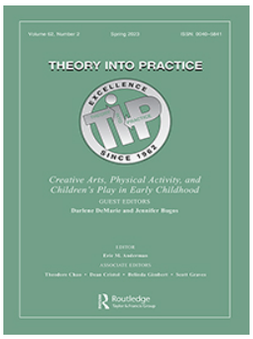

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Young magicians in kindergarten: Skill development through performing magic tricks

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ABSTRACT

Magic has been a very popular form of entertainment for thousands of years and the learning and developmental processes that take place during the process of practicing and performing the trick—are a precious phenomenon from an educational point of view. The MiniMagic kindergarten program was launched in September 2021 in a kindergarten in Józsefváros, Budapest (Hungary), in a district with a very diverse population that calls for an inclusive attitude and pedagogical methods to educate all the children successfully. The innovative program aims to develop skills and build community by integrating magic tricks into the curriculum. A well-known Hungarian magician teaches magic tricks appropriate for 4 to 6-year-old children with unanimous success. The program does not simply introduce tricks; he embeds them in story-telling sessions. This article presents how the theory about the educational values of magical tricks is turned into practice in a kindergarten showing the educational values and developmental results. I complement the analysis of the theory and practice with recommendations for practitioners, explaining the ideal context and methods of implementation.

KEYWORDS

Magic tricks in education; early childhood education; inclusive developmental programs; magic program in kindergarten; MiniMagic program

Introduction

Magic has been a very popular form of entertainment for thousands of years. The strong connection between magic programs and the audience's positive emotions might be in itself a sound reason for integrating it into children's education when considering the importance of the student's wellbeing. Still, the other side of the coin—the learning and developmental processes that take place in the magician during practice and performance—is a highly valuable phenomenon from the educational point of view.

Empirical studies revealed the benefits of using magic tricks in therapies and classrooms; however, these programs mainly appear in the curriculums of secondary schools (Spencer, 2012) and primary schools (Broome, 1989) or university courses (Ferreira & Mendes, 2014). Nevertheless, in the early years—at the age of 5–6 years, when children learn best via being engaged in play (Hirsh-Pasek et al., 2020; Hirsh-Pasek & Golinkoff, 2008; United Nations Children's Fund [UNICEF], 2018)—the transformation to the role of a magician and enchanting the people around can be a highly effective educational method. In one of the most diverse districts of Budapest (Hungary), educators launched an innovative program developed by a well-known Hungarian magician and a kindergarten teacher in a kindergarten to ascertain the benefit of the multifaceted skill development resulting from integrating magic tricks into the curriculum.

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Theoretical background: Magic and education

Watching and performing magic tricks have been known for centuries for their good influence. Several past and current magic programs have been used to enhance cognitive, emotional, social, and physical wellbeing applied to physical and psychological therapies in hospitals and in classrooms (Bagienski & Kuhn, 2019). Magicians can entertain the patients since a good spirit can be essential in the healing process; moreover, performing simple and well-chosen tricks does strengthen specific muscles or help to re-learn movements in a fun way unnoticed. An example of the practice of this approach is the *Project Magic Handbook of David Copperfield* (Kaufman, 2002) which presents a concept and program to help to motivate and stimulate activity by using magic tricks for people with various disabilities.

When discussing the classroom use of magic, firstly, we have to highlight the positive outcomes of provoking a sense of curiosity, surprise, and interest (Subbotsky et al., 2010; Wiseman & Watt, 2020) and magic provides a distinctively intellectual aesthetic experience (Leddington, 2016).

Nevertheless, from the educational point of view, the developmental effect on the young magician during the spell might be even more valuable. Integrating magic into the classroom's learning process raises enthusiasm and involvement and enhances learning motivation (Hilas & Politis, 2014). Magic is a tool that can be both an intrinsic and extrinsic motivator. It is intrinsic because children perform tricks for their own satisfaction and extrinsic at the same time since the success of the performance can bring them their peers' praise. These motivators have real value because success and praise have real reasons—an accomplished trick (Bauman, 2012).

Empirical studies have focused on the positive effects on a sample of teenagers or university students (e.g., Bell et al., 2009; Greenberg & Reed, 2018; Lin et al., 2017). As an example, "Hocus Focus" is a project-based curriculum that integrates simple magic tricks into classroom instruction in an inclusive environment (Spencer, 2012). It was developed to support the diverse learning needs of children based on the research that evaluated the effectiveness of using magic tricks when teaching students with learning disabilities (Ezell & Klein-Ezell, 2003; Frith & Walker, 1983; McCormack, 1985). The program proved to impact different learning domains resulting in student improvement in on-task behaviors, planning, and sequencing. As the students (ages 12+) participated, researchers detected enhancement in socialization and the meaningful conversation, as well as improvement in their fine motor skills (Spencer, 2012).

