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Mediation with a puppet: The effects on teachers' mediated learning strategies with children in special education and regular kindergartens

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A B S T R A C T

The main objectives of this study were to investigate the effects of mediation with a puppet on teachers' mediated learning experience (MLE) strategies. The sample was composed of 18 teachers and 145 kindergarten children, selected from special education (n = 68) and regular (n = 77) kindergartens. About half of each group was assigned to a puppet and half to a no-puppet group. Each teacher was assigned to a small group of 3–5 children and asked to teach them a story for 15 min in a puppet and 15 min in no-puppet conditions in a counterbalanced order. The teaching lessons were videotaped and analyzed by the *Observation of Mediation Interaction* scale. The findings revealed that teachers in the puppet condition used significantly and uniquely higher levels of mediation in all MLE strategies than in the no-puppet condition. A significant Mediation Modality X MLE Strategy interaction indicates that the differences between the two conditions were highest in strategies of Intentionality and Reciprocity and Meaning and lower in strategies of Transcendence, Feelings of Competence and Self-Regulation. Use of a puppet was effective similarly for children in special education as for children in regular group. When mediators accessed the puppet (i.e., in puppet condition) their level of mediation for Meaning was significantly higher than when the puppet was not accessed. When mediators did not access the puppet their level of mediation for Intentionality and Reciprocity, Feelings of Competence, and Self-Regulation was higher than when the puppet was accessed. The findings were discussed in relation to MLE theory and educational implications are provided.

1. Introduction

Puppets are used in different contexts of education, communication, counseling, psychology and therapy (i.e., Bernier, 2005; Butler, Guterman, & Rudes, 2009; Leyser & Wood, 1980; Max Prior, 2009; Remer & Tzuriel, 2015; Simon, Naylor, Keogh, Maloney, & Downing, 2008). Researchers investigating the use of puppets for therapy and communication emphasize their positive effects in helping clinicians to support children to overcome their angers, frustrations and fears (e.g., Aronoff, 2005; Bernier, 2005; Epstein, Stevens, McKeever, Baruchel, & Jones, 2008; Pélicand, Gagnayre, Sandrin-Berthon, & Aujoulat, 2006; Pitre, Stewart, Adams, Bedard, & Landry, 2007). Use of puppets help children to express feelings and thoughts that otherwise would stay hidden. The puppet serves as a mean by which children can express their feelings freely without guilt or fear (e.g., Measelle, Ablow, Cowan, & Cowan, 1998). The therapeutic strength of the puppet with clients derives mainly from its potential of being a powerful projective instrument. Clients may identify themselves in the puppet and at the same time feel that they are not identical. In this situation, deep feelings may rise to the surface with less inhibition and without awareness to the degree of exposure (Aronoff, 2005). Because young children have difficulties coping with direct questions dealing with feelings, use of a puppet enables raising the child's difficulties on the surface, objectify them, create a distance between the difficulties and the child and start a treatment process (Butler et al., 2009).

Several researchers emphasize that playing with dolls enhances young children's social, emotional and cognitive development. Through a doll, a child creates a process of “projection” in which his/her inner world is projected on to the doll. It becomes as if it is “him/herself”. The “projection” mechanism enables the child to express him/herself and give an outlet for inner emotions (Bernier, 2005). It should be emphasized however that puppets differ from dolls in both, their form and function. Dolls are completely sculpted and fixed and their function in game playing is determined by children by imitating the reality they adjust to their needs. In contrast, puppets are only partially shaped and children activate them in play, thereby giving them “a life of their own” while still controlling them (Yoeli, 2008). Several researchers argue that the goals and content for using a puppet in education is governed by the didactic questions of *what*, *how*, *why* and *for whom* (Forsberg Ahlcrona, 2012; Hamre, 2004). Forsberg Ahlcrona (2012) argue that “a puppet's ability to connect the ‘real world’ and imagined worlds, means that what is happening in front of the spectator at the given moment both *is* and *is not*—a puppet is not really alive, but what it does and says at a specific moment, that is real” (p. 172).

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1.1. Use of puppets to mediate in early childhood

The role of a puppet as an educational tool with young children lies in its human characteristics of moving and talking capacities (Fiske, 2000; Linn, 2005). Use of puppets raise in children play connotations and therefore elicits enthusiasm to take part in learning interactions (Leyser & Wood, 1980). Pervious research showed that use of puppets in learning processes was effective in raising educational achievements and motivation (e.g. Bernier & O'Hare, 2005; Brèdikytè, 2000; Epstein et al., 2008; Majaron & Kroflin, 2002; Simon et al., 2008; To, Le, Dao & Magnussen, 2010). There are three modes of using puppets in education; each has different goals: (a) use by teachers during teaching (e.g., Simon, et al., 2008), (b) use by children in learning a subject matter (e.g., Mehrotra, Khunyakari, Natarajan, & Chunawala, 2009; Peck & Virkler, 2006) and (c) observing a puppet theatre (e.g., To, Le, Dao, Magnussen, & Le, 2010). In the current study, we used the first mode where the teacher uses the puppet for teaching.

A clear advantage of working with puppets is the possibility of matching the interaction to developmental features of young children. Piaget (2007) demonstrated that during the first few years of their lives, children's thoughts are characterized by *animism*. They are attracted to dolls, perceive them as living creatures, attribute different roles to them, and recognize them as a legitimate and natural part of their world (Yoeli, 2008). Another advantage of using a puppet as an educational tool lies in its being a three-dimensional symbolic and dynamic art form that can move and speak. These characteristics serve as a vehicle for transmitting knowledge through several senses, thereby providing an opportunity for a wide range for learning abilities. Because puppets convey the connotation of play, and because young children love to pretend (Synovitz, 1999) they raise enthusiasm to participate in the learning interaction (Leyser & Wood, 1980). Learning through play is carried out easily, without fear or obstacles, and the knowledge acquired is assimilated and not forgotten for a long time (Bennett, Wood, & Rogers, 1997).

