



Montessori Elementary Philosophy

By Angela Murray

Student motivation, or lack thereof, is a popular topic in discussions about the challenges of modern education. Teachers wonder how best to motivate students; parents wonder why their children are not motivated to do well in school; and the popular media laments a general trend toward student disengagement. Motivation is a crucial concept in education because it has been shown to influence interest, excitement, and confidence, which in turn enhance performance, persistence, creativity, and general well-being (Ryan & Deci, 2000).

Because of the crucial role that motivation can play in educational success, research on motivation is prolific. Pintrich contends that “motivational research can appear to be fragmented and diffuse” (2003, p. 667). In fact, several authors have constructed theoretical frameworks by examining empirical results across diverse studies of motivation. Although studies specific to Montessori environments have not investigated motivation directly, much research has addressed the concept of student motivation in other settings.

The conceptual frameworks of authors Ryan and Deci (2000), Seifert (2004), and Pintrich (2003) share similar elements and can be used as a basis for linking Montessori elementary practice and motivation theory. These authors highlight the types of educational experiences that enhance student motivation, many of which are core elements of the Montessori approach to elementary education.

While Maria Montessori may not have addressed motivation directly, she focused on fostering children’s enthusiasm for learning (1989). She said, “Our aim therefore

is not merely to make the child understand . . . but to so touch his imagination as to enthuse him to his inmost core. We do not want complacent pupils, but eager ones.” (Montessori, 1989, p. 11). She believed that “the child should love everything he learns, for his mental and emotional growths are linked” (Montessori, 1989, p. 17). Surely, a discussion of motivation as it relates to Montessori education is due.

Contemporary Views of Motivation

A review of authors providing a unifying structure across studies of motivation yields consistent characteristics that tend to enhance motivation: interest, competence, autonomy, and relatedness (Pintrich, 2003; Ryan & Deci, 2000, Deci & Ryan, 2008; Seifert, 2004). As a means of laying

the groundwork for a subsequent discussion integrating Montessori elementary practice with motivation theory, the paragraphs that follow briefly summarize these authors’ perspectives and demonstrate their common threads. Figure 1 (see next page) provides an outline of key elements across the three organizing structures.

Ryan and Deci

A lively debate raged in the psychological literature of the 1990s regarding the potential negative impact of external reinforcers like rewards and punishments on intrinsic motivation (Cameron & Pierce, 1996; Ryan & Deci, 1996). The debate was based on the assumption that internal and external motivation were antithetical to one another. Recent articles, however, outline an integrated view (Lepper et al, 2005). Ryan and Deci’s (2000) Self-Determination Theory proposes a continuum of motivation orientation. In this model, intrinsic moti-



Working with triangles Amelia Island Montessori School



Reflects Current Motivation Theories

Figure 1.
Summary of key themes across structures organizing motivation theories

Theories of Motivation				
	Ryan & Deci (2000)	Seifert (2004)	Pintrich (2003)	Montessori Practice
Autonomy	Included	Included	Control beliefs included	Student control of work time Teacher as guide Individualized goal setting and conferences "Going out"
Interest	Meaning related to intrinsic motivation	Perceived meaning/relevance included	Impact of interest and perceived meaning addressed separately	Linking new knowledge to larger universe Following the child Uninterrupted work cycle
Competence	Included	Included	Included	Sequential and individualized nature of the curriculum Three-year age span Evaluation process
Relatedness	Included	Not considered	Subsumed under control beliefs: "build supportive and caring personal relationships in the community of learners in the classroom" (p. 672)	Three-year age cycle Frequent small group work Class meetings

vation remains a completely internalized function, while extrinsic motivation can range from being fully internalized to completely external (Ryan & Deci, 2000). Deci and Ryan say that when people are intrinsically motivated they "perform activities because of the positive feelings resulting from the activities themselves" (Deci & Ryan, 2008, p. 15).

