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Teacher Perspectives of Student Academic Decision-Making in Montessori Elementary Classes

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by

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to David, Eva, Maureen and Mark

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CHAPTER 1: INTRODUCTION

The "central problem of education" for Maria Montessori (1971) was "how to give the child freedom”. Montessori wrote more about freedom and liberty than any other topic (Ethel Wheeler in Feltin 1987, 90). Modern theorists such as Paula Polk Lillard (1996) and David Kahn (1997) also give great importance to children's freedom in Montessori classrooms. Freedom is necessary for the development of autonomy (Feltin 1987), which is one of the aims of Montessori education (Montessori 1964, Barron 1992, American Montessori Society website, Kendall 1993). Many Montessori organizations (West Seattle Montessori, American Montessori Society) include some version of the phrase "freedom with limits" in their literature or refer to the child's independence as a goal. However, many programs limit children's responsibility for their learning at the elementary level to choosing which assigned work to do first. Children are not given the opportunity to choose what they will learn and how they will show what they learned. Orcillia Oppenheimer (1999) considered the lack of "*real free choice*" to be one of the "two fundamentals which are missing from most Montessori programs" (65-67, emphasis in original).

This study describes student choice in elementary Montessori classrooms. It examines how teachers help children progress to higher levels of decision-making, and what obstacles prevent classes from progressing to the optimum level of freedom.

Personal Statement

I thought a lot about autonomy as a child, in the sense of having a say in matters affecting me. My misguided impression of autonomy was "feeling as though I am making decisions that matter by choosing differently than others." When my parents said I could choose any color I wished to paint my room, I passed over the green, yellow and blue paint that my siblings had chosen. I felt obligated to choose a different color because that is how I thought one exercised autonomy. In college, I majored in music (even though I had no aptitude for it) because none of my siblings took that direction. Far from being autonomous, my conception limited me to the options that remained after others had decided!

My conception of autonomy was not the only limit on how autonomous I became; the choices available to me as a child did not really matter. For example, I was not allowed to decide whether, when, or how to paint my room--decisions that affected other aspects of our family's life. If we spent the time and money painting the room, it might have meant we would not be spending it on a vacation. My parents' decisions held consequences. I did not experience significant consequences in deciding what color to paint the room, although I felt I was participating. My decisions did not matter in the way that choices adults made for me did.

I was dissatisfied with my understanding of autonomy as "feeling as though I am participating in decisions that affect me." My experience was much like what toy makers in a recent catalog promised: their pretend kitchen and

tool shop would help children *feel* as though they can do things themselves. I began to think that was not true autonomy, but what frequently passed for autonomy in the dominant culture of the United States. As a WASP child, I grew up valuing autonomy but not really achieving it. Now when I speak of autonomy, I mean "making significant decisions and experiencing real consequences as a result."

I became fascinated with Maria Montessori's emphasis on following the child's natural drive to do for herself. She taught children to make real choices, not simply to be different or to choose only on occasions that changed no outcome. The classroom was set up and the teacher was trained to make it possible for even toddlers to act on their own choices. I found to be personally true Montessori's notion that, "The mere contact with a human being developing in this way can renew our own energies" (Montessori 1972, 123).

When I was introduced to Montessori at the elementary level, I noticed student choice in many classrooms was relegated to deciding whether to start with the math assignment or the reading assignment. It seemed that teachers were not trying to uncover children's natural drive to choose that which helps them develop best. The focus changed from how to help the child develop to how to make sure the child gained particular knowledge.

From 1994-1997, I was part of a team which created a new Montessori program for 6-12 year-olds. I was certain we could create an environment that would allow each child to make decisions about what and how they would learn.

By choosing their own activities, the children would achieve a depth of understanding and maintain an enthusiasm that no other person could give them.

Far from wanting to be left free to follow their own interests, most of the children wanted to gain as much teacher attention as possible. I found that students who had spent several years being taught to passively receive their education could not suddenly operate responsibly in a more liberated atmosphere. I knew that "To let the child do as he likes when he has not yet developed any powers of control, is to betray the idea of freedom" (Montessori 1984, 205). None of my previous training or experience taught me how to help a large number of children build their decision-making skills if they had not received the foundation provided by Montessori preschool. Always before, a child who had not experienced the work cycle in a Montessori preschool would be supported and surrounded by children who had, and that seemed to make all the difference.

I had seen a Montessori elementary classroom where most of the students had great skill in choosing for themselves, and Paula Polk Lillard described others in her book, *Montessori Today* (1996). Those classes consisted of children who had learned to make choices in a Montessori environment from an early age. But I could not see how to apply what they did to my class of children who had little or no previous Montessori experience. My class became

more responsible for their own decisions during my time with them, but they never developed the powers of control Montessori described.

Background and Problem

Montessori used the terms 'freedom' and 'liberty' interchangeably to denote the conditions which allow children to develop fully using their natural inner powers. The ultimate development of personality is the ability to govern oneself so as to be a fully contributing member of one's community (Montessori 1984). Montessori most often referred to this self-governance as freedom gained by the individual's acquisition of independence (Berliner 1975). Her ideas correspond to others' use of the term autonomy more than to common interpretations of independence, however, and autonomy is the term used in this study.

Montessori believed children need to be able to move freely and to choose their own activities, as well as where, how long, and with whom they work. But she did not expect total nonintervention on the adult's part: she called that abandonment. The adult has a responsibility to prepare an environment that serves the child's needs and to observe so as to know how to aid each individual's development appropriately.

Margaret Howard Loeffler (1992, 104) describes the teacher as "the architect of the environment" and says that "Direct intervention by the teacher is

limited and facilitating rather than didactic". Loeffler wrote that an "essential ingredient" of Montessori classrooms is the belief that

> children are natural learners and are in a better position to make appropriate learning choices than their adult mentors. . .A successful Montessori environment is identifiably different. . .precisely because the children in it are engaged in self-initiated activities with a degree of autonomy and independence that is unique in an educational setting. (109)

Montessori's conception of student academic choice contrasts with romantic philosophies such as Daniel Greenberg's (1995) in *Free at Last: The Sudbury Valley School*, and A.S. Neill's (1995) even more radical approach, outlined in *Summerhill School: A New View of Childhood*. In these schools, children choose what they wish to do at any given moment without the intervention of adults. The adults are a resource like a book: if the children do not choose to open it, they do not benefit from the knowledge and experience there. Montessori set her method apart from philosophies like this in *From Childhood to Adolescence*,

> Some new educationists. . .advocate giving them (children) freedom to learn only what they like, but with no previous preparation of interest. . . .The necessity for the child. . .is help towards building up of mental faculties; interest being first of necessity enlisted, that there may be natural growth in freedom. (7)

If Sudbury Valley represents "maximum" student choice, Montessori education seeks "optimum" student choice. Students choose their activities from a thoughtfully prepared environment in collaboration with a teacher who knows when to step aside and when to intervene. The teacher steps aside when a

child's decisions are the result of "an internal guide" (Montessori 1924 online) and intervenes when "every external object calls the child equally, and the child, lacking in directing willpower, follows everything and passes from one thing to another without end". Dr. Montessori emphasized, "This is one of the most important distinctions which the teacher should be able to make."

While virtually every major modern Montessori theorist (Chattin-McNichols 1992, Loeffler 1992, , Lillard 1996, Kahn 1997, Oppenheimer 1999) has written about the centrality of choice in Montessori education, Turner (1992) admits that "Teachers vary greatly in. . .their allowance of autonomy" (31). Lillian Katz (1992) called attention to a common criticism by those outside Montessori, "Montessori philosophy talks a lot about liberty, but Montessori teachers seem to be very controlling" (185). Anne Burke Neubert (1992) cited an article by a non-Montessorian in the NAEYC journal *Young Children* that says in Montessori classrooms, "The choices are not the child's" (50). Perhaps the basis for these criticisms can be found in the wide interpretations Montessori teachers give to the role of autonomy. Oppenheimer (1999) may be right that if we deceive ourselves into thinking adults share power equally with children in the Montessori classroom, we in effect ensure that the adult will dominate.

