HOCUS FOCUS:
EVALUATING THE PEDAGOGICAL IMPLICATIONS OF INTEGRATING MAGIC TRICKS IN CLASSROOM INSTRUCTION

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Abstract: Educators are being asked to teach an increasingly heterogeneous population of students, some of which face additional learning challenges. Many of these students have – or will have – a significant need to develop not only academic skills but also functional and social skills. However, instruction that addresses these needs is often not a component of the school-wide curriculum. Equipping teachers with new resources and the proper preparation to use them is essential for student growth, development, and success. This project was implemented to determine if learning and performing magic tricks as a part of an educational activity could bring about improvements in specific areas for special learners. Teachers used the Hocus Focus™ curriculum for this project. Results demonstrated that the learning and performing of magic tricks could have psychological, behavioral, and cognitive benefits for students. However, it also demonstrated improvements in teacher efficacy, proficiency, and satisfaction.

Keywords: learning challenges, academic skill improvement, focus, learners with disabilities, magic

Introduction

It has become critical for teachers to have a continuum of interventions and specialized strategies they can effectively implement in their classrooms while modifying their lesson plans to meet the needs of their students (Schmidt, Rozendal, & Greenman, 2002).

Hocus Focus™ is an activity-based, student-centered, academic, and functional curriculum that integrates simple magic tricks into classroom instruction. Each lesson is developed to align with U.S. National and Common Core State Standards of Learning as well as achieve specific functional objectives. The focus of this paper will address the findings of how the organized integration of magic tricks in the classroom can empower teachers and students to achieve desired outcomes and improve important learning skills identified in Bloom’s Taxonomy of Learning, Levine’s Constructs of Neurodevelopmental Function, and Marzano’s New Taxonomy of Learning. These skills include sequencing, organizing tasks and movements, creativity, problem-solving, critical thinking, observational techniques, concentration, fine and gross motor skills, communication and presentation, and social behaviors (Marzano, 2007).

In order to put into perspective the value of the Hocus Focus™ curriculum as an effective tool educators can use to teach all students in an inclusive classroom environment, one must have an understanding of the changes in student demographics, the impact of current laws regarding the public education of special needs students, and the power of the arts to engage learners.

Literature Review

Legislation and Inclusion

In 1975, the U.S. Congress passed Public Law 94-142 (Education of All Handicapped Children Act), now codified as the Individual with Disabilities Education Act (IDEIA). In order to receive federal funds, states must develop and implement policies that assure a free appropriate public education (FAPE) to all children with disabilities. IDEIA became a major instrument of change in U.S. public schools in the later part of the 20th century. In the 21st century, the No Child Left Behind Act of 2001 (NCLB, Public Law 107-110) has become the instrument of change in U.S. education by mandating that all...
states establish academic content and achievement standards.

Globally, the demand for improved access and more effective teaching tools for students with a disability classification are not expected to diminish. A study released by the U.S. Centers for Disease Control and Prevention (CDC) revealed that about one in six children in the United States (15% of American children) have been diagnosed with some type of developmental disorder – an increase of almost 2% from 1997 to 2008 or almost 2 million children (Boyle, Boulet, Schieve, Cohen Blumberg, Yeargin-Allsopp, Vissor, & Kogan, 2011). The World Report on Disabilities estimates the number of children with disabilities under the age of 18 at 150 million and rising (World Health Organization, 2011).

It is critically important that all children have access to education; they must be able to participate in school life and achieve desired outcomes from their education experiences. “While subject-based academic performance is often used as an indicator of learning outcomes, ‘learning achievement’ needs to be conceived more broadly as the acquisition of the values, attitudes, knowledge, and skills required to meet the challenges of contemporary societies” (United Nations Educational, Scientific, and Cultural Organization, 2009, p. 6).

The Levin Institute (2011) states, “when possible, students should be mainstreamed, schools should be flexible in their curriculum and assessments, classroom specialist should be provided, and education and rehabilitation services should be linked” (¶ 21). There is a critical need for educators to work cooperatively with their colleagues in other disciplines, i.e. school psychologists, therapists, guidance counselors, and speech/language pathologists. When activities that are implemented to meet academic objectives also reinforce psychomotor and social objectives, the synergy among professionals can lead to greater achievement in academic and social skills with at-risk and students with learning disabilities.

The global situation demands that we evaluate our present practices and demonstrate a willingness to abandon those that are inefficient for those that have been proven effective (Gable & Hendrickson, 2004). In inclusive classroom environments, methods of instruction that best benefit all students must be implemented in order to serve the needs of every learner. This requires educators to find new methods and tools to support a creative inclusive approach to education.