The key distinguishing feature of intrinsic motivation is interest (Deci & Ryan, 2008). Deci and Ryan (2008) acknowl-

edge the critical role of interest in intrinsic motivation by pointing out that "people will be intrinsically motivated by activities that hold interest for them, activities that have the appeal of novelty, challenge, or aesthetic value" (Ryan & Deci, 2000, p. 71). The authors contrast intrinsic motivation with extrinsic motivation, which "involves engaging in an activity because it leads to some separate consequence" (Deci & Ryan, 2008, p. 15). Beyond distinguishing between



intrinsic and extrinsic motivation, Ryan and Deci (2000, Deci & Ryan, 2008) postulate that competence, autonomy, and relatedness provide a valuable framework for understanding what influences the degree of internalization of extrinsic motivation (Ryan & Deci, 2000). When these three needs are satisfied, they say, the result is “enhanced self-motivation and mental health” (Ryan & Deci, 2000, p. 68).

Timothy L. Seifert

Seifert (2004) also proposes a framework for organizing the body of research on student motivation in school settings. He suggests that perceptions of competence, autonomy, and perceived meaning are critical in understanding motivation and the resulting behavior patterns (Seifert, 2004). He characterizes an effective learning orientation as a “mastery pattern,” which is synonymous with intrinsic motivation. In a mastery pattern, learners pursue mastery goals over performance goals and find meaning in their work. Seifert (2004, p. 146) describes students characterizing this pattern as tending to “display positive affect, flexible and adaptive strategy use, and deep cognitive engagement in the task. They will tend to persist at difficult problems and learn from their mistakes.” He contrasts this effective behavior pattern with others that are less effective, including “failure avoidance,” “learned helplessness,” “work avoidance,” and “hostile work avoidance” (Seifert, 2004).

Paul R. Pintrich

Pintrich (2003) outlines five basic families of social-cognitive constructs in summarizing what motivates students in classrooms. These align nicely with the two overarching motivational theories discussed previously. He postulates that competence beliefs, control beliefs, higher levels of interest, stronger perceptions of value, and appropriate goals motivate students (Pintrich, 2003). Thus, competence and control are central concepts shared by all three theories for organizing research on motivation.

Pintrich (2003) adds the notion of mastery versus performance goal orientation to interest and perceived meaning as motivation influences. The other authors also address the notion of goal setting as affecting motivation. Thus, goal setting in Montessori elementary education will be viewed as playing a key role in enhancing motivation through supporting student autonomy.

Linking Motivation Theory and Montessori Elementary Educational Practice

As a means of demonstrating aspects of the Montessori elementary approach that are consistent with theories of student motivation, the three conceptual frameworks for enhancing motivation discussed previously will be used to

organize a discussion of Montessori elementary practices that foster student motivation. For each of four psychological needs (autonomy, interest, competence, and relatedness) this article first expands on the literature related to student motivation. Subsequently, each section provides specific examples of the Montessori elementary approach that reflect each of these themes.

Autonomy

Ryan and Deci (2000), Seifert (2004), and Pintrich (2003) all believe that autonomy is crucial for enhancing internalized student motivation. Ryan and Deci (2000, p. 74) characterize autonomy as a “sense of choice, volition, and freedom from external pressure toward behaving or thinking a certain way.” They cite research which finds that “choice, acknowledgement of feelings, and opportunities for self-direction enhance intrinsic motivation by increasing feelings of autonomy” (Ryan & Deci, 2000, p. 70). They believe that control is crucial for truly intrinsic motivation but also contributes to external motivation becoming internalized. Seifert (2004, p. 146) argues for the importance of self-determination by highlighting its requirement for mastery goal pursuit. He posits that mastery goal pursuit stems from students’ “strong sense of control” and tendency to “make internal, controllable attributions for success and failure.” Similarly, Pintrich (2003, p. 673) emphasizes self-determination in terms of students’ attributions for the causes of success and failure and the “perceived control one has to bring about outcomes or to control ones’ behavior.”