Another example is the European Commission-founded TEMI (Teaching Enquiry with Mysteries Incorporated) project that involved 13 partners from 11 European countries. The TEMI project focused on the professional development of science teachers regarding teaching methods. They provided workshops to support the integration of innovative, inquiry-based elements into the teaching practice to raise students' curiosity and motivation with mysteries. Besides the magic trick-like mysterious scientific experiments, during the workshops, they also taught the teachers various presentation techniques that are used in magic shows to enrich the lessons to make them more entertaining and more engaging for the children (Dittmar et al., 2014).

Magic tricks have a "built-in ability" (Bauman, 2012, p. 15) to motivate students to find out the secret behind them. Research showed that magic tricks resulted in a greater engagement in learning processes (Ferreira & Mendes, 2014; Ikhsanudin, 2017) and could

work as a catalyst for further study and experimentation (Bagnoli et al., 2019). The teachers of the "Hocus Focus" curriculum noticed that students learned the importance of sequential steps and following directions through learning the tricks, and the mesmerizing effect of magic kept them engaged during the whole process (Spencer, 2012). As part of the Computer Science for Fun (cs4fn) project, Curzon et al. (2009) conducted comprehensive research on the topic, demonstrating the link between magic and computer science concerning engagement. Magic has also proved to improve students' intellectual engagement in the discussion stage of foreign language teaching (Ikhsanudin, 2017).

Research reveals that even watching films with magical content facilitates creativity in 4–8 year old children, leading to the conclusion that "magical thinking can be viewed as an additional source of development of imagination and divergent thinking in children" (Subbotsky et al., 2010, p. 20).

According to the literature, magic can also be used as a great tool for teaching critical thinking. Revealing the trick behind the illusion is a way to show the children that it is essential to think critically about what they see, (Goodin, 2010). This feature can be especially important lately when information is flooding from the media platforms, and it is easily accessible to anyone from the Internet—even to young children.

Using magic tricks has been a popular method for centuries for presenting mathematical principles, for example, demonstrating key ideas in computing (Wiseman & Watt, 2020). Research highlights the connection between magical tricks and mathematical learning. For example, it proves that algorithmic skills can be developed using magic card tricks (Ferreira & Mendes, 2014), or it can work as an analogy to show the hidden secrets that can be unfolded through computing (Garcia & Ginat, 2016).

On a social level, magic includes face-to-face interactions, demands clear communication, and a sense of collaboration. Since age-appropriate magic tricks can be learned in a short period of time, it very quickly gives a sense of progress and mastery (Wiseman & Watt, 2020). Children with psychological issues (such as ADHD or learning disabilities) showed improvement in following multi-step directions, concentration and memory, self-determination, leadership, and socialization skills. They also showed improvement in motivation to participate and experienced more positive peer collaboration after magic-based interventions (Spencer, 2012). Empirical data proved how magic tricks increased self-esteem (Wiseman et al., 2021) and self-confidence of children with disabilities (Ezell & Klein-Ezell, 2003). Performing magic tricks enhances motor development and hand function as it is used with great success in hand-therapy programs (Harte & Spencer, 2014), which helps in the era of touchscreens. Besides, magic positively influences perception, attention, and exploratory behavior in childhood (Harte & Spencer, 2014). The *Magic Kids* program (Broome, 1989) showed the power of magic in raising self-confidence, improvement in social progress, and academic skills in students with behavioral and emotional disorders as it was used as a tool to build teamwork and increase self-esteem.[1]

Even though the above-mentioned innovative programs target school students, simple magic tricks supposedly bring similarly positive outcomes at earlier stages of life. Since various tricks can be learned quickly and easily, they are suitable to use in a kindergarten context and can give a sense of mastery and progress in a short period of time (Wiseman & Watt, 2020). It is a perfect tool for children to learn to focus on more than one thing at a time; hence, besides performing a complex movement, they need to be aware of their audience's attention and reactions

simultaneously. Amongst the multiple benefits, children learn to control their bodies at a higher level, as magicians use their eyes, voice, body language, and movements to draw the spectator's attention (Sokol, 2008) while performing a trick at the same time.