The Arts in the Classroom
The New Oxford American Dictionary defines art as “the expression or application of human creative skill and imagination” and the arts as “subjects of study primarily concerned with the process and products of human creativity and social life.” Shelley Esaak (n.d.), a portrait artist, graphic designer, writer, and educator, has written the About.com Art History website. She defines art this way:

Art stimulates different parts of our brains to make us laugh or incite us to riot, with a whole gamut of emotions in between. Art gives us a way to be creative and express ourselves. For some people, art is the entire reason they get out of bed in the morning. You could say, "Art is something that makes us more thoughtful and well-rounded humans." (¶ 2)

Research has demonstrated that the arts ignite student creativity (Burton, Horowitz, & Abeles, 1999; Fisk, 1999), and this can play an important role in supporting the diverse learning needs of students. Evidence indicates that learning through the arts can have a profound impact on learning in other domains including personal and social competencies (Fisk, 1999).

A study of over 2,000 students attending public schools in grades 4-8 found a significant relationship between arts programs and creative, cognitive, and personal competencies needed for academic success (Burton et al., 1999). When academic or social objectives are taught through the arts, they provide children and young adults...
with authentic learning experiences that engage their minds, hearts, and bodies. These learning experiences are real and meaningful for them, bringing together multiple skills and abilities. When schools prepare students only for academic success (e.g., getting the answer correct), it is “detrimental to creative growth because creative learning involves experimenting, taking risks, making mistakes, and correcting them” (Cote, 2011, p. 129). Eisner (2002) argued that more attention should be given to the cognitive aspects of the arts. Eisner’s position is that arts integration into curriculum can teach students valuable skills that include how to make good judgments about qualitative relationships, problems can have more than one solution, questions can have more than one answer, small differences can have large effects, and there are many ways to see and interpret the world (perspective).

However, research has also demonstrated that arts integration can have an impact of teacher transformation and resilience. In a Lesley University study on arts integration entitled “Voices from the Field” (Bellisario, Donovan, Prendergast, & Stevenson, 2009), researchers found, Almost 66% of teachers responding to the survey report that their participation in the ITA (Integrated Teaching through the Arts) program, and its lasting effects on their teaching practice, have played a role in their staying in the teaching profession. In a time when teacher turnover is a substantial policy problem and when teachers face mounting challenges, such as overcrowded classrooms, testing and Adequate Yearly Progress (AYP – a measure of No Child Left Behind) pressure, and stress in their own and students’ lives, this link between arts integration and teacher resilience is notable (p3, ¶ 3).

Magic in the Classroom.
The art of magic has a story as old as recorded history. Almost every society has some recorded form of magic. It may be the oldest and most universal of the performing arts because it easily translates from one culture to another (Christopher & Christopher, 2005) The Westcar Papyrus, written approximately 3000 BC, records the performance of a magician in the Pharaoh's court. Cave paintings by prehistoric people in southern France and northern Spain contain images of magicians performing their tricks (Doerflinger, 1977). Magicians performed in the streets and marketplaces of ancient Greece and Rome. Magicians of the past were an important part of society and significant players in the world of theatre. The tricks that magicians perform are the very Webster definition of the word “art” – “works produced by creative skill and imagination.” The problem-solving and creative abilities of magicians have made significant contributions to modern civilization including the parachute, vending machines, and the technology used to show movies.

The art of magic has the potential to capture and hold the attention of people of all ages. Children are especially intrigued by the seeming impossibility of a magic trick. Throughout the 1980s and 1990s, a small number of education researchers evaluated the effectiveness of using magic tricks with students with learning disabilities. Each researcher concluded that future research should be done based on their positive results, which include:

• Magic tricks offer a creative means for stimulating the senses in special education students (Frith & Walker, 1983).
• Magic tricks enhance the learning experience and encourage creative problem-solving skills, observational techniques, and critical thinking (McCormack, 1985).
• Magic tricks provide a strategy for building teamwork and self-esteem in children with Emotional Behavior Disorders (Broome, 1989).
• Magic tricks in an educational setting can help students with learning differences attain higher self-esteem
and self-confidence (Ezell & Ezell, 2003).