Autonomy is a cornerstone of Montessori education at all levels because the philosophy is based on a fundamental belief in providing children freedom within limits (Montessori, 1966). Montessori students have opportunities to exercise control over many aspects of their daily lives and learn to attribute success and failure to their own actions based on direct experience with the consequences of their decisions. Maria Montessori (1989, p. 1) said, “Our pupils [are] equipped in their whole being for the adventure of life, accustomed to the free exercise of will and judgment, illuminated by imagination and enthusiasm.” Student control of their educational process and appropriate goal-setting are key elements of Montessori education and are crucial to creating an atmosphere of student autonomy (Lillard, 1996, pp. 100, 130, 138).

Paula Polk Lillard (1996, p. 98), author of several books on Montessori education, demonstrates the emphasis Montessori educators place on students’ inherent capacity to bear responsibility for their own education in the following Montessori elementary student’s Bill of Rights:

Bill of Rights for the Montessori Elementary Classroom from Lillard’s (1996) *Montessori Today: A Comprehensive*



Approach to Education from Birth to Adulthood:

- To act by oneself and for oneself
- To act without unnecessary help or interruption
- To work and to concentrate
- To act within limits that are determined by the environment and the group
- To construct one's own potential by one's own efforts

Montessorians believe the most conducive environment for self-formation is one in which students are themselves responsible for constructing their own knowledge (Montessori, 1965). Autonomy in a Montessori classroom is most apparent in the degree of control students have over how they use their academic work time. Montessori elementary education is based on a schedule with at least one uninterrupted 3-hour block of work time each day (Montessori, 1965). Students are free during this time to select from among all subject areas. Each student works individually or in a small group at his own pace and at his own level. Students may decide if they will start the day with less demanding tasks and gradually build up to their big work of the day. Or, they can decide to immediately dive into a long-term project they have been working on for days or weeks (Montessori, 1965).

One of the reasons this degree of freedom is possible is due to the construction of the Montessori curriculum. The materials on the shelves facilitate independent work because "the whole of [the] child's path to independent discovery" is available on the shelves (Lillard, P., 1996, p. 57). Montessori children move through the materials and curriculum at their own pace rather than on a timeline established by the teacher or administration (Montessori, 1965). Paula Polk Lillard (1996, pp. 57–58) characterizes the materials as "the means to personal formation for each child." She says, "Not every child will work with every

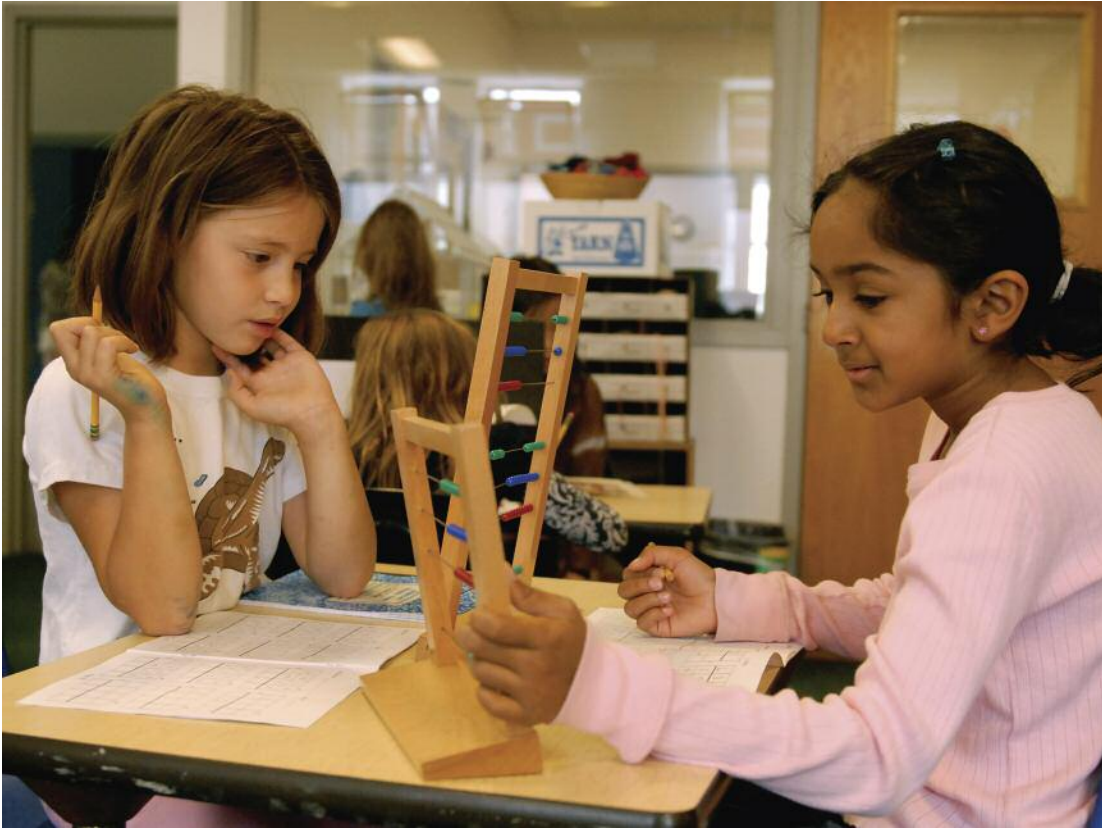
material to the same extent, and some children will go much deeper in their search for knowledge in specific areas than others" (Lillard, P., 1996, pp. 57–58).