> All of us Montessorians can identify with the equilateral triangle that was part of our training; the prepared environment, the adult, and the child-each having the same weight. But this is not true! The adult has the power in the triangle. The adult has the authority, the knowledge, and the physical size to dominate and the training in child psychology and development to manipulate the environment. The adult is all-powerful. How do we empower the child? Only by allowing real free choice. And

> why do we not do this? Is it because there is not enough faith that humans need to learn to live? (67)

The ways different teachers involve children in decisions about their learning revolve around interpretations of three Montessori concepts: the dictum to follow the child, freedom with limits, and autoeducation.

Follow the Child

David Kahn (1988) writes that the "ultimate" question is how a Montessori teacher can have expectations and yet follow the child. "What comes from the teacher and what comes from the child perplexes every Montessori teacher." He describes the dialectic using the terms "structuralist" and "essentialist." The structuralist provides opportunities for the child to choose within a teacher-arranged sequence of lessons. The essentialist avoids giving the child assignments but allows the child's work to flow from lessons the teacher offers.

Lillard (1996) describes a classroom where the teacher could be considered an essentialist. The teacher certainly influenced the children's decisions, but in a respectful and unobtrusive way. Lillard asked several children why they chose a particular activity and they couldn't think of a reason. "Finally, as if she has been thinking hard about it, the other girl answers, 'We had a lesson on it yesterday'" (147). Somehow, the teacher had used the lesson to plant the idea without the children recognizing as such.

In another instance, the teacher noticed some children were having difficulty selecting pertinent information for reports. Her guidance respected their

ability to work this out for themselves if pointed in the right direction. Instead of pointing out a student's poor selection, she made up some examples of trivial facts they could laugh about together and then facilitated a discussion of what might be important to include. By the time the students finished creating a chart for their reference, they couldn't seem to recognize the teacher's part in it at all. It seems the essentialist relies upon a carefully constructed atmosphere in which the children expect to work and they get their ideas for what to do from lessons the teacher has given.

A structuralist might give a similar lesson to the example above as part of a sequence designed to teach report writing. The difference is the essentialist gives the lesson when s/he observes a need for it and the structuralist gives the lesson in anticipation of the need. The essentialist relinquishes some control of the sequence in order to allow room for children's initiative. The structuralist gives up some of the children's freedom in order to preserve a sequence that will (s/he hopes) aid their understanding. The essentialist counts on being able to recognize when children are making "true" choices and the structuralist counts on being able to anticipate the children's needs.

Harvey Hallenberg (1990) promotes Claude Claremont's teaching that lessons are to be given as "offerings" which can be refused. If a student rejects or ignores an offering, the teacher prepares to make other offerings. Hallenberg says, "This is the practical way of following the children."

<u>Freedom with Limits</u>

A teacher's interpretation of "freedom with limits" is revealed in the way work plans are used. In some, the work is chosen by the student in consultation with the teacher. Many classrooms, however, use teacher-made work plans. These are often misnamed "contracts" despite the lack of student involvement in their creation. Teachers will usually give assignments in each of several curriculum areas. When the contract is completed, the student may often choose what activities to do. However, the teacher tries to plan so there is not a lot of “extra” time. Because the "choice" time is considered to be extra, it is devalued in comparison to the teacher-chosen worktime.

I observed a class that used teacher-made contracts and the students were rushing to get each assignment done so they could "check it off.” They did not care about what they were doing or whether it made sense to them. One boy was doing a puzzle in which he was supposed to form a chain of compound words. The pieces would only fit together one way so that all sections became part of a real word. This student kept randomly putting two sections together and then asking a neighboring child if it was right. He had no interest in the words or the activity.

When I became the teacher of the same class and restructured it to allow students greater freedom, they made choices that were meaningful to them. For example, two girls chose to read *Little House on the Prairie* together. A boy decided to research lemurs after attending a voluntary lesson about

Madagascar's isolated ecosystem. The same group of children responded differently to contrasting teacher interpretations of "freedom with limits."

Despite the fact that both of us used the term "contracts," implementation and outcome contrasted in essential ways. For the first teacher, the contract meant "I will write what you should do and you will agree to do it." I reframed the contracts as a guide created by the student and teacher in collaboration. Immutable contracts were delivered on Monday and evaluated on Friday in the first class, while the contracts evolved throughout the week in the second class. Action focused on the teacher in the first class, on the students working with the teacher in the second class. The emphasis was on completing work in the first class; becoming deeply engaged in work was more important in the second class.

The difference in implementation made it possible for the boy who just wanted to get a check by the "compound words" activity to become interested in compound words for their own sake. Being released from the artificial pressure to complete the teacher’s assignments might have given him “room” to think of his own examples of compound words, getting so caught up that he did not do much math that morning. His depth of study in language that day would have justified modifying the contract.

The choice time provided in classroom one resulted in less meaningful work partly because of its differentiation from required work. Rather than naturally flowing from what the child had been doing before choice time began,

it became an opportunity for the child to "get away from" the required topics. This structure actually created a difference between what the children want to do and what they should do, as opposed to bringing the two together.

Autoeducation

"Autoeducation" is the other term that seems to have wide interpretation. A common meaning in classrooms today is that children carry out required tasks without help or supervision. Feltin (1987) used "independent learning" as a synonym for autoeducation, defining them as "a learning situation in which the individual proceeds independently of other learners in the class or group--a capacity for self-directed study." Several examples of Feltin's emphasis are found in the "Pupil Self-Assessment Checklist" which she developed to assess levels of independent learning:

1. I work on and complete tasks prescribed by the teacher.
2. I ignore distractions from activities going on around me.
3. I participate in group activities when required.
4. I cooperate in evaluation procedures. . .
5. I tolerate disruption of what I am doing to attend certain required activities.
6. I work when the teacher has left the room.

Students were asked to rate themselves on a five point scale beginning with "Write a 1 if you almost always have to be told to do the job."

Being able to complete the learning cycle--choosing a task, concentrating on it, putting it away, and showing the joy, restedness, and sociability associated with productive work--is certainly central to autoeducation. The tone and specifics of this checklist, however, reflect an inordinate emphasis on the lower-level decisions in the process, and obedience to teacher decisions in the higher-level areas. Far from requiring students to "tolerate disruption," as listed in point five, Montessori emphasized the role of the teacher in protecting the concentrating child from interruptions. A more appropriate checkpoint would have been "I arrange times for meeting with classmates for group projects." The items on the Pupil Checklist which are appropriate --those concerning gathering, caring for and putting away materials, for example, are to be used in the service of larger goals, such as the student choosing an activity from those available on the shelves.

Why is optimum student choice an important goal?

Montessori believed that structuring for optimum student choice helps children learn more and is crucial for their overall development. By regularly exercising their decision-making skills, children develop their will and the capacity for making judgments. When children have the opportunity to make meaningful choices, they begin to take responsibility for their own education. They don't need to wait for someone to teach them: if they want to learn something, they

do what it takes to learn it. Experience making academic choices leads to the ability to make moral and ethical choices which every child must learn.

> Persistent work, clarity of ideas, the habit of sifting conflicting motives in the consciousness, even in the minutest actions of life, decisions taken every moment on the smallest things, the gradual master over one's actions, the power of self-direction increasing by degrees in the sum of successively repeated acts, these are the stout little stones on which the strong structure of personality is built up. . .Our little children are constructing their own wills when, by a process of self-education, they put in motion complex internal activities of comparison and judgment. . .The constant work which builds up their personality is all set in motion by decisions. . .Such a development of the will would be impossible if. . .[we] prevent children from making decisions by deciding everything for them. (Montessori 1971, 184-185)

When children are not directly involved in making decisions that affect their lives, they miss the chance to feel a sense of power, which William Glasser (1986) affirms is a basic human need. They learn to see teachers and other adults as adversaries rather than resources. They spend their time carving out "spaces of their own" where they do have power: fantasy worlds, social cliques, games involving "counting coup" against authorities. Some discipline problems are the result of students' feelings of powerlessness (Glasser 1986, Kohn 1996).

Purpose and Significance

This study examined the types of academic decisions students make in actual Montessori elementary classrooms. In addition, the study documented ways that teachers help children take more responsibility for decision-making and the obstacles that prevent teachers from providing opportunities for student freedom. This project helps teachers discover the depth of student decision-

making that can be achieved by showing how others approach it in their classrooms.