Dr. Aubrey Fine is a licensed psychologist who works with children with learning disabilities. He is also a Professor in the College of Education and Integrative Studies at California Polytechnic State University (Pomona, CA). Dr. Fine recognizes the value of magic as an intervention. He wrote:

The teaching of magic has many therapeutic benefits. Not only does it work on confidence and communication, but it also can be used to teach cognitive and motor skills. It is amazing that people will work hard to learn materials that are intrinsically motivating to them. So often people don't realize that they are enhancing these skills because their primary goal is self-satisfaction and developing the skills to perform the magic. I have been amazed to watch children with ADHD or learning disabilities work slowly and carefully, following the necessary steps, because they want to get the trick or illusion correct. (Personal Correspondence, August 23, 2009)

Incorporating magic tricks into the learning process can be a powerful means of tapping into the creative process and drawing on multiple learning modalities – visual, aural, and kinesthetic – allowing students to learn facts and concepts they can see, touch, manipulate, and talk about. Simple tricks can transform the learning process into a tangible and visible learning experience. It can also provide an appropriate means to build confidence, self-esteem, self-identity, and develop self-determination skills in students (Levin, 2006).

Learning is deepest when students have the capacity to represent what they have learned to others. Helene Illeris, Professor of Arts Education at the University of Agder in Norway, suggests that, in the performative aesthetic learning process, knowledge can be communicated through symbolic forms (Illeris, 2011). The performance of a magic trick is a motivating, skillful, and appropriate way to provide a platform for demonstrating what students have learned.

The Hocus Focus™ Curriculum

**Hocus Focus™** is an activity-based, student-centered educational curriculum that integrates the art of magic into 11 weeks of lesson plans (10 lessons and a bonus lesson) with the flexibility for teacher adaptation based on the abilities of the students and available classroom time. It was developed for two reasons: (1) to tap into the curiosity and intrinsic motivation of children in order to engage them in the learning process, and (2) to provide organized lesson plans that would allow for inter-disciplinary collaborations between educators, psychologists, and therapists to concentrate on and reinforce the desired outcomes (academically and functionally) identified in an Individual Education Plan (IEP).

The curriculum includes the Teacher’s Manual, an Instructional DVD, Supplemental CD, and the magic supplies for each lesson. The Teacher’s Manual is divided into five sections: Introduction to the Curriculum, Educational Factors, Guidelines for Implementation (assessment, instruction methods, etc.), Assessment Surveys, and Lesson Plans. Each lesson plan contains goals and objectives aligned with at least one National Standard of Learning and Common Core State Standard, activities to support those objectives, step-by-step illustrations for the trick being taught, and assessment tools to evaluate the students’ progress. In addition to the academic objective, each lesson also contains cognitive, motor, psychosocial, speech and functional objectives.

The Instructional DVD is for use as a part of the classroom instruction. The DVD menu lists each lesson as a separate chapter. Each lesson contains the demonstration of the trick followed by the step-by-step instructions for students. The step-by-step instructions on the DVD align with the step-by-step illustrations provided to each student by the teacher. The DVD is also English subtitled.

The Supplemental CD contains the illustrated instructions for all the magic tricks in each lesson, copies of the assessment and evaluation surveys to be used, a Certificate of
Completion, the Magician’s Code of Ethics, the “Wizard’s Book of Secrets,” and a letter to the parents introducing them to the concepts and benefits of the curriculum. This curriculum has been reviewed by Mary Beth Noll, PhD, and Kathryn Johnson, PhD (Department of Special Education, St. Cloud State University, MN).

There were several specific questions on which the researchers focused regarding the efficacy of the Hocus Focus™ curriculum. This paper, however, will focus on only one of those questions: How does the use of the curriculum encourage student growth and development, i.e. does it achieve measurable outcomes in the improvement of the previously identified cognitive and psychomotor skills as well as student affect?

Method

Settings and Participants

Three settings were selected with varying demographics in order to assess the effects of the Hocus Focus™ curriculum on diverse populations. These settings comprised nine teachers and seventy-six students.

Setting one included four classrooms at a public school in north St. Louis County, Missouri. Each classroom contained between 8 and 11 students who had been placed within the school via the decision of an Individual Education Plan (IEP) team. The students’ diagnoses included Autism, Emotional Behavior Disorder, Learning Disability, ADHD, Intellectual Disability and Communication Disorders (speech and language).

The first classroom was made up entirely of female students, ages 14-18, who had educational diagnoses of Emotional Disturbance and/or Learning Disabilities. The second classroom was made up of male and female students, ages 18-21, with educational diagnosis of Autism and/or Intellectual Disabilities. The third classroom was made up of all male students, ages 15-18, with educational diagnosis of Emotional Disturbance and/or Learning Disabilities. The final classroom was made up of male and female students, ages 14-16, with a primary educational diagnosis of Learning Disability. There were 19 females and 15 males included in the study. The students were predominately African-American from lower socio-economic neighborhoods. One supervisor, working cooperatively with each teacher, was placed in charge of overseeing the evaluation of the curriculum in each classroom. The objective was to determine if the Hocus Focus™ curriculum would positively impact student growth by improving cognitive abilities and influencing behaviors.