In addition to the autonomy enabled by the curriculum, the other aspect of Montessori education that makes independent learning a reality is teachers. The Montessori teacher's role as a guide involves familiarizing children with the pur-



Word building

Amelia Island Montessori School



Solving problems with the abacus

Brooklyn Heights Montessori School
Jerry Speier Photography

pose and use of materials, but “learning takes place in their subsequent [independent] use by the children” (Lillard, P., 1996, p. 79). In fact, the key responsibility of the Montessori teacher is to be the “designer, organizer, preparer” of an “appropriate social and cognitive environment for children” (Rambusch & Stoops, 1992, p. 38). The role of the Montessori teacher is not to impart knowledge but to indirectly “set free the individuals’ own potential for constructive self-development” (Lillard, P., 1972, p. 77). As a result, the term “teacher” is avoided in some Montessori schools in favor of the term “guide” to emphasize the child’s role in his own learning (Chattin-McNichols, 1998, pp. 56–58). The arrangement of a Montessori elementary classroom illustrates the reduced emphasis on the teacher as the focal point. There is typically no desk at the head of the classroom; the teacher is most often found in some corner of the room surrounded by a small group of students discussing their work or giving a lesson (Chattin-McNichols, 1998, pp. 56–58). Montessori (1966) herself described it as reversing the roles of the child and adult: “. . . the teacher without a desk, without authority, and almost without teaching, and the child, the center of activity, free to move about as he wills and to choose his own occupations” (p. 111).

Beyond guiding students through the graduated curricu-

lum, a primary responsibility of the Montessori teacher is protecting the children’s rights to the block of time within which to exercise their independent judgment (Montessori, 1965). This often means leaving the children alone to do their important, independent work. Paula Polk Lillard (1996, p. 93) says, “When the children are concentrating and working independently and without teacher interference, they have achieved the goal of self-direction. The teacher leaves them alone and protects them from interruption.”

The freedom to choose one’s work and exercise autonomy in the Montessori elementary classroom is not without commensurate responsibility (Montessori, 1965). Montessori herself (1965, p. 197) said that a child will be free “when he has sufficient knowledge not only to distinguish the good from the bad but to understand the social utility of each.” As Paula Polk Lillard (1996, p. 23) states, “To be free means to be in control of self, to be able to do what one chooses to do,