Theory into practice: Magician program in the kindergarten

The features of the MiniMagic kindergarten program

The most famous Hungarian magician is Rodolfo, who was born in the neighborhood, and his heritage is cherished in the district inspired the program. The magician kindergarten program was launched in September 2021 in a kindergarten in Budapest as part of a European Union-founded program called "Inclusive Kindergartens."[2] The diverse population of the 8th district of Budapest calls for an inclusive attitude and pedagogical methods to successfully educate all the children and build community in the diverse classroom. In addition to making it a priority to ensure equity, the program also wished to make the institution attractive to parents from all social groups by introducing a unique service. The innovative program aims to develop skills and build community through teaching children to become magicians and learn to perform tricks for peers.

Botond Kelle, a well-known Hungarian magician, has been invited to collaborate with kindergarten teachers to introduce magic tricks into the curriculum.[3] The first step has been for him to choose very simple tricks that 5–6-year-old children can learn. Introducing magical tricks at an earlier age (under 5) does not bring the same effect since there is no sharp dividing line between reality and magic in younger children's world perception. While 4-year-old children view magic as an acceptable possibility of causing events, 5-year-olds already see magic as tricks that can be learned (Hickling & Rosengren, 1994). As a second step, the magician taught the chosen trick to the teachers. Valéria Tóth, a kindergarten teacher with a tale-therapy qualification, created a story around it to make the magic trick become an essential part of the story.[4] The trick is introduced as part of a storytelling session, embedded into a context that gives a special meaning to it and makes it even more exciting for the children. Later the children have the chance to try out the magician's role through the learning and practicing phase and the performing phase. This arrangement brings a double educational profit: The storytelling is more engaging for the children when the real magic happens in front of their eyes, and they are more motivated to perform the trick when they can become a character or a narrator of the story.

An example: The disappearance of the princesses' golden ball

To understand how they build up a lesson and the program, a good example might be the session involving the classical trick of the magic cup and beads. During the preparation phase, the trick evokes a tale from the tale-therapy expert teacher, and she builds up the session around the story; she embeds the magic cup and balls trick in the fairy tale of the Frog Prince by the Grimm Brothers.

Firstly, she tells the children a shortened and simplified version of the beautiful story of the princess who dropped her golden ball in the well. During the storytelling, she focuses on the movement of throwing and catching the golden ball and emphasizes the mysterious

event of losing the ball by bringing the magic cup into the story. With the help of the magic prop, she makes the ball disappear so the children can experience the magical disappearance of the ball both in reality and in the story. Later in the tale, when the frog brings the ball back, the children can see the reappearance of the ball with their own eyes by watching their teacher finish the trick.

At the end of the storytelling, the children can come up with ideas about how the trick works, touch the magic prop and experiment with it themselves. Even though it might be easier for them to understand the trick, they must train their fine motor skills to perform them perfectly. In the following sessions, the children either have the chance to perform the trick to the whole group or work in pairs. It depends on their personalities, abilities, creativity, and moods if they focus more on the story or the trick while performing or if they feel it essential to recreate their strong connection as they had seen before.

Variation options

In certain cases, a trick is performed with ready-made tools so children can feel themselves special by taking the objects in hand that was previously used by a real magician. They feel the value of being trusted to work with them. In other cases, the children create their own tools as part of a craft session. This way, they have the chance to take their magic props home to perform the tricks for their family as often as they wish.

The presentation part is organized in a way to keep it in each child's comfort zone. They all have the chance to participate, but they can volunteer to perform. Therefore, braver kids can encourage more shy children with their show to participate at their own pace. It depends on the child's creativity and imagination to simply perform the trick or weave a story around it—the latter might be the story they previously listened to or the creation of their own fantasy. Young children need and love repetition, which results in enjoying the trick's magic again and again and each child can have the chance to experience creating magic and entertaining the audience. The quick and clear success resulting from learning and practicing a magic trick gives all young children sheer joy and a sense of self-efficacy, which is a primary goal of education.

Educational benefits

The features of the program make it an effective educational method for complex skill development. The first stage (either with the presence of the real magician or without him) is the time for the children to enjoy the experience of surprise and be enchanted. The storytelling session raises curiosity and enhances motivation, which are both key factors for later engagement. First, children simply enjoy the story and the trick, and later, during a discussion session, they try to find out the secret behind it—which develops their problem-solving and communication skills. The gift of understanding the secret through the explanation of the trick is highly valued and gives them the sense of being special.

The follow-up activities, including discussions, craft activities, and magic performances, enhance creativity; as research also shows, meeting with magic at a younger age helps to expand children's imagination and creativity (Subbotsky et al., 2010).

When the children learn to perform the trick—the practicing part—it is an ideal time to train movement coordination and fine-motor learning. The very different and precise movement that is repeated frequently through practicing embedded in an exciting and

engaging atmosphere is a perfect tool for fine-motor development as they are used in hand therapy (Harte & Spencer, 2014). It provides an opportunity for children who tends to make large, powerful movements to train body control and practice precise, delicate movements.