Much has been written by Montessorians (Kendall 1993, Kahn 1997, Dorer 1997) about the importance of student choice in Montessori education, but the only major bibliography of writings related to Montessori education (Boehnlein 1994) includes no categories in its table of contents for any of the following words: autonomy, freedom, independence, liberty, or choice. Some non-Montessorians (Eda LeShan and Dean Haskell in Berliner 1975, DeVries and Kohlberg 1990, Katz 1992) are struck by the lack of choice in Montessori education. This study recognizes that both views may have a basis of truth and responds to the dichotomy by examining choice in Montessori classes.

Previous studies involving Montessori education have often not documented the interpretation particular classrooms gave to Montessori philosophy and method or they have relied on an organizational name (usually AMS or AMI) to certify "authenticity" (Boehnlein 1988, Neubert 1992). David Kahn points out in his introduction to Boehnlein's (1988) analysis of Montessori research that, "Montessori research of the future will not only provide descriptive data and measure the effectiveness of the Montessori method, but it will require a definition of authentic Montessori education" (1). Marlene Barron (1992), past president of the American Montessori Society, called for Montessorians to "address what are the nonnegotiable components of their model" (277). This

study will clarify one nonnegotiable component of "authentic" Montessori: student decision-making.

CHAPTER 2: LITERATURE REVIEW

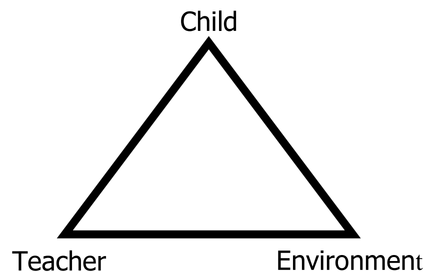
The challenge in discussing student choice is the different interpretations given to the words "choice" and "autonomy," as well as their relationship to education. In this chapter, I review what these words mean from the perspective of Montessori education. Both Maria Montessori's writings and those of others who have interpreted her ideas are examined because together they constitute "Montessori education." Next, I explain how providing students with opportunities to choose is important for autonomy, motivation, discipline, moral character, and intellectual understanding. Then I summarize the obstacles teachers face in providing greater freedom for students. Finally, I review what has been learned about how choice is carried out in actual Montessori classrooms, and the significance of student decision-making in a Montessori understanding of human development.

Choice and Autonomy in Montessori Education

Montessori believed children should choose which activities to do because only they can construct their personalities and only they know what they need at a given moment to help them in this process. The teacher helps the child in her work of self-creation by removing obstacles which frequently thwart the natural course of development (Montessori 1964, 1971, 1989) and by observing the child's choices in order to prepare an environment best suited for the child's decision-making. A proper understanding of this perspective requires further

discussion of Montessori's dialectic between the child, the teacher, and the environment, as represented by an equilateral triangle in many Montessori training programs (Turner 1992).

Figure 1: Oppenheimer (1999, 67) suggests that without student choice, the child will not have equal weight in the triangle.



The Child

The teacher who would help children in their work of self-development must understand the true nature of children--what unimpeded development looks like. Montessori gave teachers a new picture of the normal child to guide them in observing children's behavior. "Normal" is not used by Montessorians in the sense of "average or usual," but "what humans are meant by nature to achieve."

Montessori (1984) considered "normalization" to be the most important result of her work. Normalization is the process whereby a child 3-6 years old loses commonly seen qualities such as caprice, disorder, timidity and sloth. In their place appears concentration, love of work, self-discipline, and sociability. These reflect the true nature of the child that had previously been hidden by

deviations (detours). Montessori likened normalization to the state of health a patient needs to achieve in order to function normally. Montessori saw the same normalization process repeated in children from many cultures worldwide.

The process is set in motion when a child concentrates on a freely chosen task. Freedom for spontaneous activity is a "vital component" in the transformation to a normalized child (Cuevas 1997, Zener 1999). Zener's elaboration of Montessori's meaning for the first three characteristics of normalization included the phrase "freely chosen work."

While Montessori thought of normalization as specific to the preschool level, David Kahn (1997) suggests that normal development is a goal for every stage of development. He posits that the characteristics of normality stay the same through all stages of development, but the conditions which produce these characteristics change from one developmental stage to the next (Kahn 1997). One such condition for elementary students is the need for freedom to explore, such that "learning tasks should *never* be dictated" (Kahn 1997, Montessori 1989). This suggests that elementary level students should have a large role in deciding what they are going to learn.

Montessori believed children could not make all their own decisions without guidance from an adult because not only are they still developing, but they encounter obstacles that prevent normal development. The obstacles include, but are not limited to, ignorance of the possibilities, lack of resources, and an undeveloped will.

> If we offer an uneducated peasant good and bad paper money, leaving him 'free to choose' which he will take, and he chooses the bad notes, he is not free, he is cheated; if he chooses the good, he is not free, he is lucky. He 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. (Montessori 1971, 197)

Paula Polk Lillard (1996), in her recent book, *Montessori Today*, defines the child's freedom as the following, "..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" (23). A child who has not developed her will through continual practice in making decisions in an atmosphere of concentration and focus cannot be considered free because she is at the mercy of whims.

Montessori described three stages in the development of the will. In stage one, the child can accomplish a task sometimes but not always because the capacity comes from the subconscious mind. In stage two, the child can consistently accomplish the task because her will is consciously present. She cannot always perform as well when another person asks her to. Stage three involves the child's will directing her actions, so she can consistently accomplish a task even when requested by someone else.

Montessori educator Irene Fafalios (1997) speaks out strongly:

> Our task as educators and parents is to arm our children with their strongest weapon-a strong will-so that they will be capable of making choices, and be responsible and dignified human beings, with a love and concern for their fellow man and for their natural environment. So that we will never again have a generation of adults who succumb to populist ideologies and the power of mass psychology. (Fafalios 13)

The teacher who understands that a truly free child makes choices from a well-developed will observes the child's behavior in order to encourage actions that develop the will.

> Free choice is a higher activity: only the child who knows what he needs to exercise and develop his spiritual life can really choose freely. One cannot speak of free choice when every external object calls the child equally, and the child, lacking in directing willpower, follows everything and passes from one thing to another without end. This is one of the most important distinctions which the teacher should be able to make. The child who does not yet obey an internal guide is not the free child entering upon the long and narrow way of perfection. He is still the slave of superficial sensations, which make him the sport of his environment; his spirit is tossed between one object and another, like a ball. The man is born when the soul feels itself; fixes, orientates itself and chooses. (Montessori 1924, online)

An assumption of Montessori education, therefore, is that children do not naturally know how to "find out for themselves" (Berliner 1975). Children who are merely following impulses are not choosing "freely." Teachers and education serve the important role of orienting children so they can learn how to learn. The following section explains in more detail the role Montessori envisioned for the teacher and its implications for children making choices.

The Role of the Teacher

The teacher is a combination of resource, guide and catalyst (Feltin 1987). She does not simply follow what the children are doing and wait to be asked to participate. When Montessori said "follow the child" she meant use the child's needs as a guide to action. The teacher must observe the children in their freely chosen activity so she will know what each individual needs. The teacher then

prepares the environment and entices the child to it. Montessori's (1984) statement about parents' role in children's development applies at least as much to teachers,

> Once they can persuade themselves not to be themselves the builders, but merely to act as collaborators in the building process, they become much better able to carry out their real duties; and then, in the light of a wider vision, their help becomes truly valuable. (27)

Montessori believed that a teacher's first priority must be helping a child to concentrate, with persistence, on any constructive endeavor. She made very clear that the exact nature of the child's work is irrelevant: it is the child's persistence that is sought. She believed that persistence is the "foundation of the will" and the most important facet of a person's will is their capacity for making decisions, which are "always the result of a choice".

> The instructions of the teacher consist merely in a hint, a touch-enough to give a start to the child. The rest develops of itself. (Montessori 1965) The teacher moves quietly about, goes to any child who calls her, supervising operations in such a way that anyone who needs her finds her at his elbow, and whoever does not need her is not reminded of her existence. (Montessori 1964)

The adult's job at every level of education is to remove obstacles and avoid becoming an obstacle himself.