not what one’s feelings or illogical thoughts of the moment may dictate” (Lillard, P., 1996, p. 23). In other words, she says, “In the elementary classroom, the children may choose their topics of research and their working companions. They are not free to waste their days in aimless activity or idle conversations with their friends” (Lillard, P., 1996, p. 23). In gradually building toward the child accepting full responsibility for his own work, Montessori education establishes norms of acceptable behavior through individual student conferences with the teacher. These often occur weekly, but timing differs depending on the needs of individual children (Lillard, P., 1996). Students bring their daily journals, completed work, and work in progress to their conferences to help the teacher understand their progress. The daily journals are a mechanism for children to “keep track of their own activities and to be accountable for them” (Lillard, P., 1996, p. 99). If something in the conference suggests a concern, the child and the teacher *jointly* develop a plan to address the problem.

As part of the ongoing dialogue with teachers through conferences, Montessori elementary students are expected to establish goals and to be accountable for progress toward them. These goals tend to be of the type Pintrich (2003) characterizes as mastery goals, like learning and under-



standing, rather than performance goals, like social comparison or norm-referenced standards. Montessori education downplays performance goals, like grades and competition among students (Montessori, 1964). Instead, students are encouraged to gauge their own success based on goals they establish with guidance from their teachers in conferences. For example, a child may choose whether he needs one week or two to complete a report on a particular topic depending on how far he decides to pursue the subject. The consequences for failing to achieve goals tend to be logically related to the situation. Punishment in the form of bad grades is not used to coerce behavior (Montessori, 1964). If a child failed to accomplish the goals in the time frame he and his teacher established, they would use the incident as a problem-solving opportunity to avoid future issues. Perhaps the child would suggest staying in from recess to finish the work. However, the teacher would not dictate a solution or punitive consequences. The emphasis would be on the importance of accomplishing the agreed-upon goals rather than on punishment for bad behavior. Maria Montessori advised teachers to give children reasons for the importance of accomplishing goals and the consequences for failing to do so (Lillard, A., 2005). The reasoning mind of the elementary child thrives on understanding not only what, but why (Montessori, 1965, 1989). These goal-setting and achieving practices in Montessori education are designed to foster student feelings of control over their education and their ultimate sense of autonomy in place of working for the sake of pleasing a teacher or surpassing peers.

A very visible culmination of the children's work toward autonomy is the Montessori practice of "going out" (Montessori, 1973). As small groups of students work on researching a particular topic, they often reach a point at which they run out of classroom resources to answer their questions. At this point, they begin to venture outside the classroom on their own quests for knowledge. Early in the elementary program, this may only include expeditions to other classrooms, the school library, or the school grounds for gathering information, materials, or specimens. Ultimately, however, older children begin planning outings into the community to visit with public librarians, university professors, or business leaders to further their research (Lillard, P., 1996). These outings are not designed to be adult-organized field trips but rather student-initiated excursions for which the children themselves do most of the planning and preparation work independently. Paula Polk Lillard (1996, p. 105) states, "The 'going out' experiences further the development of the children's independence and will."

Based on the control children have over their own learning, the emphasis on freedom with responsibility and opportunities for going out, Montessori education is

unquestionably committed to fostering the kind of autonomy and self-confidence modern scholars believe is necessary to enhance internalized motivation.

Interest/Meaning

Maria Montessori believed that interest is an important companion to self-determination in fostering internalized student motivation. In a summary of her later writings, Paula Polk Lillard (1996, p. 5) outlines among Montessori's ideas that "Interaction with the environment is most productive in terms of the individual's development when it is self-chosen and founded upon individual interest." The degree of control Montessori children have over their time in school is possible because of the interest the Montessori curriculum sparks in students. One of the ways that Montessori education engages student interest is through linking new knowledge to the larger universe and finding connections that will make material meaningful for students (Montessori, 1965). Furthermore, development of intrinsic motivation is considered a crucial outcome of authentic Montessori education according to *The Authentic American Montessori School* (Rambusch and Stoops, 1992, p. 37), which states that "The motive force for learning in Montessori environment comes from within the individual child. This drive toward competence is fueled by the child's curiosity and interest. Thus is the child's self-initiated activity considered its own reward."

