively examined to determine any changes.

Children’s output was also tracked throughout the mindfulness-based curriculum. Group participation was tracked using running record observations. It is known that young children learn with repeated exposure over time as they assimilate and accommodate new experiences into their structures of thinking and problem solving (Feeney et. al., 2013). Thus children’s output can reflect their changes in understanding and thinking.

Teacher observations were also conducted to evaluate the impact of the mindfulness-based curriculum. The teachers noted changes in students’ behavior over time. The teachers were unaware of the target objectives of the curriculum.

**STUDY SITE – TRENTON, NEW JERSEY, UNITED STATES**

The first site of implementation was Howley School Preschool and Child Care Center in Trenton, New Jersey, United States. The curriculum was taught to two preschool classes (ages 3 and 4) over the course of six weeks with two 30 minute lessons each week. The class sizes ranged from 12-14 students. One class included several English Language learners (ELLs) with Spanish as their first language. A bilingual teacher assistant supported these students for the duration of the implementation. Differentiation, including the use of signaled response, pictures to supplement concepts and the use of Spanish to clarify or introduce higher-level concepts, was also provided.

An overview of the data analysis revealed the following themes: 1) awareness of sensations in the body, 2) identifying with the body and 3) awareness of surroundings and presence of others.

**AWARENESS OF SENSATIONS IN THE BODY**

One of the key changes noted in the children over the course of the curriculum was increased awareness of sensations in the body. This was noted in children’s output as well as their self-portraits. During the first week, children demonstrated prior knowledge in the ability to correctly identify the topography of the body including the location of the body, mind and heart. However, the ability to correctly identify and correlate physical sensations with these body parts was developed with time. By the end of the curriculum, most of the class was able to identify unique physical sensations in their own body. For example, students would share after doing a pose that they could “feel their muscles” or that they used “their legs.” They would also share their mood-state or physical response such as “boy that hurts” or “it felt good.” Students would also describe the sensations of stretching using their own creative language, demonstrating authentic self-reflection and not repeated teacher-induced responses. Children would say “I feel my body grow” or “It felt squishy” to describe such movement. Students also demonstrated body awareness with signaled response. When asked to share where they could physically feel the sensations of the breath in the body, children would immediately point to their stomach or chest. The children had been instructed to put their hands on their chest or belly during the mindful breathing exercises. One child, Donte, carefully watched his breath each week. One day, Donte became aware of the breath in his
nose. “Miss I can feel my breath in my nose! Can I put my hand on my nose?” This demonstrated the increased connection between felt sensations and body awareness.

The increased awareness of the body was also demonstrated in the children’s drawings. Many children drew figures that had increased size and more central placement of sensory body parts, especially the eyes, arms and legs (Figure 1). This demonstrated the increasing importance and relevance of the five senses to the children’s body concept.

IDENTIFYING WITH THE BODY

Another change that emerged over the course of the curriculum was increased self-identification with the body. Children began to use more descriptive language when discussing their bodies and emotional states. For example, one child, Jason, described what it felt like to get angry by saying it “feels like my heart wants to get out” and pointed to his chest. He then added that when he is excited his “heart wants to get in.”

Children also demonstrated identification during the final self-portraits. All children were able to correctly identify their own body topography with that in the drawing. This was a change from the pre-assessment when most children could not do so. Many children would also add or change their drawings after discussing their bodies with the researcher. This reflected a connection between their drawing and their actual body. Students would say “Oh I forgot my tummy!” or “I forgot my mouth!” This realization indicated a heightened awareness of their physical body. The children did not make such additions during the pre-assessment. Some children also added mood-states and more descriptive words. One child, Mariah, shared that she drew “her heart” and “her flowers” because “I am happy.”

AWARENESS OF SURROUNDINGS AND THE PRESENCE OF OTHERS

A key change that emerged was increased awareness of surroundings and the presence of others. Although there were no significant changes reported in student behavior related to pro-social behavior or perspective taking, the children’s drawings did demonstrate increased awareness of at least the physical presence of others. In the pre-assessment, all children drew themselves alone on the paper. In the final post-assessment, nearly all children drew themselves within the context of their everyday life. For several children, this included the addition of everyday activities such as “brushing my teeth” or “waking up” (Figure 2). Other children included background and additional characters such as friends or family members. This reflected a change in the perception of the children of the relationship of their body to everything else around them. When asked to describe their drawings, children would eagerly share about not only themselves but those who mattered to them. One child, Chris, shared, “This is me and all of my friends!” He had drawn himself surrounded by all of the other students in the class.
STUDY SITE - YOGYAKARTA, INDONESIA
The second site of implementation was Sekolahku MySchool (SMS) in Yogyakarta, Indonesia. This curriculum was implemented in a Kindergarten class with 25 children ages 5-6. All students were of Indonesian nationality and the language of instruction was Indonesian. The lead teacher received curriculum and mindfulness training using a Teacher Handbook which was developed by the researcher and translated into Indonesian. The curriculum was taught weekly for one hour each week over the course of six weeks. Each lesson was translated from English to Indonesian.