Setting two included four separate level IV classrooms containing a total of twenty-seven students in the state of Minnesota (USA). All students were diagnosed as having an Emotional Behavior Disorder and Learning Disability. The students’ ages ranged from 12-14 years old. The evaluation of the curriculum in each classroom was under the supervision of a teacher and one graduate student from the Department of Special Education at Saint Cloud State University (SCSU) in Saint Cloud, Minnesota. The objective was to improve on task behaviors, frustration tolerance, sequencing, and social behaviors.

Setting three included one classroom containing fifteen students, ages 12-14, who were identified as having a learning disability under Minnesota law to receive special education services. The evaluation of the curriculum in this classroom was under the supervision of a teacher and a graduate student from the Department of Special Education at Saint Cloud State University (SCSU) in Saint Cloud, Minnesota. The teacher and graduate student adapted the curriculum by selecting three students who would learn, present, and teach the magic tricks to the remaining twelve students in the class. The objective was to decrease inappropriate behaviors in one student with Emotional Behavior Disorder and increase self-advocacy skills of one student with a Learning Disability and one student with Asperger’s disorder (ASD)

Materials and Procedure

Data were systematically collected and evaluated utilizing both qualitative and quantitative data collection methods. These methods included observation checklists, pre/mid/post student surveys, pre/post teacher
surveys, teacher observation data sheets, and anecdotal recording by teachers and students. Analyses were conducted across data collected from each of the three settings. In this manner, validity of the emergent themes was ensured.

In setting one, students were given two self-assessment tools to complete at three distinct times throughout the 11-week curriculum. The first assessment tool used was the Rosenberg Self-Esteem Scale. The second assessment tool was the Hocus Focus™ Self-Efficacy Scale. This scale was created specifically for this curriculum and is based on the self-efficacy theories of Albert Bandura (Pajares & Urdan, 2006). These were administered on the same timeline as the teachers’ surveys, i.e. prior to start of curriculum, week six of curriculum, and after the final week. Students were also asked to keep a “Wizard’s Book of Secrets” which contained their thoughts, ideas, and stories for each trick learned through the curriculum. Likewise teachers were asked to keep short anecdotal notes about the ease of use of the curriculum, noting what worked, what did not work and other thoughts about the curriculum. Both the “Wizard’s Book of Secrets” and the teacher notes were collected and analyzed. Each of the data sets was initially coded by applying both deductive and inductive coding strategies.

The supervisor scheduled classroom observations on weeks 1, 3, 6, 9 as well as during the final performance. Each class was observed for either the entire lesson or a minimum of 20 minutes. Informal interviews were conducted with students and teacher participants following observations.

In settings two and three, students were given two self-assessment tools to complete at the beginning and end of the curriculum evaluation. The first assessment tool used was the Rosenberg Self-Esteem Scale. The second assessment tool was the Hocus Focus™ Self-Efficacy Scale created specifically for this curriculum and based on the self-efficacy theories of Albert Bandura (Bandura, 2006). Informal student interviews were conducted throughout the evaluation period and students were asked to keep a “Wizard’s Book of Secrets” or journal which contained their thoughts, ideas, and stories for each trick learned through the curriculum. Teachers were asked to observe student behaviors and make a careful review of the research process.

Findings

The findings of this study can be categorized into three primary areas: first, the psychological and cognitive benefits for students (self-esteem and self-efficacy; self-determination and self-regulation; self-actualization/self-realization; metacognition; sequencing and following complex directions, etc.); second, the pedagogical implications for students (engagement; communication and collaboration; creativity and innovation; critical thinking and problem solving); and third, the pedagogical implications for teachers. I would like to discuss this third category more fully.

Pedagogical Implications for Teachers

Teacher Efficacy

Teachers who reviewed the Hocus Focus™ curriculum prior to introducing it to their students demonstrated a greater confidence in their ability to assist students in reaching the performance and academic objectives. However, all of the teachers included in this study grew in their level of confidence in unison with their students. This allowed teachers to build a stronger rapport with their learners assisting them in classroom instruction, classroom management, student engagement, and student motivation.

As educators, it is our job to provide an environment that is conducive to learning – one that is engaging, goal-specific, and challenging. But we must also not lose sight of the concept that learning can be fun. Individual Education Plans (IEP) must describe strategies for providing the student with acceptable and understandable ways of communication, teaching situation-appropriate social behaviors, and providing experiences that satisfy sensory needs. Hocus Focus™ provides educators with another strategy to assist their students in meeting these IEP objectives. The Hocus Focus™ curriculum provides educators with proven strategies and tools to help their students reach
their goals and better prepare for the future. Integrating simple magic tricks into the overall learning process can be a powerful and motivating way to engage students in their education and educators in the learning process – academically and functionally.