The presenting part provides multiple opportunities to learn and develop skills. Clear communication and presentation are essential for the success of the magic trick (Sokol, 2008), which forces the child to learn patience and to express himself clearly. For example, they need to take the time to make the audience understand the initial situation or condition of the object to make the transformation even more shocking and fascinating. For young children, this might be a fun way to practice movement and speech coordination—as it is a complex task to perform the movements of the trick precisely and, in the meantime, tell the audience what is happening or what they want the audience to think is happening. Enhancing presentation skills is a great way in the early years to develop skills related to self-expression and self-assertion, which is a key-competence to success later on in school and everyday life.

Performing tricks is a great opportunity for children to deepen the self-other distinction. Children must clearly understand the difference between inner and outer reality (Sokol, 2008) to succeed. They need to understand that their audience has no idea about the hidden egg or the knots on the scarves even though they themselves know about it, and they have to be aware in every second that they can direct the spectator's attention.

Successfully leading the audience's attention requires divided attention. The children learn to focus on their movements and simultaneously follow their audience's reactions. For example, they need to hide an egg without looking at it and talk to their peers at the same time while thinking about the next step of the trick. This needs a lot of practice, and since children do not like to fail, they learn that persistent work leads them to reach their goals. This sometimes means practicing the same movement many times, which can be frustrating, but the tangible goal and the clear, desired award promote persistence.

As the research revealed, mathematical learning can also occur due to using magic tricks. During the practicing phase, student magicians gain an understanding of the importance of following the given steps to reach the destination. They can be creative in their communication when entertaining their audience, but they need to understand the logical chain and consequently follow the given order of the elements of the tricks. As they need to think ahead, they learn the concept and importance of sequencing. During the process, they also learn about cause and effect and develop their problem-solving skills.

The process requires children to train their patience and practice listening to others while waiting for their turn. Both the learning and the performing part develop their patience and endurance. The tricks must be well-chosen to be simple enough to bring quick success but still difficult enough to get pleasure from the accomplishment. All the children have a chance to perform the trick if they wish, and they root for each other to succeed.

Becoming a wizard is a role-playing opportunity for the kids, which is made even more authentic by actually performing the trick. For those children who are shy or afraid to speak out in front of others, the transformation into a magician allows an opportunity to hide behind the role and try out a different personality. Active participation can be evoked more easily through taking a role. However, the experience of success stays with students after leaving the role behind and helps them be braver also in other situations and activities.

The act of performing a magic trick for an audience is an opportunity for the children to experience the feeling of control and agency. This valuable experience is an essential treasure for shy or introverted children to support their opening up, but it might even be crucial for children from a disadvantaged background or with disabilities—that is a priority in heterogeneous classrooms. Similarly to the "Hocus Focus" program, through the integration of magic tricks into the curriculum, the teachers "level the playing field" (Spencer, 2012, p. 21) for students from disadvantaged circumstances or those with learning differences. These positive experiences of being a worthwhile person might be crucial for children with low self-esteem or feeling isolated.

The whole process is based on social interactions—learning, practicing, and performing the trick—developing social skills during the whole session. The language of magic is universal, so also, children with insufficient language knowledge can impress their peers, which helps to bond. In the catchment area (or school district) of the kindergarten, there are many families with low socio-economic status with poorly educated parents whose children often come to school with poor verbal skills or limited vocabulary. Repeating the sentences and the story created around the trick through their greater engagement can further support their comprehension and extend their vocabulary. Students wish to give their best when presenting, which involves trying to say full, clear, and correct sentences.

The life story of the most famous Hungarian magician, Rodolfo, is in itself a source of inspiration and motivation for children from disadvantaged backgrounds. His life is a real magical tale that enchants the children. Rodolfo was born into a very poor family in the kindergarten neighborhood where the program is manifested. He spent much time at the bank of the river Danube in his teenage years, where he saw a drowning man in the river whom he helped to the bank. It turned out that he saved the life of a Chinese pearl merchant who taught him a magic trick as a sign of his gratitude. Rodolfo performed the trick on his friends on the street and a magician who was passing by discovered his talent. He volunteered to mentor Rodolfo and allowed him opportunities to perform on theater stages. As a result of working very hard and being an honest and fair person, Rodolfo could leave poverty behind and became one of the most famous Hungarian people. His story is also told to the children at the beginning of the program providing a role model since many of them come from very poor families in the same neighborhood.

