

# **Integrating the Arts in Early Childhood Settings: The Role of Materials**

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## **ABSTRACT**

*Children are competent and autonomous learners, with the ability to create meaning and reach an understanding of their surrounding environment through frequent opportunities to work with open ended materials. Exchanging differing perspectives and ideas during group work is a valuable part of children's co-construction of knowledge, the emergence of socio-centric thought, and the development of higher order thinking skills. Children convey thoughts and feelings through visual media before they develop more conventional ways of expressing ideas and emotions in words. Therefore the creative arts serve as a vital means for young children to represent emergent concepts and to communicate about the world in which they live.*

## **INTRODUCTION**

Open ended materials are an essential component in early childhood education. They can be transformed by children to express ideas and create uniquely novel forms, which engage not only the creative and expressive domains but also cognitive capacities. Therefore their potential is invaluable. They enrich the curriculum and extend children's thinking (Danko-McGhee & Slutsky, 2003). However in recent years, the role of materials in learning has been framed more often in terms of content area knowledge and skill development (Drake, 2007). The rationale for this shift is a product of an increasing emphasis on formal academic training as preparation for entrance into the primary grades (Resnick & Zurawsky, 2005). For example, blocks, which were initially valued for their role in social play and child directed problem solving, have been redefined in terms of the mathematical concepts that can be learned from their use. Items, such as unit blocks and parquetry puzzles, previously employed in open-ended ways, now must address specific learning outcomes in order to be included in classrooms (Seplocha & Strasser, 2008). While this might improve the quality of instruction in some ways, it suggests a narrowing of the definition and application of materials (Glidden & Hightower, 2007).

In a similar manner, materials that support the creative

arts have become restricted in many early childhood classrooms. Materials associated with expressive aspects of children's intelligence, imagination and creativity provide a valuable way to support their representations and emergent understandings. However, in many classrooms they have been a part of goal oriented art projects, usually conceived by teachers who justify their inclusion in terms of offering standards-based learning possibilities. In many early childhood settings, step by step directions in an art project are thought to help young children follow instructions, develop fine motor coordination and engage in sequential thinking (Drake, 2007). In these settings, art is viewed more as a product that teaches concepts, rather than a process valued for its own contribution to the intellectual and creative development of the child (Dehouse, 2001).

In this frame of reference, painting at an easel is considered to be an important large motor activity that enables a child to engage various sets of muscles and develop laterality as his strokes enable him to cross the midline of his body. Likewise, clay is regarded as a release material that allows children to pound out anger and frustration. Even in programs where beautiful and aesthetically appealing materials have been valued, such as Montessori and Waldorf classrooms, they are offered for a special purpose. Montessori materials that are finely made of natural elements invite children to handle them with respect (Follari, 2011). However, there is only one way to use many of these materials, and they serve as didactic teaching tools, which tend to limit the capacity for creative thinking (Goffin & Wilson, 2001). Therefore the child is the recipient of a packaged intention, and it is assumed that if he acts on the material in a specific way, there will be an outcome achieved (Samuelson, Sheridan, & Williams, 2006). In the current standards-based climate, it is very difficult for teachers to allow children to use materials without a convergent outcome, and the main art experiences are offered through weekly classes that are separate from the content of the daily life of the classroom. In this context, there is little room for decision making and collaborative inquiry with peers, and when art experiences are not integrated across the curriculum, choices are limited or

nonexistent (Copple & Bredekamp, 2009).

On the other end of the continuum from this standards-based orientation is the idea that children should be offered opportunities to explore expressive materials in an unfettered and uninhibited way, without regard for construction of knowledge or specific outcomes. In this mind set, the teacher follows a hands-off policy regarding children's work with expressive materials, and any type of instruction is seen as inappropriate and possibly inhibiting the child's creativity (Edwards, 1998). In most types of activities, teachers are expected to support children's learning by offering guidance in moving them towards mastery, such as helping them sound out beginning letters in words or suggesting that they should hold a book appropriately. However, according to advocates of minimal intervention, to recommend a way to manipulate clay or hold a paint brush to enable greater control is thought to be an intrusion that does not support the child's need to explore (Edwards, 1998). It is felt that children benefit from being left on their own without any intentional guidance on the part of the adult. However, teachers do not have to sit on the sidelines. An observant adult can identify a teachable moment and enable a child to gain a greater sense of satisfaction from learning a new skill with a material. The increased mastery that results from adult scaffolds enables the child to express his thinking more effectively (Cadwell, 2003).