> It is necessary for the teacher to guide the child without letting him feel her presence too much, so that she may be always ready to supply the desired help, but may never be the obstacle between the child and his experience. (Montessori 1965, 131)

One obstacle is a lack of appropriate material with which to work; the teacher must create an environment rich in materials that will call to a child in a

particular stage of development (Montessori 1984). Not knowing how to use a material to greatest advantage is another obstacle. The teacher must infringe upon the child's freedom to give lessons occasionally: they are part of the necessary "preparation of interest." These lessons are to be brief and are only given if the child accepts the invitation to receive the lesson.

> A lesson in the ordinary use of the word cools the child's enthusiasm for the knowledge of things, just as it would cool the enthusiasm of adults. To keep alive that enthusiasm is the secret of real guidance, and it will not prove a difficult task, provided that the attitude towards the child's acts is that of respect, calm and waiting, and provided that he be left free in his movements and in his experiences. (Montessori 1965, 131)

Teachers should plan and have a sequence in mind, but be ready to change the plan whenever observation of the child's needs or the child's own intelligent decision indicates it. Michael Dorer advocates cultivating a "spontaneous feel" in the classroom by not informing the students of the teacher's plan or sequence. According to Joy Starry Turner (1992), "If children are allowed to work with materials only in an 'approved' sequence, the result is a serious misapplication of Montessori's original intent" (36). Irene Fafalios (1997) believes, "The role of the adult is to provide the right environment-to let the child use it and then, when ready, to let the child go" (11).

The Environment

Montessori insisted upon providing children with the freedom to act in a prepared environment for two reasons: the child's inner guide must be allowed the freedom to direct growth, and an atmosphere of freedom is the only way the

true child can be revealed to adults. Without a well-prepared environment that encourages the child's natural tendency toward independence, real freedom (autonomy, decision-making) is not possible (Montessori 1984, Lillard 1972, Feltin 1987, Kendall 1993).

> Two factors must be present if the child is to develop. It is necessary to create surroundings for the child that answer his needs not only from the point of view of his physical health but also from the point of view of his spiritual life.
>
> The child must be able to act freely in such an environment. There he must find motives for constructive activity that correspond to his developmental needs. He must have contact with an adult who is familiar with the laws governing his life and who does not get in his way by overprotecting him, by dictating his activities, or by forcing him to act without taking his needs into account. (Montessori 1972, 91-92)

In summary, children develop by a progressive series of decisions beginning with choosing an activity and concentrating on it. The teacher protects the child's right to make productive decisions and intervenes when a child's choice is not likely to promote development. The teacher's mandate is restricted by numerous caveats and warnings, including the admonition to examine the environment and teacher's behavior if the child is not exhibiting characteristics of normalization.

The Importance of Student Choice

The initial goal of education is normalization, and as a reversible condition it must continually be attended to, but not as a point of arrival; normalization is the "point of departure, after which 'freedom of action' consolidates and

develops the personality" (Montessori 1984). Autonomy is the expression of a fully developed personality. The importance of student decision-making in developing autonomy will be discussed first as a whole and then in terms of various aspects of autonomy: motivation, understanding, self-discipline and moral character.

Autonomy Through Decision-making

The focus of autonomy is different for elementary age children. The autonomy discussed in this paper relates to Erikson's (1963) stage of Industry versus Inferiority rather than Autonomy versus Shame/Doubt. Between the ages of 3 and 6, children seek to define their separateness by exercising their rights to choose. At the 6-12 level, children must have decision-making opportunities so they can develop their capacities in a social and cultural setting. Feltin (1987) reported widespread agreement that ". . .autonomy development requires skill in making choices and the choosing must be based on reasons." Montessori believed children become autonomous by developing their will through exercising their decision-making powers. ". . .when the child achieves something he set out to do. . .he is training his positive will-power" (Montessori 1964, 364). Montessori wanted to help children make choices based not on whim, peer influence, ignorance, confusion, or idle curiosity, but based on a fully developed will and knowledge of the options. Thus, a child may choose to do a project with a group

of children, but that decision will be based on internal reasons, not from being swept into the group's tide.

> The child who has never learned to work by himself, to set goals for his own acts, or to be the master of his own force of will is recognizable in the adult who lets others guide him and feels a constant need for the approval of others. (Montessori 1964, 20)

> Education must concern itself with the development of individuality and allow the individual child to remain independent not only in the earliest years of childhood but through all stages of his development. Two things are necessary: the development of individuality and the participation of the individual in a truly social life. This development and this participation in social activities will take different forms in the various periods of childhood. But one principle will remain unchanged during all these stages: the child must be furnished at all times the means necessary for him to act and gain experience. (Montessori 1972, 66)

Decision-making is Necessary for Motivation

Children are naturally motivated to learn; it is obstacles to development, such as doing everything for a child, which thwart intrinsic motivation (Montessori 1966, Kohn 1993, Verschuur 1998). Intrinsic motivation here refers to reasons for action that originate inside the person and thus correspond to Montessori's conception of the natural course of development. Examples include a person's interest in the activity and that person's desire to feel competent or to have power over a situation. Intrinsic motivation is set against extrinsic motivation, which usually takes the form of rewards or punishment.

Children who make decisions about their learning are more interested in what they study, develop greater competence, and feel a sense of power over their lives: in other words, they maintain their natural intrinsic motivation

(Glasser 1986, LePage 1987, Wasserman 1990, Kohn 1993, Csikszentmihalyi 1997).

Alfie Kohn shows how student choice relates to interest in his book, *Punished by Rewards: the Trouble with Gold Stars, Incentive plan$, A's, Praise, and Other Bribes*. Drawing on the work of Edward Deci and others, Kohn maintains that "Controlling environments have been shown consistently to reduce people's interest in whatever they are doing, even when they are doing things that would be highly motivating in other contexts." One study of 35 elementary classrooms showed that children who had controlling teachers displayed less intrinsic motivation than children who had teachers who supported their "capacity to make choices" (Kohn 1993).

Dr. Thomas Gordon (1970), originator of "Parent Effectiveness Training," tells the story of a family in which the mother habitually left notes for the rest of the family telling them what to do to help the household function. Both father and children hated the notes and often did not do what she requested. One day, she was running late and did not leave the note but asked her husband to "do what he could" to make the house ready for guests later that evening. By the time she returned, she was astonished to find that he had completely prepared for their guests. When the husband's capacity to make good decisions was respected, albeit inadvertently, he was motivated to do the very things he had previously refused to.

The work of Mihaly Csikszentmihalyi, professor of human development and education at University of Chicago, gives some clues as to why students need some control over decisions in order to maintain intrinsic motivation. Csikszentmihalyi (1997) interviewed individuals to find the commonalities in experiences that people enjoy the most. He coined the term 'flow' after many of his interviewees used it to describe experiences that are so enjoyable they are worth doing for their own sake. Many of the characteristics these experiences share were also identified by Montessori in relation to normalization: concentration is deep, skills match challenges, control is possible, problems are forgotten, sense of time is altered, goals are clear, and feedback is immediate.

Csikszentmihalyi (1997) believes that students experience flow (and hence the deepest learning opportunities) more often when they have some power to make decisions, when they are not self-conscious, and when they are not interrupted in their activity. His work shows that individuals can focus on only one thing at a time, which supports Kohn's assertion that students who are led to focus on their own performance and possible rewards or punishments cannot focus on the task itself.

Elementary-age children need to feel competent with the tools of their society and with their place in the social organization (Montessori 1989). They gain competence by making decisions. Andy LePage (1987) insists that "Every decision made for a student is a robbery made against the student's store of self. Students who are kept from decision-making ultimately believe they are

inadequate" (93). Selma Wasserman (1990, 7) asserts that "Allowing children options implicitly communicates that we believe in them and in their ability to do."

Education as Maria Montessori conceived it provides the opportunities to choose that maintain intrinsic motivation (Verschuur 1998). From Montessori's point of view, traditional teaching, which includes deciding what students will learn and "telling" it to them, is simply another way of doing too much for children. Far from needing to be "made" to learn, children cannot be forced (Montessori 1989). Moreover, force is unnecessary for the very reason that children are motivated internally as long as they have choices.