Conclusion

The unique, innovative magician program launched in the kindergartens of Józsefváros, Budapest, has introduced a new approach to early years education by enriching the everyday life of young children with magic in a setting offering services for a very diverse population. Integrating magic tricks into the kindergarten curriculum is a versatile tool for complex skill and personality development. Even adults love magic and illusion—it is easy to imagine how easily they enchant kids. The skill development happens unnoticed while they are busy admiring and creating magic. The benefits of using magic tricks in schools and therapies listed in the literature (Bagienski & Kuhn, 2019; Bagnoli et al., 2019; Ferreira & Mendes, 2014; Hilas & Politis, 2014; Ikhsanudin, 2017; Spencer, 2012; Subbotsky et al., 2010; Wiseman & Watt, 2020, etc.) would manifest at also a younger age in kindergarten classrooms.

The practitioners' experiences are in harmony with the literature about children's developmental stages resulting in the program being suitable for children ages 5 and older. They need to reach this age to understand the process fully and be able to participate successfully. The presence of a real magician arriving at the classroom makes the program more precious and special for the children, but if that is not possible, the teachers can find tricks especially recommended for children on the Internet and learn them from the demonstration videos and explanations to perform them to the children later. The best way to choose tricks that can be performed by using low-cost tools or tools created by the children; therefore, they can easily show them to their family or friends after school to multiply the beneficial effects.

The developmental benefits in an educational environment can be greatly enhanced by embedding the tricks into storytelling sessions, which enchant the children and make them more involved in the learning process tailored to their needs. In this case, the well-chosen, age-appropriate magic tricks should be simple but challenging at the same time because this will bring a quick but real sense of accomplishment. Through practicing, by trying to follow the exact sequence of moves, children learn about mathematical concepts while they train their movement coordination and fine motor skills. Practicing and performing the tricks enhance the development of their attention, patience, perseverance, and also their social skills, and communication. By experiencing and creating magic, the children become knowers of secrets that support their community building which is a primary educational goal in the heterogenous classrooms of the kindergartens.

A rigorous evaluation of the program would bring exact data about the degree of development initiated by the innovative method. Nevertheless, the unanimous enthusiasm of the teachers, children, and parents toward the magical storytelling sessions and the little magicians' performances reflect the results revealed in the literature and show the success of the project.

Notes

1. The "Magic Kids" educational program was launched in 1984. It was developed for behaviorally and emotionally handicapped children in grades 3 to 6 with the aim of skill development, including building self-esteem, teaching cooperation, and improving organizational skills.
2. The "Inclusive Kindergartens" program was funded by the European Union's Rights, Equality and Citizenship Programme (2014–2020).
3. Botond Kelle, a 5-time Hungarian champion with many Hungarian and international professional awards.
4. Valéria Tóth, a kindergarten teacher with many years of teaching experience and tale-therapy qualification, developed the program in which magic tricks are an integral part of the carefully chosen tales.

Disclosure statement

No potential conflict of interest was reported by the author(s).

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Additional Resources

1. Ogren, K. (1995). *Why magic is an effective teaching strategy*. University of Victoria. http://dspace.library.uvic.ca:8080/bitstream/handle/1828/5280/Kevin_Ogren_MEd_2014.pdf?sequence=1&isAllowed=y

The paper gives a rich presentation of the benefits of using magic as a teaching strategy. Following a literature review, the reader can get deeper into the topic through a very detailed description of a professional development workshop developed for teachers planning to use magic tricks in their teaching practice. The workshop material is based on the author's 20 years of experience in integrating magic tricks into the classroom curriculum.

2. The Hocus Focus Education website. https://hocusfocuseducation.com/

The Hocus Focus creative instructional approach's website provides training programs and workshops for professionals interested in integrating magical content into their teaching practice. The research material on the evaluation of the program can also be read on the page

containing plenty of information about the features and effectiveness of the program. The benefits of the program in teaching special needs children are also highlighted.

3. The Magic Tricks for Kids website. http://magictricksforkids.org/

The website is a great collection of magic tricks for children, with detailed instructions and resources ready to learn and use in the classroom. The tricks are presented by magicians recorded on videos giving exhaustive explanations and many tips for a successful performance. On the homepage, readers can also find a Magicians Dictionary containing words and phrases used by magicians and a massive collection of famous magicians from around the world with short biographies and videos.

4. Wiseman, R. & Kaye, D. (2020). Positive magic for children. ***European Journal of Applied Positive Psychology, 4*****, Article 17, 1-4.** https://www.nationalwellbeingservice.org/volumes/volume-4-2020/volume-4-article-17/

The article highlights the importance and significance of positive psychology in shaping children's thinking, emotional wellbeing, and behavior and the idea of incorporating positive psychology into magic shows developed for kids. The innovative approach is presented with examples, and also results of best practices are included.