The curriculum was modified for its implementation at SMS in Indonesia. This curriculum used mindful movement and Zumba exercises in place of Yoga pose practices. Many of the students at SMS were Muslim. The associations and experience of yoga for these children were more religious in nature than for Western students. In the United States, yoga is more associated with fitness or physical well-being. This is due to a long history of cultural appropriation of yogic practices in the United States. Thus the SMS curriculum was modified to be culturally responsive.

An overview of the data analysis revealed the following themes: 1) awareness of sensations in the body and 2) embracing differences and helping others.

AWARENESS OF SENSATIONS IN THE BODY
One of the major changes noted in the children over the course of the curriculum was increased awareness of sensations in the body. This change was reflected in many of the children’s drawings. One of the key changes was the size and placement of sensory body parts, especially the head. Many children also included their heart, which was not observed in the pre-assessment. This reflected an increased awareness of the chest area, either with reference to the physical sensations of breathing or “preparing the heart” in the mindful greeting exercise.

It is also important to note the change in engagement of the students over the course of the curriculum. In the beginning, the teacher reported that students were disengaged, shy or disinterested in movement and mindfulness activities. By the end, all students were reportedly engaged with enthusiasm and happiness, demonstrating increased sense of comfort and confidence in the practice.

Children also demonstrated behaviors of increased self-awareness and self-regulation. One child, Devi, demonstrated increased self-confidence during everyday activities including leaving the class without a friend and washing hands without support. Another child, Farel, demonstrated increased emotional regulation. He shared with his teacher that “If I want to be angry, I take a breath first so I am calm and not angry.” The teacher reported that the children were able to self-regulate when angry by noticing their chest and how their heart rate increased and then taking deep breaths.
EMBRACING DIFFERENCES AND HELPING OTHERS
Another key finding with the class in Indonesia was increased pro-social behavior and perspective-taking. The teacher reported that the children acted “more caring” with their classmates, especially with one of the classmates with special needs. The children also demonstrated an increased awareness of differing abilities as the teacher reported the children liked to discuss a poster of an athlete with a physical disability. This stemmed from one of the lessons where the children appeared to have to accommodate their understanding and acceptance of different body types. A conversation surrounding an athlete with a physical disability became a teachable moment for the teacher and the children.

*Teacher:* How many hands and feet do you have?
*Children:* Two hands and two feet
*Teacher:* How would you like to only have one hand and one foot?
*Children:* Strange
*Teacher:* It is not strange, only different. Look at all of us, different from each other, yes?

This was a critical moment in making the connection between self-awareness and the awareness and acceptance of others. Creating space to explore one’s own body allows for more thoughtfulness and curiosity. This in turn fosters acceptance and non-judgment. Rather than becoming aware of the body simply through its aesthetic value, children are taught to become aware of the physical sensations and come to know their own body in a more powerful and intuitive way.

Children in Indonesia also demonstrated multi-tiered awareness, which is a significant goal of many peace-building programs. In the final week of the implementation, children were able to differentiate between kind wishes to themselves and kind wishes to the world (Figure 3). Their responses demonstrated thoughtful understanding of the greater needs of society, particularly with respect to environmental issues.

![Figure 3](image_url)

*Figure 3.* Child’s drawings demonstrate differentiated awareness between the needs of the self and the greater community. She writes that for herself she wishes for her own room. For the world she wishes for green trees to be planted.

COMPARATIVE ANALYSIS
These two sites of study reflected different demographics with respect to culture, religious background and ethnicity. Developmental appropriateness and cultural responsiveness will be discussed. It is important to recognize that while development and culture could influence children’s processing and learning differently, there is some overlap. It is known that developmental expectations do have a cultural element (Feeney et. al., 2013).

Although inherently a secular practice, it is critical not to oversimplify the roots of mindfulness and Yoga practices in Eastern religious traditions. Individuals inherently receive and interpret physiological sensations through their own cultural lens (Duque et al., 2009). Thus, the experience of the
individual is intersectional to race, class, gender, culture, religion and a variety of other identity elements. For this reason, mindfulness-based interventions must be culturally sensitive and adapt to the needs of the community.