Decision-making Contributes to Better Intellectual Understanding

Eleanor Duckworth (1987) has several related insights about children's learning based on the work of Piaget and others. She wrote that a student adds new knowledge by relating it to what they already know. A child only gains understanding when he struggles to make sense of a conflict in his thinking himself. Children sometimes "compartmentalize conflicting notions" (Duckworth 1987, 39) if they are not personally bothered by the conflict. No amount of help will change a child's perspective unless the child has "thought about thinking that way." Howard Gardner (1991) concurred with Duckworth's assessment that "It is not the pressure of data that gives rise to the understanding. It is, on the

contrary, the child's own struggle to make sense of the data" (Duckworth 1987, 37).

Such a view of children's learning might appear to negate the role of teachers, however, it only suggests a focus on observation and caution regarding our preconceived ideas about children. A teacher speaks from her experience in Rogers' and Freiberg's (1994) book *Freedom to Learn*, "Actually, tremendous planning and a very carefully organized program must be developed in order to enable. . .any child to make discoveries and come up with ideas and conclusions based upon their own experience" (145).

Only individuals know just how they are perceiving a concept at any given point, but an alert teacher can gain clues from observation and interaction. These allow him to create an environment that causes the students to think in new ways.

> A good learning situation must permit the child to establish plans to reach a distant goal, while leaving him wide freedom to follow his own routing. (Duckworth 1987, 42) The right question at the right time can move children to peaks in their thinking that result in significant steps forward and real intellectual excitement. (5)

Duckworth suggests children can raise the right question for themselves if the setting is right. The proper setting includes children regularly making choices. Such choice builds students' ability to judge ideas and helps the teacher understand their perceptions so she can create a situation that challenges the misperceptions.

Montessorian Paula Polk Lillard (1996) says it another way,

> 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. This emphasis on the children's questions versus our own is often difficult for adults. Nevertheless, the teacher is to give only as much guidance and encouragement as is necessary to elicit the children's interest. (59-60)

Alfie Kohn (1993) cites studies that found various positive learning outcomes when children have a say in their learning. Among the findings were higher scores on standardized tests, a greater tendency to choose tasks at an appropriately challenging level, and a tendency to "complete more learning tasks in less time" (222).

Lev Vygotsky (1978) theorized that learning leads development, such that the best learning activities are those just beyond a child's developmental level. Kohn (1993) cited experimental work that shows "children appeared to be intrinsically motivated to engage in those tasks which were within their reach but developmentally just beyond their current level" (220). Allowing children to make choices is one way to ensure each individual has the appropriate level of challenge.

The academic choices referred to in this study are the small steps whose accumulation leads to autonomy. When a student chooses where to work, who to work with, and how long to work on a task, she is building her capability to make more complex choices such as what to work on and how to show what was learned.

Decision-making Builds Internal Discipline

"A Montessori approach to discipline begins with an understanding and respect for the child's need for independence, freedom, and choice" (O'Shaughnessy 1998, 94). Montessori (1972) found that, as children learn to follow their natural cycle of work, self-discipline also increases.

> When work becomes a habit…good conduct becomes a habit….the medium of this construction of the personality, is working in freedom, in accordance with the natural wants of the inner life; thus *freedom in intellectual work* is found to be the *basis of internal discipline.* (108, emphasis in original)

Kohn (1993) stresses the "three C's: content, collaboration, and choice" (234) for promoting children's self-control. He concurs with Montessorian Molly O'Shaughnessy (1998) that adults must constantly consider the reasonableness of requests they make (the content). They must be ready to include children in decision-making and provide opportunities for children to choose.

Children develop self-discipline spontaneously when given an opportunity (O'Shaughnessy 1998). By discipline, Montessori (1964) meant the ability "to regulate [one's] own conduct when it shall be necessary to follow some rule of life" (86). This implies that adults have a duty to help children understand what the "rules" of living in community are. Montessori believed children need help distinguishing "good" from "evil" and hence, the teacher should "suppress" any behaviors which "offend or annoy others, or whatever tends toward rough or ill-bred acts" (87). The adult's responsibility to the child is to make cultural expectations for behavior clear just as one would explain that adding numbers

involves putting them together. The adult does not necessarily give the answer to the addition problem or to the behavioral dilemma. Instead, the child works out the "answer" in collaboration with other students and with the teacher.

When Montessori's ideas concerning discipline are taken out of the larger context of her educational theory, they may be interpreted as advocating coercion by the teacher. Rheta DeVries (1990 with Lawrence Kohlberg, 294) is one such critic, "While believing that character and morality develop through self-discipline rooted in liberty, [Montessori] outlined methods that seem at least equally rooted in authority". If this criticism is true, then allowing children to make important academic choices is not central to Montessori education.

DeVries criticizes Montessori's view as holding self-discipline synonymous with obedience to adults. However, obedience was not the only aspect of discipline--not even the central aspect--in Montessori's eyes. Montessori (1979) made a distinction between obedience that is the "real reason why vast masses of human beings can be hurled so easily to destruction" and obedience that "comes under the control of the conscious will" (5-6).

DeVries associates obedience with teachers who expect children to orient towards adults "as their main source of information and rules for behavior". That is not at all what Montessori expected. Her point about will and obedience was that the child with a well-developed will is able to judge the wisdom of obeying an adult's request. In addition, the adult will not seek to coerce, but to

collaborate with the child in promoting the child's work of development. Chattin-McNichols' (1992) response to DeVries is,

> Montessori's point about the third stage of obedience is that the teacher will get such obedience from a child *just to the extent* that she is leading him to his own potential through work. . .To the extent that the teacher serves the children's needs, their hunger for development through meaningful activities, to just that extent will she get the joyful obedience that Montessori describes. (165, emphasis in original)

Montessori's third stage in development of the will is more closely related to Piaget's definition of autonomy than to blind, unthinking obedience. The Nazis and Italian Fascists apparently understood how antithetical to blind obedience is Montessori's system. They burned her in effigy and burned her books in Nazi Germany; in Fascist Italy they closed her schools (Berliner 1973).

Decision-making Builds Moral Character

Intellectual and moral autonomy are a package: an individual who lacks one will lack the other. (Piaget 1973, Kohlberg 1981, DeVries and Zan 1994, Kohn 1993)

> In reality, education constitutes an indissoluble whole, and it is not possible to create independent personalities in the ethical area if the individual is also subjected to intellectual constraint to such an extent that he must restrict himself to learning by rote without discovering the truth for himself. If he is intellectually passive, he will not know how to be free ethically. (Piaget 1973, 54)

This suggests that teachers who hold class meetings about behavior issues but do not allow students to participate in decisions about their work not

only miss out on deeper, more sustained learning, but also on better ethical judgment on the part of their students.

DeVries (1994 with Betty Zan) believes "educators generally manage children in ways that promote heteronomous rather than autonomous morality" (39). She used the terms in Piaget's sense: heteronomous means "following rules made by others" and autonomous means "self-regulation", or following internal convictions. The "drill sergeant" and "manager" teachers encourage heteronomy by managing every detail of children's behavior. By contrast, the "mentor" organizes the classroom so the children can regulate the details of their behavior.

Montessori education is consistent with Piaget's (1973) assertion that "full development" means the creation of a "morally and intellectually autonomous person" (23). The organization of the Montessori class, with children choosing work from accessible shelves, allows the teacher to be more of a mentor than drill sergeant or manager. "The child comes to see that he must respect the work of others, not because someone has said he must, but because this is a reality that he meets in his daily experience" (Montessori 1984, 221).

Obstacles to Student Participation in Academic Decisions

Four types of obstacles may prevent teachers from helping students progress in decision-making ability: the teacher's beliefs or values, the teacher's skills, structural or programmatic decisions, and societal pressure.

Teacher Beliefs or Values

A teacher who does not believe children should or can make significant decisions about their work will not help children increase their capabilities in this area. Kohn (1993) warns against teachers expecting too much at first from students who are not used to making decisions. The less children are allowed to make choices in their home setting and in previous school experiences, the longer it will take for them to be capable of taking more responsibility in this area. Kohn's concern is that teachers who initially find their students incapable of making the decisions offered will give up in the belief that the students cannot learn to do so.