Contemporary scholars agree with Montessori's conviction of the importance of engaging student interest and perceived meaning in fostering internal motivation. Seifert (2004, p. 147) contends that "perceived meaning is important in motivated behavior," but "little attention has been paid to meaning in studies of academic motivation." Ryan and Deci (2000, p. 73) do not include interest or personal relevance as one of their three fundamental needs leading to internalization of extrinsic motivation because "extrinsically motivated behaviors are not typically interesting." For them, then, interest is a key differentiator between intrinsic and internalized extrinsic motivators. Pintrich (2003, p. 674) cites research showing that higher levels of interest "are associated with more cognitive engagement, more learning, and higher levels of achievement." Therefore, all three organizational theories agree that student interest and meaning can be important factors in enhancing internalized student motivation.

Montessori education links student interest and perceived meaning together with the belief that students will find interesting those things that are valuable and meaningful for them personally. As previously mentioned, interest is the key to making the autonomy of the Montessori elementary classroom possible. Meaning and interest are facilitated



in Montessori education through the content and delivery of lessons and teachers' following the child's lead through monitoring student interest (Montessori, 1989).

Montessori education is based upon the premise that students "are not satisfied with bits and pieces of isolated information. . . . They want to grasp the whole of knowledge" (Lillard, P., 1996, p. 45). During each lesson given to small groups of students, the teacher's task is to provide connections to a larger body of knowledge to establish the meaningfulness of the material (Montessori, 1989). In doing so, however, the teacher provides just enough information to leave the child with many questions because "only when children seek to answer questions which they themselves ask, do they commit themselves to the hard work of finding answers that are meaningful to them" (Lillard, P., 1996, p. 60). In other words, students are internally motivated to seek answers to questions that are meaningful and interesting to them through the content of Montessori lessons (Montessori, 1989).

The Great Lessons are the cornerstone of the Montessori elementary curriculum and provide excellent examples of how lesson content and delivery spark student interest. The Great Lessons are "impressionistic stories, accompanied by simple experiments, teacher-made charts, timelines, and illustrations" (Lillard, P., 1996, p. 59). The interconnectedness of these stories and the teachers' linking these lessons to the students' lives all contribute to recognition of the personal relevance of the information. There are five Great Lessons: "The Creation of the Universe," "The Coming of Life," "The Coming of Human Beings," "The Story of Communication in Signs," and "The Story of Numbers" (Lillard, P., 1996, p. 61). These lessons are not delivered as if they include facts to be stored in memory; rather they are delivered in the vein of an engaging story. In other words, "The purpose is to create a picture in the children's minds and to send them off wondering, questioning, and exploring in order to fill in the details of that picture" (Lillard, P., 1996, p. 59). These stories purposefully leave out important details because "If children of this age are bombarded with detail, they do not seek out information on their own" (Lillard, P., 1996, p. 71). Maria Montessori (1989, p. 4) drew the analogy to "broadcasting the maximum number of seeds of interest . . . held lightly in the mind, but . . . capable of later germination."

Beyond the Great Lessons, Montessori teachers enhance student motivation by following the child's lead through monitoring each individual student's interests. Timing of specific lessons for each child is not dictated by an external timeline because "each child comes with his or her own interests and capacities" (Lillard, P., 1996, p. 72). This results in the children no longer being "bound by the adult's concept of what is useful to know, a concept that, in any case,

has no power to arouse their interest," and teachers are "free to follow and build upon the children's own interest" (Lillard, P., 1996, p. 74).

Once their interest is sparked, the uninterrupted work cycle allows Montessori students to indulge their interests for as long as they are motivated to do so rather than being moved to a different subject based on the school bells. Maria Montessori (1989, p. 80–81) said, "Interest is not immediately born, and if when it has been created, the work is withdrawn, it is like depriving a whetted appetite of the food that will satisfy it." As crucial as it is to ignite the child's interest, monitoring the child's progress is equally important because "The secret to maintaining their interest is to keep them challenged" (Lillard, P., 1996, p. 92). Appropriate levels of challenge are important in maintaining interest and for building upon children's feelings of competence, which is the next motivational theme to be explored.