DEVELOPMENTAL APPROPRIATENESS OF MINDFULNESS
In this study, it was found that preschool students were able to demonstrate changed mental experiences but not necessarily behavior, whereas Kindergarten students were able to demonstrate both changed mental experiences and changes in behavior. This may have to do with developmental differences emerging between these age groups. According to developmental theory, awareness of others’ needs is a higher-order skill that emerges later in early childhood. Around 4-5 years of age, children begin to become aware of the effect of their actions on others and can identify thoughts and feelings in others (Feeney et. al., 2013). Thus, children ages four-to-six may be more developmentally ready than younger children to exhibit pro-social behavior. Another reason for this difference could be prior knowledge. It is important to recognize that Howley School, the preschool at which the curriculum was implemented in Trenton, already had existing support and curricula on teaching social-emotional learning (Sprung et al., 2005). Thus, a significant difference in pro-social behavior was more difficult to observe because the children already demonstrated such expected behavior prior to the current intervention.

Another difference found between the study sites was the level of engagement and differentiated responses with respect to “compassion for others.” In Indonesia, more students participated in sharing about other students. Both groups of students were able to identify things they were thankful for. However, students in Indonesia were more likely to identify people, rather than activities, they were thankful for. For example, in Trenton, the most common response was “I am grateful for playing” or some variation. In Indonesia, the most common response was “family.” This could reflect cultural, developmental or instructional differences. Gratitude is a higher-order concept that may not be fully understood by children in the preoperational stage of thought because it is more abstract. For young children in Trenton, gratitude was simplified to “saying thank you for what we have and what we like.” This choice of language may have schematically reminded children of activities and items rather than people.

It is important to recognize that mindfulness and compassion are abstract concepts that need to be integrated into the thinking and learning of young children. To make this practice developmentally appropriate, these concepts should be made accessible through experiential student-centered activities and concrete examples. The choice of activities should be culturally sensitive. This inquiry-based approach allows students to become aware of their own understanding of what it means to “be me.” The language of instruction becomes an important lens by which the child receives the curriculum. For children at both sites, language became a powerful tool as it offered associations and meaning. Word usage and vocabulary had to be chosen carefully in order to foster awareness and understanding for all learners.

For Spanish speaking students, mindfulness was translated to atenci\'on plena. This directly translates to “full attention.” For Indonesian students, mindfulness was translated to kesadaran which directly translates to “awareness.” Keharmonian which translates to “harmony” was used in place of the term “peace.” This is because according to the Yogyakartanese perspective on feelings, peace and war are seen as conditions, whereas harmony is the action to achieve peace. Language is critically important to scaffolding student understanding with respect to mindful awareness. The implications and associations that children make with different words impact the way they assimilate their new experiences.

IMPLICATIONS FOR FUTURE WORK
The findings in the present study offer a promising foundation for the use of mindfulness in peace building curricula. It is known that self-awareness and empathy are critical skills to develop in young children to foster inclusive and compassionate classrooms. It was observed that these skills could be supported and developed in two different international contexts among two different cohorts of young children.
Future research should present findings of longitudinal studies of young children’s development of mindful awareness, self-awareness and empathy. Mindfulness-based interventions with an emphasis on whole child learning should be authentically assessed in a variety of cultural contexts to establish a fuller picture of how culture impacts this learning. Assessment on mindfulness-based interventions should be replicated and validated in order to equip teachers and implementers with appropriate measurement tools.

Administrators and teachers should consider the cultural context they are working in to determine the specific activities that would be best understood and received by the children. The schematic understanding and prior knowledge will differ greatly depending on the students’ previous exposure to contemplative and metacognitive practices. However, the basic framework of whole child learning can be applied to multiple contexts. Differentiation and meeting the needs of individual children is inherent to mindfulness. Mindfulness is about becoming aware of the present moment with acceptance and non-judgement. Thus, the teacher must adopt a stance of open-hearted acceptance of all responses and behaviors of the students.

CONCLUSION
In this ever-changing world, children will be challenged to connect to their own experience and identity as well as community and group dynamics. Mindfulness is a skill that can support such development if it is integrated in a holistic and developmentally appropriate way. A one-time curriculum intervention implemented at two international study sites of Trenton, New Jersey and Yogyakarta, Indonesia showed promising results with respect to self-awareness and empathy. Yet it is known that peace building programs require thoughtful and consistent practice. To see truly radical change, these practices should be integrated more fully into the child’s everyday learning experience. This pilot curriculum encourages a different approach to teaching. Implementation of whole child learning does not have to be limited to the teacher. It is known that best teaching practice invites children into their own learning experience. Mindfulness offers opportunities for children to connect with their own bodies, minds and hearts through intentional awareness. This approach fosters compassionate thought and action from the inside out.

REFERENCES


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i All children's names have been replaced with pseudonyms.