## **THE SCHOOLS OF REGGIO EMILIA**

According to Howard Gardner (1991), a balance between these two points of view is found in the schools of Reggio Emilia. In keeping with this view, it is the authors' belief that children are competent and autonomous learners with the ability to create meaning and to reach an understanding of the surrounding world through frequent opportunities to work with open ended materials (Gandini, Hill, Cadwell, & Schwall, 2005). As children become absorbed in investigation, they generate and test hypotheses through varied symbolic means or "hundred languages" which include drawing, sculpture, dramatic play, and writing (Malaguzzi, 1998, p. 3). By engaging in group projects that are supported by adults, children are able to dialogue, critique, compare, negotiate, and problem solve with each other (Hong & Trepanier-Street, 2004). Exchanging differing perspectives and ideas during group work is valuable in the children's co-construction of concepts, emergence of socio-centric thought, and development of higher order thinking skills (Fosnot, 1996).

This reciprocal process builds relationships as well as shared knowledge among the protagonists in the classroom and the child feels empowered. As children offer a suggestion which affects the whole group, it

deepens their view of themselves as competent. There is also a relationship with the material that gives rise not only to increased mastery and deeper understanding of its properties, but also lends itself to a connected way of thinking about the world and gives the ability to represent understandings (Katz, 1998).

The principles of Vygotsky's theory of social constructivism and Gardner's theory of the Multiple Intelligences form the foundation of this view of materials (Follari, 2011). It is also consistent with the constructivist philosophy which is advocated by the National Association for the Education of Young Children (Copple & Bredekamp, 2009). Likewise, it is in keeping with the principles and practices of the internationally recognized Reggio Approach, which originated in the schools of Reggio Emilia, Italy. This approach does not treat art as a separate subject. Instead, it is believed that children communicate thoughts and feelings through visual media before they develop more conventional means of expressing ideas and emotions in words (Gandini, et al., 2005). Therefore the creative arts are viewed as a natural developmental process that operates across the curriculum, as young children use varied media to illustrate and explain the world in which they live (Thompson, 1997).

The gift of the schools of Reggio Emilia has been to enable early childhood educators to rediscover the joy of working with materials in open ended ways. Through collaboration, teachers enable children to bring their own capacities to an experience or project (Edwards, 1998). With intentionality in the guidance of children's exploration, the teacher uncovers how much each child knows and gauges the appropriate challenge (Katz, 1998). She discovers as she listens, observes and reflects just how the children think, and how they are able to express emergent concepts with materials, thus enabling them to make sense of their world by using a "hundred languages" (Cadwell, 2003).

Educators in the schools of Reggio Emilia regard materials as a vital and indispensable resource. Materials provide provocations, which serve as opportunities to engage and extend children's thinking, as well as their emotional and aesthetic sensibilities (Topal & Gandini, 1999). All of these are essential human characteristics which are rarely developed when children only have chances to use expressive materials in a way that is prescribed by adults or is too loosely monitored (Thompson, 1997). Rich and varied experiences with open ended materials also have a long range effect on later dispositions for learning and joyful engagement with the world at large (Helm & Katz, 2001).

## **THE TEACHER'S ROLE**

In spite of favorable literature on the value of materials,

for some teachers, there is still the lingering sense that children cannot be trusted to initiate play episodes without adult intervention and direct instruction. Therefore in many settings, play with materials is structured around preset curriculum goals and defined outcomes. This does not give sufficient respect to the child's own competency and capacity to create meaningful experiences with peers or develop new forms with materials. It is from these self initiated play experiences that many opportunities emerge for long term projects and integrated learning experiences, in which children of all levels of development can deepen their understanding of concepts (Kolbe, 2001). In order for these types of experiences to occur, the teacher must be a facilitator and dispenser of possibilities (Edwards, 1998). To do this, there must be faith in the child's intelligence and in the integrity of the teacher to allow herself to be a partner instead of a gatekeeper in the construction of knowledge in the classroom (Gardner, 1991). The teacher's understanding of the potential of the material and her respect for the child's competency and emergent autonomy are the most important elements in framing meaningful creative learning experiences (Gandini, et al., 2005).