For Montessori teachers, the greater concern is that they will settle for lower-level decision-making out of a misinterpretation of Montessori's concept of independence. Feltin reported the interpretations given to independence and the student's role in decision-making by four teachers in her dissertation, “Independent Learning in Four Montessori Elementary Classrooms.” Both the responses and some aspects of the study’s design raise doubts about the level of student decision-making these teachers (including the researcher) expect.

For example, although Feltin included "self-direction" as part of her definition of independent learning, she betrayed an emphasis on teacher direction in her assessment tool, a "Pupil Self-assessment Checklist" which determined students' and teachers' perspectives on individual levels of independence. All 78 students completed it and the 4 teachers completed one for

each of their students. 20 checkpoints cover many areas of student decision-making, but notably absent was any reference to students choosing what to learn or how to show what they learned. The checklist's overall tone of capitulation to the teacher was evidenced by the following checklist items:

> I work on and complete tasks prescribed by the teacher.
>
> I participate in group activities when required.
>
> I cooperate in evaluation procedures. . .
>
> I tolerate disruption of what I am doing to attend certain required activities.
>
> I work when the teacher has left the room.

Students were asked to rate themselves on a five point scale beginning with "Write a 1 if you almost always have to be told to do the job." While these are largely reasonable expectations, their tone and the lack of corresponding items referring to decisions or choices by the child suggest that Feltin has a rather low ceiling for student decision-making.

Feltin provided a continuum from which she asked the teachers to choose the point that expresses the "most common definition of independence" in their classroom (table 1).

Table 1: Feltin's Study: Teacher selections to express the "most common definition of independence" in their classroom

determining curriculum unassisted	sharing equally with teacher to set curriculum	Making choices from teacher determined program	having some input	deciding <u>when</u> to do assigned work	using didactic materials to complete assigned work
	One teacher	Three teachers			

Four of the six options on Feltin's continuum are teacher-centered, while one leaves no role at all for the teacher. The researcher did not include a more student-centered option that allowed teacher input, such as "choosing work with teacher guidance and preparation." The mere use of the terms "curriculum" and "program" suggests teacher action rather than student action. A less loaded phrase like "work" might have produced different results.

When asked in an interview "Who decides the curriculum?", all four teachers said "the teachers, with input from the students." The two teachers who were not also administrators also included the school as playing a role in curriculum decisions. Two teachers distributed the responsibility for planning the program between teacher and student as 80:20, one gave a proportion of 75:25, and the other 50:50.

In time-sampling of 78 students in the four teachers' classrooms, Feltin found them to be working alone 68% of the time and working with peers 13% of the time. The peers number includes instances when students were working in

parallel but on the same activity. This suggests that "working alone and without assistance" was at least part of the teachers' interpretations of independence.

All the teachers in Feltin's study were AMS trained and teaching in the Seattle area. Perhaps the AMS emphasis on "integrating Montessori's ideas into the American culture" (Neubert 1992, 67) has resulted in more emphasis on working alone and less emphasis on student choice. In addition, teachers who have never observed a class that functions at a higher level of decision-making may not realize that it is possible. If the teacher is working under some of the programmatic obstacles outlined below, he may become convinced that children cannot make decisions as much as Montessori described.

Teacher Skills

Dr. Montessori (1964) related the difficulties some of her trainees had in distinguishing when to intervene in a child's activity. They would stop a child who had "an expression of intense attention" as he rearranged the tables, because they thought he was "too noisy." Montessori would correct them, saying it was the "first manifestation…of movements that were coordinated and directed toward a useful end, and it was therefore an action which should have been respected" (91). The teachers would then, in frustration, sit passively when other children were obviously destructive.

Teachers who face some of the other obstacles described here may not know how to overcome them or may not even recognize them as obstacles. AMS

publications (*Montessori Education: Questions and Answers* 1997*, AMS website*) are vague in many areas. For example, they call for "multi-aged" classes, but do not specify what age levels and how many levels go together. They require "A schedule that allows large blocks of uninterrupted time to problem solve, to see the interdisciplinary connections of knowledge, and to create new ideas," but do not say how long this period should be or whether it is important to allow many different subjects to be pursued during that period. These are two key aspects that are discussed below.

Structural or Programmatic Decisions

The following aspects of Montessori elementary classes contribute to an environment of increasing levels of decision-making. While the absence of any single one does not prevent the possibility of profound student decision-making, it does present an obstacle.

- mixed-age groupings of three to six years
- at least 20 students
- no more or less than two adults
- lengthy (3 hours) uninterrupted work period
- nearly 100% children with Montessori preschool experience
- student access to resources inside and outside the classroom
- little testing and no grades

Groupings of at least three age levels are important in several ways: sustained relationships (child-child, child-teacher, and teacher-parents) have greater possibilities for depth. Older children can pass on the “heritage” of behavior the class has developed. Children have opportunities to see what is ahead and to review what has previously been experienced (Stephenson 1999, *Montessori Education: Questions and answers* 1997, Kahn 1995, Dorer 1997).

It is recommended that classes have at least twenty children and no more than two adults because when there are more adults and fewer children, the children tend to look to adults more than necessary for guidance, discipline, and attention. AMI (website), in fact., recommends 28-35 children, one teacher, and one assistant as the optimal ratio.

Children who have been in Montessori preschool are likely to have learned the work habit and to have learned enough skills to start doing some simple research of their own. Such children can easily help one or two who have not had that experience, however, when the ratio between those with Montessori preschool and those without gets closer, the difficulties multiply.

Making materials in the class available to the students is standard in Montessori classes, however, many neglect the need for children at this level to plan outings individually or in small groups. Elementary level children need "…to establish social relationships in a larger society. The closed school, as it is conceived today, can no longer be sufficient for them. Something is lacking for the full development of their personalities. . ." (Montessori 1973, 12). Lillard

(1996) says, "The 'going out' experiences further the development of the children's independence and will. Without a continuous development of these capacities, children are easily led astray" (105).

Societal Pressure

The educational climate today as portrayed in media, politicians' statements, and current educational jargon may act as a pressure against teachers allowing students to choose what they do and how they show what they learned (Kohn 1993). Specifically, overemphasis on standardized testing, "accountability", and "standards" may act against student choice. Kamii wrote, "As long as educators feel compelled to make themselves look good in short-term evaluations, they will go on with behaviorism and associationism, which produce quick results" (in Neubert 1992, 53).

These concepts, part of a "back to basics" attitude, focus on skill building to the exclusion of all other aspects of development. Montessori education emphasizes education for development of the whole child because education that focuses on just one element does not even do that element justice. For example, a teacher who needs his students to "know" the Pythagorean theorem for an upcoming test is less likely to allow them to "discover" it on their own, the way Montessori lessons intended. A teacher who is overly concerned about the local grade level standards might interrupt a child's intense work on the American Revolution to insist that she study Washington State history. Another might

institute tests to boost her "accountability", thinking observation and portfolios are not sufficient.

Howard Gardner (1991) describes the results of current societal pressures as the "correct answer compromise". Teachers and students settle for being able to parrot the right answer on quantifiable tests rather than spending the greater time needed for students to understand the concepts thoroughly. Both refuse to take "risks for understanding" because all that counts in this atmosphere is whether the student remembered the algorithm the day of the test. Student choice is pointless because the teacher knows the algorithm the student needs and the students' interest or conception is irrelevant.

Are Students Choosing in Montessori Elementary Classes?

If autonomy is a goal of Montessori education, then students should be choosing some portion of their work. Choosing one's work is one of the highest levels of decision-making possible. Ann Burke Neubert (1992) observed teachers and students in ten randomly selected Montessori preschool classes (240 hours total) for her 1980 dissertation. She found "71.6 percent of all activity choices on average were child initiated, and 28.4 percent teacher initiated or teacher assisted." Her work suggests that, at least at the preschool level, children make many of the decisions about what activities to do.

Sharon Dubble Kendall's work is more helpful because she studied elementary classrooms. In "The Development of Autonomy in Children", Kendall

(1993) examined the nature and degree of autonomous behavior among thirty[1] Montessori students because she believes "The development of autonomy must be seen both as a critical aspect of the Montessori method and as an important measure of its effectiveness" (67).

