

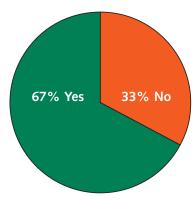
By Angela Murray

The American public generally recognizes the name "Montessori" because so many schools across the country and around the world use the Montessori name. However, the Montessori community has long believed that misunderstandings abound. In The Montessori Controversy, John Chattin-McNichols (1998) highlights conflicting criticisms that Montessori education is either too rigid and robs children of creativity or that it is completely unstructured and without any academic standards. A recent dissertation study quantified Montessori awareness and identified misconceptions in particular for those aspects of Montessori education that are unique, relative to other educational settings.

In order to gauge public understanding of Montessori education, an online survey was conducted with members of an Internet panel administered by a national research firm. The study included a demographically representative sample of 1,520 U.S. adult panel members, who answered questions regarding their understanding of Montessori education. Two members of the American Montessori Society's Research Commit-

tee and six Montessori teachers, including a combination of early childhood and elementary teachers with AMS and AMI credentials, reviewed the survey to identify any disagreements on correct answers for the Montessori knowledge questions. The survey was field-tested with six individuals, including parents and nonparents, both with and without Montessori experience, to identify any potential points of confusion.

Fig. 1
Ever Heard of Montessori Education?



Awareness of Montessori Education

Two-thirds of survey participants said that they had "heard the term Montessori education." Significant demographic differences were evident in age, income, and education level between those who were and were not aware of Montessori education. Those

who had heard of Montessori education were significantly older, with higher levels of education and income than those who had never heard of it.

Knowledge of Montessori Education

For those who had heard the term "Montessori," their average score on a series of Montessori knowledge questions was only 64% correct. Participants recognized their limited understanding because they tended to rate their own knowledge of Montessori education as fairly low. Of those who had heard of Montessori education, only about 5% believed themselves to be *very knowledgeable*, while five times as many, 25%, reported themselves to be *not at all knowledgeable*.

The table on the next page outlines the individual item results for all the Montessori knowledge items as well as the correct responses. Correct responses ranged from a low of 6.1% to a high of 96.5%. The mean score on the 45 items was 28.9 (SD = 4.34, N = 1,025) or 64.2%.

Most respondents recognized aspects of Montessori education that are consistent with mainstream educational practice. In particular, the vast majority of respondents correctly indicated that Montessori environments have handson materials for learning (Lillard, A. S., 2005; Rambusch & Stoops, 1992) and that goals of Montessori education include

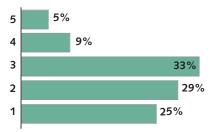
Fig. 2

Never Heard of Montessori Education	Have Heard of Montessori Education	
 Younger on average (36.6 years of age) Lower average income (\$51,540) Lower education level (45% college or graduate degree) 	 Older on average (44.4 years of age) Higher average income (\$65,827) Higher education level (68% college graduate degree) N=1,520 	



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Fig. 3
Self-reported Knowledge of Montessori Education
(1=not at all knowledgeable, 5=very knowledgeable)



helping children reach their individual potential (Lillard, P. P., 1972; Rambusch & Stoops, 1992) and motivating them to want to learn (Lillard, A. S., 2005; Seldin, 1999). These results were not surprising because motivating children and helping them to reach their individual potential would be laudable goals for any educational environment, and manipulatives are commonplace in many classrooms today (Chattin-McNichols, 1998).

Fewer survey participants understood less intuitive aspects of Montessori education. For example, less than 10% understood Montessori educators' avoidance of extrinsic rewards in order to develop children's internal motivation. Nine in ten participants mistakenly believed that Montessori teachers primarily motivate children by praising good work, and only one in four respondents correctly answered that Montessori children do not typically receive small tokens of recognition as encouragement (Lillard, A. S., 2005; Rambusch & Stoops, 1992). This misunderstanding is important because Montessori philosophy is based on the idea that students develop intrinsic motivation only when the learning activity itself, not an external incentive, is its own reward (Rambusch & Stoops, 1992).

Also misunderstood was the fact that Montessori classrooms do not typically have areas for pretend play for preschoolers (Chattin-McNichols, 1998) or multiple sets of each activity so that children do not have to wait for a turn (Hainstock, 1997; Lillard, P. P., 1972).