As facilitators of play, the first challenge to teachers is to prepare the environment, find and select appropriate materials and create spaces for encounters (Tarr, 2008). Next, they must think about how they wish to engage the children, prepare the questions that they might ask them to consider, and formulate how they would develop a discourse with a group. The teacher has an important role in selecting the materials and arranging the environment, but she must also be ready to be an active observer and listener. By observing closely how the children begin to engage with the materials, she can plan how to proceed with intentionality. She becomes a partner with the child in the journey of discovery (Tarr, 2003). She is prepared for and comfortable with the surprises that come from not having so many prescribed outcomes and expectations. She serves as a mentor and provides scaffolds for children as they move towards greater understanding of the materials, themselves, and the world they live in (Rinaldi, 2006). Well trained teachers with a grasp of how to support creative processes are able to adapt to unexpected occurrences and discoveries that the children make, such as the way sunlight may play on a window shade, the casting shadows of tree limbs, how the puddles form in various ways in the school yard, or why there are holes under the trees (Cadwell, 2003). Since the curriculum is co-constructed among the teachers and the children, materials are vital to the process of investigation and representation, and small groups are the preferred configuration for in-depth exploration.

## THE IMPORTANCE OF SMALL GROUPS

In the words of Loris Malaguzzi, "For children to be in a group is a situation of great privilege, as if inside a great, transformative laboratory"(1998, p. 94). To begin small group work, teachers prepare carefully for interchanges and consider how they will open the dialogue. They reflect on what they will say and perhaps what questions will be asked. They listen carefully and observe what the children do, what they find challenging and what might give them pleasure, and they move forward from there. There is always great intentionality in small group work with materials (Vecchi & Guidici, 2004). There is satisfaction and pleasure in interacting with materials to create a novel form for its own sake, one which may be ephemeral and quickly transformed again and again, because the goal is not to make a product. When children are invited to investigate familiar materials in new ways their capacity for imagination and their ability to investigate scientifically becomes apparent. For example, children, who are given paper without glue or scissors and are encouraged just to explore it with their hands, begin to see details of properties that they had not considered before (Cadwell, 2003).

In the infant and toddler centers of Reggio Emilia, very young children are often invited to explore common materials, such as paper or clay, and their actions and language are written down (Vecchi & Guidici, 2004). This documentation of exploration is used to help the children and teacher reflect and plan, and it is shared with visitors and parents in the form of panels showing a narrative, photographs and the children's quotations (Smith & Goldhaber, 2004). This exploration of materials is valued not for what the children made, but for the process of experimentation, dialogue, and hypothesis formation, which is revealed in the panels and in the children's language (Gandini & Edwards, 2001). Children are not expected to follow preset directions, and are allowed to explore, plan and make discoveries that are supported by their teachers. In other words, the thinking and the joyful sensory exploration that results from engaging with materials in an open ended way is valued, and the learning is made visible and communicated to others (Project Zero & Reggio Children, 2001).

For preschool and kindergarten children, the process is more complex. Several years ago, a group of four-year-old children at A Child's Place School, in Lincroft, New Jersey, visited a field of sunflowers that were glorious in color and form and majestic in height. Back at school, the children revisited their memories of the field, and they were very focused on the size of the flowers that was apparent in the photographs they had taken. Only their very tall teacher seemed to be close in height to these flowers. The teacher offered them many materials from their outdoor garden and the classroom by which

they could compare the sizes and heights of the stalks. They drew and painted, as well as measured and collected a variety of related objects as part of the study.

When they revisited the field a month later, they were saddened to find that their flowers had begun to die. The flower heads were bent over and the stalks were beginning to dry and shrink. They were no longer glorious in color or stature. After returning to the classroom, the teacher and the children talked at length about the changes and why they were sad. The teacher asked if they could find a way to recreate the field as it was when they first saw it, and the children talked about this. Because the teacher knew the children were impressed with size, she guided them towards a mural, and she chose paints as a medium, since color was very important in their memories. The children decided they needed a very tall mural, because the field was so big. They also wanted to make colors for the flowers that were like the ones they first saw. The subsequent project involved research, experimentation and community effort to accomplish the children's goals. Many problems had to be solved in terms of placement of objects, mixing colors, and refining other techniques for representing the details of the sunflower heads. A sky was needed but then the question of could you see the sky between the flowers all the way down to the bottom of the mural was considered and experimented with until a consensus was reached.