Competence

Seifert (2004, p. 147) states that "perceived meaning is important in motivated behavior" but only if students feel capable of understanding the topic. Along with control/autonomy and interest/meaning, competence is another theme shared by all three authors examined in this article. Just as competence and interest are related, competence and control are related concepts and enhanced internalized motivation is most likely when both are present. Ryan and Deci (2000) suggest that feelings of competence cannot enhance intrinsic motivation unless combined with a sense of autonomy (Ryan & Deci, 2000). As was the case with control, they propose that competence is required for intrinsic motivation and can also contribute to greater internalization of extrinsic motivators. Likewise, Seifert (2004) combines competence with self-determination as giving rise to mastery goal pursuit, as opposed to failure avoidance or learned helplessness. Finally, Pintrich (2003, p. 671) states, "Students who believe they are able and that they can and will do well are much more likely to be motivated in terms of effort, persistence, and behavior than students who believe they are less able and do not expect to succeed." Therefore, competence establishes expectations of future success. This expectation motivates effort directed toward meeting new challenges, particularly when students are interested in the material and feel that they have some level of control over the situation.

Montessori education builds on the premise that competence begets confidence, which in turn inspires children to tackle subsequent challenges. The individualized nature of the curriculum, the 3-year age span, and the evaluation process all develop individual student feelings of success in a Montessori elementary classroom. Montessori teachers



Jerry Speier Photography

Reviewing a work plan

Brooklyn Heights Montessori School



Jerry Speier Photography

Classification of animals

Kingsley Montessori School

use detailed record keeping to track students' progress through the carefully sequenced curricular materials to ensure that they are constantly but appropriately challenged (Montessori, 1965). In order to serve as an "effective link to the environment for the children, the Montessori elementary teacher constantly observes the children in order to know where they are in their development at any given moment" (Lillard, P., 1996, p. 91). In this way, teachers utilize their intimate knowledge of student ability to ensure that each child is introduced to new material according to his/her individual abilities rather than on a timeline applied to the entire class as a whole.

Since each individual child's progress is tracked by teachers who follow the child for 3 years in a multiage classroom, a much wider range of abilities can be accommodated in one classroom (Lillard, P., 1996, p. 91). If a particular child is strong in language skills but weaker in math, that child

will have the ability to work with the advanced sentence analysis materials while having the extra time needed to master long division without being out of place among his peers (Montessori, 1995). In addition, the mixed ages in the 3-year age span of a Montessori classroom provide competent peer models to inspire student expectations of future success (Lillard, A., 2005).

Montessori teachers' evaluations of student progress also contribute to an environment that builds student confidence in their own abilities. A lack of emphasis on traditional grading allows students to gauge their own success against their own progress rather than being compared to their peers. Maria Montessori (1965, pp. 111–114) recommended understanding a child's progress through "prolonged observation." Teachers gauge understanding by the way materials are handled, accuracy of written work, ability to transfer concepts to new situations, and demonstrating



mastery through one child teaching a concept to another (Charlap, 1999). Such an approach enhances feelings of competence because appropriate challenges yield incremental growth for each student, setting the expectation that new learning opportunities are likely to result in continued success.

Relatedness

Ryan and Deci (2000) articulated the concept of relatedness, “the need to feel belongingness and connectedness with others,” as important for internalization of less intrinsic motivators. “Because extrinsically motivated behaviors are not typically interesting, the primary reason people initially perform such actions is because the behaviors are prompted, modeled, or valued by significant others to whom they feel attached or related” (Ryan & Deci, 2000, p. 73). In particular, they credit relatedness with helping students internalize positive school-related behaviors, such as following rules and demonstrating appropriate classroom comportment (Ryan & Deci, 2000). Pintrich (2003, p. 675) incorporates relatedness into his discussion of the influence of social goals on motivation, saying, “The pursuit of social goals such as making friends and being responsible (adhering to classroom rules and norms) are related to academic outcomes including effort and achievement.” Rather than considering social goals to be a distraction from academic achievement, he suggests social goals can “be harnessed in the service of academic goals” (Pintrich, 2003, p. 675). Therefore, he says research on social goals highlights “the importance of peer groups and interactions with other students as important contexts for shaping and development of motivation . . .” (Pintrich, 2003, p. 675).