Findings from several studies show that the knowledge acquired and involvement of children who participated in intervention programs using puppets were higher than those of their counterparts who had participated in no-puppets intervention programs (e.g., Epstein, et al., 2008; Simon et al., 2008). Unfortunately, very few studies are known to explore the impact of scaffolding (Wood, Bruner, & Ross, 1976) or mediating (Feuerstein, Feuerstein, Falik, & Rand, 2002; Vygotsky, 1978) with a puppet, despite its potential to enhance learning processes. An exception is an ethnographic qualitative study of Forsberg Ahlcrona (2012) who explored the role of the puppet as a mediating tool. Her data were collected through written observations, conversations, photographs and the children's drawings. One conclusion of this study was that teachers who use a puppet for teaching in preschool must be trained how to use puppets and utilize them effectively. The findings showed also that puppet's communicative potential as a mediating tool was generated through mediation processes, and a triadic "subjectivity" (Vygotsky, 1978) of mediator-puppet-child.

Use of puppets as a mediation tool in a learning situation can serve as a tool to develop a dialogue, explain abstract ideas, demonstrate processes and concepts, and enhance the learning process (Lowe & Matthew, 2000; Remer & Tzuriel, 2015; Salmon & Sainato, 2005). In the current study, we propose an innovative model of mediation where the dynamics of the triadic interaction (M-P-C) involving a human mediator (M), a puppet (P, i.e., human mediator mediates under a disguise of a puppet) and a child (C). We propose that M-P-C interaction elicits a different unique pattern of mediation than the standard mediator-child (M-C) model. The M-P-C model elicits three interactional patterns that may have a different impact on children's learning than the standard one. In addition to the typical mediator-child (M-C) interaction, the M-P-C condition allows interactions between the child and the puppet (P-C) and between the mediator and the puppet (M-P), each carries a different interpersonal ramification. For example, in P-C interaction the puppet can circumvent resistance of the child to accept mediation from a human being, partly because the child perceives the puppet as an equal partner. In M-P interaction the mediator may convey information to the child, who serves as audience, that otherwise would be ignored or rejected. The mediator and the puppet can talk about the child's behavior or emotions and about difficulties of the puppet that are like the child's difficulties, thus objectifying the learner's difficulty, or about the mediator's difficulties to teach a concept or a strategy. The *objectifying mechanism* (Butler et al., 2009) created by puppet-interaction may convey information that would otherwise be rejected, should the child receive it directly from the mediator. In each case (i.e., M-P, M-C, and P-C) the third party can intervene and comment on some aspects of the dyadic interaction that takes place and thus, enrich the interaction. The use of a puppet by the mediator to enhance the mediation process requires some level of expertise and convenience from the mediator's side. In the current study, we focused on five major strategies exemplified by the *mediated learning experience* (MLE) strategies as formulated by Feuerstein et al. (2002).

1.2. Mediated learning experience (MLE) strategies

Feuerstein et al. (2002) suggested 12 strategies of MLE. However, only the first five strategies have been operationalized in studies of infants and young children (e.g., Tzuriel, 1996, 1999, 2001, 2002, 2013; Klein, 1988; Tzuriel & Eran, 1990; Tzuriel & Ernst, 1990; Tzuriel & Shomron, 2018; Tzuriel & Weiss, 1998) and in studies on peer-mediation (e.g., Tzuriel & Caspi, 2017a, 2017b; Shamir & Tzuriel, 2004; Tzuriel & Shamir, 2007, 2010) and sibling's mediation (e.g., Klein, Zarur, & Feldman, 2003; Tzuriel & Hanuka-Levy, 2014; Tzuriel & Rokach, 2009). The MLE strategies, described below, are the focus in the current study. An adult-child interaction was defined as *mediated interaction* if it contains the first three strategies: Intentionality and reciprocity, meaning, and transcendence (Feuerstein et al., 2002). These strategies are necessary for an interaction to be classified as MLE. Other criteria can contribute to cognitive development but are not regarded as necessary and/or sufficient in a mediated interaction (Feuerstein et al., 2002; Tzuriel, 2013). It should be emphasized that the MLE strategies are general strategies that may be applied with various mediating agents (e.g., parents, teachers, peers) and that examples of previous studies are based mainly on parent-child interactions simply because the bulk of research has been carried out on parent-child and peers' mediation. There is a difference however, between parent-child and teacher-child mediation. The parent-child mediation is usually more spontaneous, unstructured and with a different set of expectations of parents and children than the teacher-child interaction which is structured, goal directed, professional and with participants that are aware of their different roles. The current study is the first known study focusing on teacher-children MLE processes and the first one known for using MLE strategies with a puppet technique. In the following we describe the five major MLE strategies.

(a) *Intentionality and Reciprocity* is an interaction characterized by efforts to create in the child a state of vigilance, and to facilitate an efficient registration of the information (input phase), an adequate processing (elaboration phase), and accurate responding (output phase). The reciprocity component is of crucial importance to the quality and continuation of the mediation process. When children respond to or reciprocate to mediation, it enables mediators to adjust their mediation and continue the process efficiently. Intentionality and reciprocity is observed, for example, when parents intentionally focus the children's attention on an object and the children respond overtly to that behavior. A parent can draw a child's attention to a specific aspect of a drawing, highlighting its specific features, and sensitively waiting and even encouraging the child's response.

(b) *Mediation of Meaning* refers to interactions in which the mediator