As described by Gardner (1991), much theory making followed the initial planning discussions. The group and their teacher worked on perspective and creating appropriate textures and colors, and ultimately the children produced a striking and huge piece that took over a month to finish. All during this time, the group worked on drawing, painting, looking at books to see how famous painters represented sunflowers, and talking with teachers and children in other classrooms. Through this process, the participants developed a sense of their own competency, and they were empowered to express their ideas (Rinaldi, 2006). As their work progressed, the giant sunflowers were under their control. In addition, they accepted the thoughts of the older children in the primary class who felt their painting looked "too flat" and worked on representing texture in response to this feedback. In time the children shared their thoughts with others about their beloved sunflower field, which was an object of emotional response and intellectual engagement and a vehicle for collaborative endeavor.

Here then was an identifiable product, a giant mural, but it was more importantly a summary of the various challenges that were met by the children and of the learning that had taken place. Perhaps the most important aspect of making the mural was the opportunity for surprises, which entailed unexpected outcomes that challenged everyone's ideas of what the work was about and how best to show it. The surprises

were left in, and it was this element, especially the "errors," that provided the canvas for discussion and problem solving that demanded reflection as well as creative thinking from everyone involved (Forman & Fyfe, 1998). That is why a mural or any other in-depth open ended investigation can be a satisfying a process for both children and teachers. It is a living, organic process that keeps changing and presenting new challenges. True to the concept of the "hundred languages" the children became the authors of their experiences and trusted in their own ability to engage in problem solving and meaningful discourse with adults and peers (Malaguzzi, 1998)

The Ray of Light Atelier or studio in Reggio Emilia provides an additional example of complex and deep small group work. The Ray of Light Atelier has grown out of the educational experiences of the preschools and infant toddler centers, but it focuses more fully on primary age children. This space emphasizes light as a material for exploration by children and adults, and it can be used by various school groups and visited by community members (Cagliari & Ghirardi, 2009).

Teachers, who bring their children to the Ray of Light Atelier, propose related studies of light to the children. The concept of angles which are part of geometry, were a major focus of investigation for one group. Although the children were not told that they were using light to study angles, this was the unstated intent. The teachers knew that angles would be part of the study, since they were naturally occurring in this context. The overriding question for the teachers was how to support the ability of the children to explore the phenomena of light in the context of geometry (Ghiardi, 2009). Therefore, the exploration of light as a material was integrated creatively with mathematical subject matter.

What is particularly significant about the investigations in the Ray of Light Atelier is that this aspect of curriculum came from the "bottom up," demonstrating that the pedagogy defined in the preschool practices of Reggio Emilia is moving up into the primary grades in that community as it should. Whereas in the United States and elsewhere, the policies and practices of primary grades "push down" the curriculum from upper levels into the kindergarten and preschool, which leads to inappropriate practices and unrealistic expectations for children (Drake, 2007).

## **PROFESSIONAL DEVELOPMENT OPPORTUNITIES WITH MATERIALS**

The importance of adults forging a relationship with materials, as illustrated in the mural project and the Ray of Light Atelier, cannot be overstated. The adults who guide children must understand the properties and intrinsic nature of materials, the possibilities for transformation and expression, and the satisfaction from

being deeply engaged. It is also paramount for them to approach this type of learning with playfulness and joy and to remember that “emotions are essential elements of any authentic cognitive and educational process” (Rinaldi 2006, p. 141). Developing an appreciation of the potential in a varied assortment of open ended and found materials is a significant factor in planning meaningful experiences, and it needs to be included in professional development opportunities offered to pre- and in-service teachers (Danko-McGhee & Slutsky, 2003). With this type of support, teachers can plan and advocate for the importance of materials in early childhood classrooms (Ashelman, 2009).

Additional professional development opportunities should include teachers observing, reflecting and commenting on children using materials and reviewing transcripts of their conversations (Freidus, 2007). Experiences in their own classrooms need to be shared and opportunities for an ongoing dialogue with other teachers and workshop leaders conversant with the practices of Reggio Emilia are most helpful in building knowledge. This type of professional development took place at A Child’s Place School in Lincroft, New Jersey, and it was very effective in bringing various levels of staff into the circle of inquiry during one school year. In addition to weekly seminars on site, staff members were given the opportunity to meet with teachers from two other schools. A discussion leader who was knowledgeable in these practices facilitated the experience. At the conclusion of the study, the participants provided feedback that confirmed the validity of the process.