Kendall defined autonomy as "independence, initiative, and self-regulation." Dubble tallied the frequency of behavior types during observations of the classes. Montessori students were observed in independent behavior 95.6% of the time. Independence here referred to activity not directed by the teacher and so included work done alone and work done with other students. One of the measures of initiative was how work was chosen. Observations were categorized one of three ways: *chooses own task*, *chooses among teacher options*, or *assigned by teacher*. Her results for both independence and initiative are shown in Table 2. The students in her study chose their work and carried on without direct involvement by the teacher to a remarkable degree.

Table 2: Kendall's Study of Autonomy in Montessori Elementary Classrooms

Student Activity Type	Percent of total activity observed
Independent individual	54.3
Small group	41.3
Subtotal Independent	95.6
Directed Individual w/teacher	0.4
Small group w/teacher	4.1
Whole class w/teacher	0.0
Subtotal directed	4.4 (rounded)

[1] 16 girls and 14 boys participated in the study. 21 children were white, 7 were African American, and two were Asian American.

Method of Task Selection	Frequency each method was observed (in percents)
Chooses own task	69.7
Chooses among teacher options	12.4
Assigned by teacher	18.0

Kendall found high levels of Montessori student choice, however, she only studied schools related to Association Montessori Internationale in one metropolitan area. Feltin's interviews with four Montessori teachers who had American Montessori Society training raised doubts about the level of choice students have. There may be a training or a regional difference in how Montessori teachers view student decision-making, but these studies do no more than raise the notion.

Student Decision-making Reflects Montessori Philosophy and Theory

When actual classroom practice is consciously informed by educational philosophy and theory, and put into the context of other perspectives, the reasons for particular arrangements become clear. Thus, if students are not choosing some of what they do in a Montessori class, the result is far from Montessori’s philosophical and theoretical underpinnings. All classrooms are operated under some philosophical and theoretical basis, and those who regard student choice as unessential tend to select only the outer trappings of Montessori which fit into their alternate philosophy.

Some believe, for example, that we live in a highly technical society in which a person needs certain skills in order to succeed. It is a teacher’s job to

give children the skills they need. The children don't know what they need, so they couldn't possibly be depended upon to choose wisely (personal communication, Seattle area teacher who was interviewed and guaranteed anonymity but not included in the study because her single-age class did not fit the study criteria.)

This approach assumes that education is only about skills acquisition. It is a process of "writing on a blank slate" or "pouring knowledge into an empty vessel." Knowledge is something the teacher has and the students must get. Kohlberg (Kohlberg and DeVries 1990) called this the cultural transmission model of education.

A teacher who believes this would be inclined to reduce the three age groupings of Montessori education to two or even one age level because it would help the teacher concentrate on a less widely ranging set of "vessels." For the same reason, one would want to reduce the student/teacher ratio as much as possible. The teacher who is concerned about children acquiring a certain set of skills above all else will also find it helpful to have students concentrate on one "fundamental subject" at a time so she can ensure all children are "getting the information." On the other hand, Montessori education's sequentially arranged materials would greatly appeal to a teacher operating under the cultural transmission model.

By contrast, a teacher who supports romanticism (Kohlberg and DeVries 1990), exemplified by Sudbury Valley schools or A.S. Neill's Summerhill, would

scorn the materials while accepting the multi-age grouping and the large block of uninterrupted time to work on a variety of projects. In contrast to the cultural transmission model, romanticism focuses on the inner maturation of the individual. While the individual's perceptions are irrelevant in the cultural transmission model, they are paramount to romanticism. An individual's perceptions unfold naturally with maturation, according to this view.

It might accurately be said that for the cultural transmission advocate, education is skill development for success. For the romanticist, education is life. For the Montessorian, education is *for* life. Montessori education rests on a cognitive-developmental theoretical and philosophical base as described by Kohlberg and DeVries.

> In this view, knowledge evolves from an internal psychological core through an interaction or dialogue with the physical and social environment rather than by direct biological maturation or direct learning of external givens from the environment (Kohlberg and DeVries 1990, 7).

Knowledge is not the only aim of education; instead, development is the aim of education. Montessori's view of development is holistic in two ways: she considers all aspects of development (physical, emotional, intellectual, and moral) and all phases of life (Grazzini 1996).

Montessori deplored the isolation of family, school, and university because it pigeonholes aspects of development that are best understood in relation to one another. The family should not be left to develop the child's moral character without thought for the child's intellect and support from the school. Likewise,

the school cannot properly develop the child's intellect without thought for her moral development and support from the family.

Montessori not only criticized the way society subdivides development, she ridiculed the fragmented treatment of education at different age levels (Grazzini 1996). Montessori (1984) said, "The world of education is like an island where people, cut off from the world, are prepared for life by exclusion from it". As a result of Montessori's holistic view of development and desire to educate for living rather than for getting along in an isolated school setting, she developed a method of education that applied equally well to all phases of life. She preferred not to use the term "method", in fact, but spoke of "help given in order that the human personality may achieve its independence" (Montessori 1955).

Children must make decisions, according to this model of education, because knowledge is something the individual must construct within himself and not the external information conceived by the cultural transmission model. They must also make decisions because knowledge is part of the larger scheme of development, to which the importance of decision-making was explored in previous sections.

Unlike the romanticists, however, Montessori advocates adult guidance for children. The process of development is not wholly an individual one; it happens in the context of the teacher’s guidance, and the social and physical environment.

> The aspects of [Montessori's] thinking that have not been fully understood, I contend, are the importance she attached to the child's developing autonomy as well as her rare understanding of the self-constructive nature of the child's learning and the psychological and social matrix necessary to support it (Loeffler 1992, 112).

The value Montessori places upon an adult's help suggests agreement with the concept of "scaffolding" that emerged from Vygotsky's work. A more knowledgeable person can build a structure that will help a child achieve more than if left to himself to wrestle with a concept (Wood 1988). The prepared environment of the Montessori setting may be thought of as scaffolding that will aid the child in self-construction.

Seeing some of the differences between Montessori and models based on cultural transmission or romanticism helps form a context in which to place the importance of student decision-making and understand the obstacles to decision-making sometimes found in Montessori programs. To the extent that Montessori classes are not seeking increased student decision-making, they are not following the developmental model upon which Montessori education is based.

Summary

Montessori education calls for the teacher to prepare an environment conducive to children's development of "will." Children develop their will by making many small decisions. At the same time, children whose will is not fully developed are unable to truly choose freely. Responsibility is placed on the teacher to discern when and how to provide opportunities for student choice. A

teacher's decisions must be based on observations of individual children making choices in a prepared environment.

Children must have experience making choices in order to become autonomous, which is the primary aim of Montessori education. When children make choices, the process of normalization is set in motion. The child who exhibits characteristics of normalization is on her way to achieving autonomy.

The literature on impressions of Montessori education, in addition to research about student choice in Montessori elementary classrooms, suggests the existence of two approaches. One approach is more directive and may be associated most often with the American Montessori Society. The other approach appears to allow children to make more choices, and may be associated with the Association Montessori Internationale. The level of choice in a particular classroom may be influenced by teacher attitudes or beliefs, teacher skills, structural or programmatic decisions, and societal pressure.

CHAPTER 3: METHODOLOGY

This descriptive study examined the academic choices students are responsible for making in Montessori elementary schools. It discovered how teachers help students become better decision-makers and the obstacles (whether self-imposed or externally imposed) teachers face in providing greater freedom for their students to choose. I interviewed twelve teachers in their classrooms after a 30-minute observation of their class.

In this chapter, I describe the participants and school sites. I tell how the observations and interviews were conducted. My procedures for developing the analysis tool, the interview protocol and the observational method are explained in relation to the changes made based on the pilot testing. Finally, I describe the data management system.