Table 1

Montessori Knowledge Individual Item Correct Responses and Results (N = 1,025)

	Correct	%
Montessori education is	response	Correct
-always affiliated with a particular religion.	FALSE	86
-only for preschoolers.	FALSE	81
-available in public schools.	TRUE	21
Montessori teachers most often		
-evaluate children's learning by observing children's work.	TRUE	93
-view learning as developing from within the child	TRUE	90
based on his/her experience.		
-motivate children through following the children's interests.	TRUE	89
-are more concerned with children's understanding concepts	TRUE	87
than correct answers.		
-keep detailed records on individual student's progress in	TRUE	81
the curriculum.		
-teach lessons for the entire class so everyone gets the	FALSE	61
information at the same time.		
-evaluate children's learning by giving students tests based	FALSE	53
on the curriculum.		
-see their role as making learning seem like play.	FALSE	29
-schedule breaks for the class during work time to rest.	FALSE	22
-see their role as transferring knowledge to children.	FALSE	21
-change activities frequently during the day to keep	FALSE	13
children interested.		
-motivate children by praising good work.	FALSE	6
Children in Montessori classes most often		
-are allowed to work together in small groups.	TRUE	93
-work at their own pace.	TRUE	91
-have a large block of time to work without interruptions.	TRUE	76
-are expected to do their own work without help	FALSE	71
from classmates.		
-are expected to sit quietly while doing their work.	FALSE	63
-decide what they want to work on each day.	TRUE	60
-get small prizes or rewards for good behavior.	FALSE	37
-receive certificates, stickers, or other forms of recognition	FALSE	22
for encouragement.		
Montessori classrooms most often		
-have hands-on materials for learning.	TRUE	97
-have activities for preschoolers for educating the senses.	TRUE	94
-include children of mixed ages.	TRUE	79
-display papers with the highest grades on the bulletin board	FALSE	75
in elementary classes to showcase the best work.	171232	, 3
-have incentive charts on the wall recognizing children	FALSE	39
for good work.		
-have specialized workbooks.	FALSE	27
-have multiple sets for each activity so that children do	FALSE	16
not have to wait for a turn.		
-have areas for pretend play for preschoolers.	FALSE	16
(Continued on page 20)		





Table 1 (Continued)

Montessori Knowledge Individual Item Correct Responses and Results (N = 1,025)

	Correct	%
Primary goals of Montessori education include	response	Correct
-helping children to reach their individual potential.	TRUE	96
-motivating children to want to learn.	TRUE	96
-teaching children to be respectful of others.	TRUE	94
-helping children become independent people.	TRUE	93
-teaching children to cooperate with one another.	TRUE	93
-helping children become responsible people.	TRUE	92
-helping children develop the ability to concentrate.	TRUE	90
-developing children's self-discipline.	TRUE	90
-developing children's sense of community at school.	TRUE	90
-providing an orderly learning environment.	TRUE	73
-teaching children to value high grades.	FALSE	61
-teaching children to rely on the teacher's feedback to know	FALSE	51
how they are doing on their work.		
-keeping children on track with classmates at their grade level.	FALSE	49
-helping children gain a competitive edge in life.	FALSE	33
		N=1,025

These characteristics of Montessori classrooms are very different from typical school settings and are grounded in Montessori philosophy. First, housekeeping or dress-up areas are not available in typical Montessori classrooms because Maria Montessori believed young children have a strong desire to understand the real world and engage in meaningful work, not artificial imitations of adult activities (Lillard, A. S., 2005). Second, the presence of only a single specimen of each of the Montessori materials in the classroom is purposeful, reinforcing in children the habit of respecting the work of others and waiting one's turn (Hainstock, 1997).

The importance of the classroom community was a better understood aspect of the Montessori environment. In fact, nine in ten survey participants recognized that Montessori children are allowed to work together in small groups and that primary goals of Montessori education include teaching children to cooperate with one another and developing children's sense of community at school (Lillard, P. P., 1972).

Understanding of the role of the Montessori teacher as an indirect guide and preparer of the environment was mixed (Lillard, P. P., 1972). Even though nine in ten respondents recognized that development of children's concentration abilities is one of the primary goals of Montessori education, almost 90% of participants incorrectly believed that Montessori teachers change activities frequently during the day to keep children interested (Chattin-McNichols, 1998; Lillard, P. P., 1972). Furthermore, Montessori teachers' belief in the importance and energizing nature of meaningful work was clearly misunderstood, with three in four respondents mistakenly believing that Montessori teachers schedule breaks for the class during work time to rest or that Montessori teachers see their role as making learning seem like play (Lillard, P. P., 1972). These findings suggest that people do not understand that Montessori teachers allow children to dictate their own schedules during long stretches of uninterrupted time so that they can engage in meaningful, self-chosen work until their interest is satisfied (Lillard, P. P., 1972).

Understanding of the philosophy upon which Montessori teachers base their classroom practices was limited. While over 90% of respondents recognized that Montessori teachers view learning as developing from within the child based on his/her experience (Lillard, P., 1996), eight in ten also erroneously believed that Montessori teachers see their role as transferring knowledge to children (Lillard, P. P., 1972; Lillard, A. S., 2005; Rambusch & Stoops, 1992). These conflicting views highlight the misunderstanding of the importance that Montessorians place on development unfolding from within the child with a teacher's subtle guidance rather than his/her direct instruction (Lillard, P. P., 1972, p. 51).