Teacher Proficiency
Knowledge of the subject to be taught, the skills to be developed, and the materials that embody the content of the curriculum provide the fundamentals for proficient teaching (National Board for Professional Teaching Standards, 2002). As teachers became more familiar with the content of the Hocus Focus™ curriculum, they became more effective in teaching the lessons. One of the teachers in the evaluation conducted by Bradley Walkenhorst, MAT (Special School District of St. Louis County, MO) stated that she had many “should’ve” moments after a class when she could identify when she could have made a connection between the Hocus Focus™ curriculum and the skills taught in the core curriculum. She described these as a light bulb going on after a particularly difficult lesson as she reflected back on what could have been done differently.

Teacher Satisfaction
Studies have concluded, “teacher motivation is based in the freedom to try new ideas, achievement of appropriate responsibility levels, and intrinsic work elements” (Sylvia & Hutchinson, 1985). They explain that real job satisfaction comes from the gratification of higher-order needs. Teachers who implemented the Hocus Focus™ curriculum in this study found satisfaction in bringing new ideas and strategies to their students, observing student growth, and celebrating student successes.

Discussion
The Hocus Focus™ curriculum provides educators with access to specific, goal-oriented magic tricks for use in the classroom. Each of these tricks assist the student in the achievement a specific functional and/or academic objective aligned with a National Standard and/or Common Core State Standard of Learning. When teachers integrate these magic tricks into learning experiences, they can provide students with authentic opportunities for advancement in critical thinking, problem solving, creativity, and retention, as well as positively impact the metacognitive and self-system processes.

The findings from this study have profound implications for the education of students with special needs and those involved in their education. Based on the pre and post assessments of the participants and the examination of the teachers, the following observations became evident when integrating magic tricks into the classroom experience by way of a structured lesson plan. These observations are:

1. Help “level the playing field” for students from disadvantaged circumstances or those with learning differences. All students, regardless of their abilities, start at the same place when learning magic. It makes no difference their socio-economic status, their language, or their skill levels. Some students with autism learned more quickly because of their increased focus and their ability to think in terms of patterns and sequences (the very heart of the art of magic). Students with varying degrees of ability were able to achieve some level of success in the learning and performing of a magic trick.

2. Engage multiple skills and abilities that develop cognitive, social, and personal competencies. Learning magic requires students to think sequentially, follow directions, and perform specific tasks. Performing the magic trick for an audience, no matter the size, requires confidence, the ability to communicate (tell a story with the trick), and some knowledge of social rules. Combined, they bolster self-esteem and move a child toward achieving self-actualization.
3. **Reach students who are not otherwise engaged in school and excite them about the learning process.** Frith and Walker (1983) found that magic has a special appeal for students because it gives them a chance to do something that cannot be equaled by their peers. Traditional instruction has focused on individual learning that isolates the student from social interaction. By integrating magic tricks into the educational process, students can engage in authentic experiences, purposeful conversation, and depend on each other’s thinking to enrich their own understanding and construct meaning.

4. **Provide an opportunity for students to teach or mentor other students in the classroom.** Marzano (2007) writes that many studies support the idea that learning is most effective when it is social and collaborative. This cooperative learning process is a valuable experience for children. Helping one another stirs creativity and builds positive relationships. It also increases a student’s feeling of control over his environment and improves self-esteem. The concept of magic tricks may also be used to talk about perspective and how two individuals may perceive the same situation differently. In today’s inclusive and diverse classrooms, collaboration is a way to learn to contribute to the common good, seek collegiality, and to draw on the knowledge and resources of others.

5. **Engage the "whole person" - the student is invested in ways that are more meaningful than simply "knowing the answer," or reciting facts from memory.** Unlike traditional learning experiences that look for right or wrong answers, being engaged in the learning and performance of a magic trick allows for multiple outcomes. When we allow students to learn creatively, we remove the stressors of “being right” and give them permission to take risks and make mistakes. And through those mistakes, they develop self-determination, critical thinking, observational techniques, and problem solving abilities. These are essential skills if young people are going to be productive in today’s societies.

**Conclusions**

Preliminary research demonstrates that **Hocus Focus** can provide educators and students an opportunity to experience growth and development in a fun, exciting, and engaging way. Future research should be explored to examine how educators can be better trained and prepared to implement this strategy, what effects it may have on their resilience and satisfaction, and how including this strategy may improve teacher and student growth and engagement.
References