Shared reading and discussion of selected resources have also been effective with small groups of staff for helping generate ideas related to classroom application. Two excellent sources for professional development are Louise Cadwell’s Book, *Bringing Learning to Life* (2003) and *In Dialogue with Reggio Emilia* by Carlina Rinaldi (2006). Tapping the true value of materials as opportunities to reveal the intelligence of the child can be found in *Children, Art, Artists* edited by Vecchi and Guidici (2006) and *The Hundred Languages of Children* edited by Edwards, Gandini and Forman (1998). *In the Spirit of the Studio* by Gandini, Hill, Cadwell, and Schwall (2005), and *Rapunzel’s Supermarket* by Kolbe (2001) are valuable sources related to the development and function of an atelier or studio.

## **THE ATELIER AND THE ATELIERISTA**

Intense and sustained work with materials is supported by an atelier or studio space. The atelier was first envisioned by Malaguzzi (1998) as a place which would be open to all classes and teachers (Gandini, et al., 2005). It was to be a site of investigation that housed a wide array of materials and a laboratory that afforded varied opportunities to work with them. Vea Vecchi was

the first studio teacher or atelierista in Reggio Emilia, and she was very instrumental in helping to shape the concept of having a studio space in each school, with a trained studio teacher as a staff member (Ceppi & Zini, 2003). The studio teacher serves to support both teachers and children as they engage in in-depth investigations.

A studio teacher and the presence of a studio space in a school offers the ideal arrangement for supporting work with materials. However, many adaptations that foster the expression of a “hundred languages” though a variety of materials can be carried out, without a studio or studio teacher. These principles can be included in any classroom space if there is a willingness to try (Kolbe, 2001). With support, teachers can become conversant with the potential of low cost or free recycled materials and can help children use these materials to engage in research, represent thinking and solve problems, working collaboratively or individually, which is the essence of the studio. To be successful, it is essential for teachers to be comfortable with materials and not feel that only a specialist can work with them. The view the teacher has of the value of the materials will determine the quality of their use in the classroom and the choices children are given (Vecchi, 1998).

## **THE CHILD AS CHOICE MAKER**

The amount of choice children are allowed during the course of the day and the opportunities they have to help make decisions that affect the group have both been identified as indicators of quality in kindergarten classrooms (Seplocha & Strasser, 2008). Offering children choices often means that the teacher must relinquish some control. However allowing children the freedom to pursue their goals is both freeing and revitalizing (Malaguzzi, 1998). Using open ended unstructured materials and developing a model of collaborative inquiry and investigative project work, not only affords opportunity for much thoughtful choice making, it also engages the whole child and develops a sense of responsibility to community. In addition to choice, time is not set by the clock in the schools of Reggio Emilia (Gandini, 2008). There must be adequate time given for exploration and experimentation with materials, so that hypotheses can be formed, theory making developed and thoughtful and reflective discourse can emerge. This is a necessary factor in developing a negotiated curriculum that includes work with materials (Bisgaier, Samaras, & Russo, 2004).

## **THE ROLE OF THE ENVIRONMENT**

Jerome Bruner (2003) described an appropriate environment for young children as,

a place to learn together about the real

world, and about possible worlds of the imagination. It must be a place where the young discover the uses of mind, of imagination, of materials, and learn the power of doing things together. It is as much like a stage, a self made museum, or a forum as it is like a classroom. And it should be easily transformable from one to the other (p. 137).

The storage, accessibility and display of materials are very important to their use in meaningful endeavors. These factors support child initiated planning and implementation that are crucial components of emergent autonomy (Wexler, 2004). As they prepare the environment, teachers must ask key questions, such as “Can the children get what they think they need on their own to support their work, i.e. a blue piece of cellophane to make a river in the block corner or enough paper to draw a long road?” “Can they touch and feel and rearrange collections of objects without asking permission?” Many questions arise when teachers begin to offer children possibilities and see them as partners. What are their rights? What are the teachers’ rights? How does the classroom space support those rights? How do the classroom and the school support the rights of parents to know and understand the work of the schools?

Although many materials may be stored in different areas of the classroom out of a need for order, the importance of fluidity needs to be recognized. Spaces should be easily transformable, and materials should be made available in novel ways. At the very least, pencils, crayons and papers should not only be in a writing center or studio space, but also in the block area and the dramatic play corner (Chudacoff, 2007). These are tools that children should be allowed to employ as they feel a need to do so, and not only when the teacher allows their use in a specific area in a limited way. As children discover new means to represent their world and learn new skills, they need opportunities to apply them in contexts that are meaningful and relevant to their own actions (Tarr, 2008).