Montessori education clearly leverages the power of elementary children’s social tendencies as a means of fostering motivation. Maria Montessori identified the “shift from individual formation to development as social beings” as the fundamental transition of children as they proceed from the primary (preschool) to elementary planes of development (Lillard, P., 1996, p. 44). Paula Polk Lillard (1996, p. 46) characterizes this new orientation to peers by saying, “The children now tend to join together and form their own peer group outside the family. They become more extroverted; they want to be with other children and to be like them.” Montessori (1989, p. 4) stated that the elementary child has a “need to associate himself with others, not merely for the sake of company, but in some sort of organized activity.” Three components of the elementary Montessori classroom facilitate relatedness, which in turn fosters internal motivation: the 3-year cycle in each classroom, freedom to work in small groups, and class meetings. First, as mentioned previously, Montessori education is typically structured in 3-year age groupings, where each child spends 3 years in the same

classroom. In addition to deeper teacher understanding of students, the 3-year age span allows social relationships among most students to extend beyond a single academic year. The 3-year age span also ensures that younger children enter a classroom with well-established social role models to model appropriate behavior and work habits (Montessori, 1989).

Second, during their academic work time each day children are “free to work in groups, talk with each other, and help each other” (Lillard, P., 1996, p. 70). Therefore, Polk Lillard (1996, p. 70) concludes, “The Montessori elementary plan uniquely meets the children’s need in the second plane to form themselves as social beings, capable of contributing to others, both following and leading in group effort.” Constantly working in a team results in the Montessori elementary classroom being abuzz with purposeful activity, with “synergy in the air” while small groups of children simultaneously “work together at large tables or mats on the floor, do science experiments, compose music on the Tone Bars, carve wood, or paint an illustration for a story or time line” (Lillard, P., 1996, pp. 70–71). Typically, children choose their own work companions, discovering in the process “how to make wise choices in coworkers” (Lillard, P., 1996, p. 93). One of the important lessons in this process is an appreciation for diversity in companions rather than always working with the same group of children.

Finally, class meetings provide a forum for children to resolve any disputes while exploring the limits of socially acceptable behavior (Angell, 1998). On a daily basis, “The informality of the classroom makes it possible for the children to discuss their relationships and behavior openly with each other. . . .” And “Facilitating the openness of such discussions is a primary responsibility of the elementary teacher” (Lillard, P., 1996, p. 90). Class meetings, typically held on a weekly basis, provide a formalized avenue for the students to discuss any social problems and creatively identify possible solutions on their own. These three features of the Montessori elementary classroom enhance students’ feelings of belonging, and a stronger sense of relatedness has been shown to foster increased internalized motivation for engaging in positive school behavior. In addition to behavioral influences, enhanced feelings of relatedness can contribute to a strong learning community that values the learning enterprise.

Conclusion

Montessori’s theories, developed more than 100 years ago, certainly resonate with current psychological research on improving education. Autonomy, interest, competence, and relatedness form the foundation for three contemporary efforts to organize the vast literature on motivation into a parsimonious theory. These four elements also comprise



fundamental aspects of Montessori elementary educational practice. By integrating modern motivation theory development with well-established

By integrating modern motivation theory development with well-established Montessori practice, one could argue that Maria Montessori was a woman before her time.

Montessori practice, one could argue that Maria Montessori was a woman before her time. She was passionate in the early 1900s about the importance of students becoming actively engaged in their own learning. Montessori schools around the world today live that vision through practices that are beginning to be recognized as crucial to the formation of internal motivation.

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