Some aspects of the Montessori emphasis on individualized learning were fairly well understood. The majority of respondents recognized that Montessori children decide what they want to work on each day and work at their own pace (Lillard, P. P., 1972; Lillard, A. S., 2005; Rambusch & Stoops, 1992). More than 80% of respondents realized that Montessori teachers keep detailed records on individual student's progress through the curriculum (Lillard, P. P., 1996), evaluate children's learning by observing their work (Lillard, A. S., 2005), and are more concerned with children's understanding of concepts than correct answers (Lillard, P. P., 1972). Fully 93% of respondents recognized that helping children learn to become independent people was one of the primary goals of Montessori education (Lillard, P. P., 1972; Lillard, A. S., 2005; Rambusch & Stoops, 1992). Even so,



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respondents did not understand the degree to which individualized learning made Montessori teachers' practices so different from other teachers. About half of participants erroneously believed that Montessori teachers most often evaluate children's learning by giving tests based on the curriculum, and four in ten mistakenly indicated that Montessori teachers present lessons for the entire class so everyone gets the information at the same time (Lillard, A. S., 2005; Lillard, A. & Else-Quest, 2006; Rambusch & Stoops 1992)

While roughly nine in ten respondents correctly identified most of the primary goals of Montessori education listed, the group was split in their ability to identify goals not associated with Montessori education. Half of participants were able to recognize that Montessori goals do not include keeping children on track with classmates at their grade level or teaching children to rely on the teacher's feedback to know how they are doing on their work. These participants seemed to grasp Montessori education's emphasis on individualized pacing and self-assessment. While twothirds of respondents erroneously believed that Montessori goals include helping children gain a competitive edge in life, the same number recognized that teaching children to value high grades is not a Montessori goal. These results suggest that people may understand the lack of emphasis on traditional grading in Montessori education, but confusion exists regarding the degree to which Montessori education downplays competition.

Limitations

The key limitation of this study was the online panel source for the sample. While this medium provided an efficient way to obtain a large sample size, questions can be raised about the sample's accurate representation of the general public. Efforts to balance the sample to reflect the 2000 Census mitigated these concerns as much as possible, but variation was evident in education more than other demographic characteristics. Specifically, the sample contained a larger proportion of college graduates than the Census showed. More highly educated individuals may be more likely to participate in an online panel of this sort. In terms of these research questions, one would expect this more highly educated respondent base to be at least as knowledgeable, if not more so, as the general public about Montessori education.

Implications for Practitioners

Despite its limitations, this study provides practitioners with the first large-scale study examining the general public's knowledge of Montessori education. These results suggest that the

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Montessori community can build on the high level of awareness of the Montessori name in the general public. Montessorians have long believed that people outside the Montessori community lack an understanding of their approach to education (Chattin-McNichols, 1998). This study supports this contention and provides strong evidence for the need to educate the public regarding several aspects of Montessori education. This is particularly true for those aspects of Montessori education that are unique relative to other educational approaches.

The public clearly lacks understanding of the Montessori perspective on extrinsic rewards, including such things as stickers, certificates, and even teacher praise. Since extrinsic rewards are common in other school settings, their absence in Montessori environments may seem peculiar unless people understand that Montessori philosophy is based on

the idea that students develop intrinsic motivation when the learning activity itself, not an external incentive, is its own reward (Rambusch & Stoops, 1992).

Finally, the public recognizes that developing children's concentration abilities is a goal of Montessori education, but opportunities exist for helping people understand specific practices employed to achieve this goal (i.e., providing opportunities for long stretches of uninterrupted work time, allowing the child to determine the timing of changing activities). Better understanding of the reasons behind the unique structure of the schedule in a Montessori classroom will help people see that the differences from other educational environments are based on a comprehensive philosophy of child development.

References

Chattin-McNichols, J. (1998). *The Montessori* controversy. Albany, NY: Delmar Publishers.

Hainstock, E. G. (1997). The essential Montessori: An introduction to the woman, the writings, the method, and the movement. New York: Penguin Books.

Lillard, A. S. (2005). Montessori: The science behind the genius. New York: Oxford University Press.

Lillard, A. & Else-Quest, N. (2006). Evaluating Montessori education. *Science*, (313) 1893–1894.

Lillard, P. P. (1972). *Montessori: A modern approach*. New York: Schocken Books.

Lillard, P. P. (1996). Montessori today: A comprehensive approach to education from birth to adulthood. New York: Schocken Books.

Rambusch, N. M. & Stoops, J. A. (1992). The authentic American Montessori school: A guide to the self-study, evaluation, and accreditation of American schools committed to Montessori education. New York: AMS and the Commission on Elementary Schools of The Middle States Association.

Seldin, T. (1999). Montessori for the elementary years. *Tomorrow's Child*, (7)2, 5–9.

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