In short, learning experiences need to allow for the child to be a principal player and a partner in the learning, and should be varied, to accommodate the complexities of children’s thinking and the different perspectives they will bring. Therefore, the strategies employed by teachers to engage children need to be adapted to them (Helm & Beneke, 2003). When children see themselves as learners, the disposition to seek out new knowledge is formed and life-long learning begins (Helm & Katz, 2001). When children are imposed upon at a young age to follow the adult’s direction, they often lose the sense of self as learner and become dependent on the teacher’s thinking. The experiences offered to children in early childhood settings and the relationships they form is the

key to future success, much more so than a set of discrete skills that can be quantifiably evaluated through testing (Gardner, 1991).

Classroom displays of materials offer invitations for children to explore and create in as many ways as possible (Curtis & Carter, 2005). Open-ended materials are most appropriately part of the collections available to children in the classroom, and are not simply random items that are put out for a collage or to make a project. Sometimes collections are changed and new items are added for a different dimension. What is important is that children can freely handle and benefit from collections and contribute to them. They can touch them, arrange them in various ways and play with them.

Collections of objects, that can be arranged and changed in some form or organized in various ways to form patterns, and beautiful designs appeal to children. Collections of natural objects invite one form of wonder, whereas a collection of all metal objects may stimulate another line of questioning and exploration. Children become fully engaged when they are manipulating interesting objects of various sensory properties in open ended ways, and they do not always have to be given glue or other means for making their arrangements permanent. Including small figures in the collections may encourage using the materials to create narratives which can be shared with peers (Topal & Gandini, 1999).

In contrast to organized collections, children spontaneously see patterns and make connections when they are allowed to experience the variety of properties found in a diverse array of materials. They are natural sorters and organizers, and when allowed to bring their own intelligence to the experience often surprise adults by the unique combinations they perceive and the logic they can also articulate (Topal & Gandini, 1999). Furthermore, engagement with open ended materials in small groups allows for collaborative inquiry and a shared sense of satisfaction in successfully transforming materials into unique and novel forms (Swann, 2005).

## **BUILDING COMMUNITY THROUGH MATERIALS**

To more fully support access to and full use of a wide range of materials the Remida Center in Reggio Emilia and others like it throughout the world provide an example of community building and resourcefulness that are inspired by materials (AGAC, 2005). In its beautiful presentation of donated materials, the Remida center also respects children’s curiosity and views them as sharing in the aesthetic sensibilities of the artistic community of Reggio Emilia, which also uses it as a resource. Remida is a word derived from the two words Re Mida which in Italian refers to King Midas, but this story has a happy ending (AGAC, 2005). Events are

planned for families and community members to come together to celebrate the life of discarded materials through the golden touch of creative imagination.

The idea of a Remida Center for creative recycling can provide a valuable community building process, as well as offering a wider range of materials to children. Many communities within Italy and throughout the world, such as Belfast, Ireland, have created resource centers for teachers and artists and many are joining the international network of Remida (AGAC, 2005). Likewise, there are communities across the United States where centers for creative uses of recycled materials have been established and are working well (Curtis & Carter, 2003). Such a center in any community could have far reaching effects, both in a new appreciation of the role of open ended materials and in increased understanding of the importance of their use for young learners.

## CONCLUSION

In the words of Via Vecchi (2003), who wrote about the importance of materials in early childhood,

Children are nomads of the imagination and great manipulators of space: they love to construct, move and invent situations. Materials and furnishings too are recreated by the children, with their enormous capacity for imaginative projection in play. The children create a variety of relationships with these materials, sometimes using them for the purpose for which they were designed, but other times in ways that are entirely different from the original idea (p. 131).

Unstructured, open-ended found materials have always been tools for learning throughout humankind's evolution, and they have formed the basis of the development of thought and learning. There would be a great benefit in exploring the deeper potential of materials as expressions of thought, creativity, and metaphor. In addition, their relationship to the oral and graphic languages and their potential for building community should be considered. If teachers can go beyond seeing materials only as a way to make things and appreciate their potential as vehicle for expressing ideas, feelings and aesthetic sensibilities, it could have a major impact on the education of young children by increasing their opportunities for meaningful learning. Therefore, the goal is always of deepening the awareness and knowledge of teachers, so that they can in turn enable and empower children, and promote an understanding of what is gained from working with materials.

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