Participants and Sites

Participants were selected from all Montessori schools within 25 miles of Seattle or Portland which had an elementary program older than three years. Portland was included to balance the lack of many well-established AMI elementary programs in the Seattle area. The three year minimum provided a greater likelihood that the classes were not challenged by initial start-up compromises such as a small class, an imbalance of ages, a teacher who is training concurrently, or a large proportion of non-Montessori experienced students. With "initial start-up phase" removed as a variable, obstacles to free

choice which arose for other reasons stood out better. Classes which did not have a three year age span were not included because these are considered to be transitional or compromised Montessori elementary programs (Boehnlein 1988, Lillard 1996, Dorer 1997, Kahn, Dubble and Pendleton 1999.)

Participants were selected who had taught elementary level Montessori at least three years at their current school. Teachers who have guided students through a full three years have had a better opportunity to observe a progression of student responsibility in individual children. Participants were certified for elementary level by an Association Montessori Internationale (AMI) or American Montessori Society (AMS) training program because those were the only two affiliations with individuals who met the study criteria.

Thirty-four teachers fit the study criteria. Twenty had AMS elementary training and fourteen had AMI elementary training. Six participants from each training background were chosen using a randomized computer model from Microsoft Excel. More information about the participants and their schools will be given in Chapter 4: Results.

Procedure

The 30 minute observations of each participant's class were recorded in narrative form, using the observation guide (Appendix A) developed for this study. Particular observation points were chosen based upon which aspects of the study questions could be discovered from observation. In addition, the

observation provided both a context for understanding what teachers said in the interviews and an opportunity to corroborate their statements. The observations were non-participatory because this was the least obtrusive method and Montessori teachers would be far less likely to participate in the study if they knew I wanted to interact with the children during the observation.

Following the observation (in most cases) each participant was interviewed for an hour. Participants were asked to fill out a short demographic questionnaire (Appendix B) at the beginning of the interview. This covered the participant's experience, training, and affiliation. When allowed, I audio recorded the interviews. Upon starting the tape, I explained the purpose of the study and then began asking the questions.

The same questions were used in each interview (Appendix C) in order to provide a basis for comparing answers. However, some flexibility was maintained to ask clarifying questions if needed to better understand participants' responses. I chose semi-structured interviews as the primary source of data because "the face-to-face encounter provides the richest data source for the human science researcher. . ." (Polkinghorne 1983). In addition, the one-on-one interview made it easier to distinguish different individuals' meanings for words central to the study: independence, choice, autonomy, and freedom.

The Pilot Study

Both the interview and observation protocols were tested with four participants who taught at three schools in the Seattle area. One school was located in a middle income suburban neighborhood, one was in a mixed-use, lower income area, and the remaining school was on the border between an upper income neighborhood and a lower income neighborhood. The teachers all came from middle class backgrounds. Three were Caucasian and one was African American. Their students ranged from 66% of non-European descent in one class to 39% of non-European descent in two classes and 24% non-European in the remaining class. The following section will describe the participants in the pilot study, some of the results, and the ways the instruments were changed.

Participant one was AMS certified for preschool level and had taught that level for nine years. She was not certified for elementary level but had taught lower elementary (6-9 year-olds) for six and a half years. She was currently teaching a lower elementary class in a private school with a mature program (over 15 years old).

Participant two was AMS certified for preschool and lower elementary and had taught at least five years at elementary level. She was currently teaching a lower elementary class at a public school in its second cycle of elementary level. Participant three was AMI certified for elementary level. She had two and a half years' experience at elementary level and was currently teaching seven, eight and nine year olds in a new private school. Participant four was AMS certified for

lower elementary level and had taught for four years. She was currently teaching five, six, and seven year olds at a new private school.

Listening to conversations during the classroom observation was difficult but yielded rich sources for understanding how student decisions were viewed. For example, I recorded the following exchange:

Child 1: See, I've done all these (points to zoology poster).

Child 2: I've already did my bird report.

Child 1: What's after vertebrates?

From this exchange I knew the children were expected to follow a sequence that they were aware of. I decided to focus on conversations more fully in the final study observations. Drawing the classroom layout did not prove very useful and I decided just to note what was available on the shelves for the final study observations.

Interview responses suggested the interview in general would help answer the study questions. Many changes were made, however, that would focus responses better (see comparison of pilot and final interview form, Appendix D.) The whole group of questions about students who were skilled or unskilled at making decisions was scrapped because it failed to maintain focus on the study questions. Participants were led to speculate more about aspects of student decision-making that were beyond their control, such as ADD and homelife. Questions were changed so the participants would talk more about their own

thoughts and actions with regard to student decision-making. Following are some of the preliminary results that helped shape the final interview.

The main characteristic of children who have trouble making decisions is lack of confidence, according to all four participants. Even if they know what to do, these children need the proximity of the teacher in order to keep going. They need constant reassurance that they are doing it right and frequent repetition of how to go about their task.

All four participants thought the child's home environment had something to do with how well they made decisions at school. Participant three said, "I think the more the home and school work together with the same kind of expectations for the children the easier it is for them to adapt." She gave an example of a boy whose mother did everything for him at home. When he was expected to do things for himself at school, he refused, saying his mom would call the teacher. The family ended up leaving the school because they did not agree with the school's expectations.

Three participants thought there was less choice offered at the elementary level than at preschool level and that it was appropriately so. They agreed the reasons for this include increased academic expectations and parent pressure. (Participant one was not asked about it.)

The final interview was structured to elicit thoughts like these with fewer questions, thus maintaining a focus on the participants' decisions in relation to what they observed.

Responses from the pilot interviews suggested that the primary area of debate about student decision-making would be: to what extent and in what way should we allow students freedom in selecting **what** they do? All four participants in the pilot allowed students to choose where to work, which order to do the work, who they work with (for the most part), and how long to spend on a task. All four gave assignments. The differences were in the extent to which they allowed student input.

Participants one and four conferred with each child weekly about what to put on their contracts. Participant three would have liked to, but felt unable to take the time because she did not have an assistant in the classroom. She did make sure that students "who are capable of handling it" had time to work on their own choices after they finished assigned work. Participant three made a point of keeping the contracts pretty full, but allowed occasional choice of work. Her decisions may also have been influenced by the fact that she did not have an assistant.

In addition to collapsing the group of questions about good and poor decision-makers into one that emphasized the teachers' assessment rather than causes outside their control, other questions were reworded to be more clear or precise. For example, instead of asking "How do you establish your expectations so the children know what they are supposed to do?" I asked, "How do the students know what to do during the work period?" Instead of, "Describe a particular work period in terms of decisions you and the students make" I asked,

"What are the students' responsibilities with regard to planning and reporting what they do? What are your responsibilities?"

The Final Interview Form

The final interview questions were assessed using Kvale's (1996) advice that "A good interview question should contribute thematically to knowledge production and dynamically to promoting a good interview interaction" (129). Often the information sought overlapped with several questions, but this was important because most of the questions were indirect so as to avoid leading questions. Overlapping helped ensure that the information sought was gained.

Student demographics and the daily schedule were the first two questions because they provide the setting in which the students' and teachers' decisions are taking place. They were relatively easy questions to get participants started. Question two indicated whether the class had a block of time dedicated to individual pursuits and gave a sense of how much subjects are separated for study.

Question three was intended to establish what controls the teacher places on student work and which decisions students make. The presence and nature of a checklist or contract was discovered without using a term which might bias the answer or make an uncomfortable distinction between the interviewer's experience and the participant's. Also, the participant was asked to think about the students' experience of decision-making here with a factual question, which

was relatively easy to answer. Participants told about students' freedom of movement as well as choices regarding work companions, scheduling tasks, work space, and type of work. Clarifying follow-up questions were asked where needed. For example, if a participant said something about the student "taking work to his desk" without specifying whether the desk was assigned, I asked whether desks were assigned.

The fourth question gathered more information about whatever checklist system, if any, the teacher uses. It also elicited information about how the participant uses lessons. The students' and teachers' responsibilities for planning and reporting (question five) were sought in order to learn how collaborative those processes are. If the participant focused only on the short term, I asked about longer-term goals and reports such as parent conferences.

Previous questions asked about responsibilities and decisions children made; question six introduced the word "choices" for the first time. It elicited similar information with a very different approach. Earlier questions focused on what freedoms the teacher gives; this question focused on what restrictions the teacher placed on freedom.

The next two questions prepared the participant for question nine by getting him to think about student decision-making as a skill and a process. The first of this group, question seven, was more difficult than previous ones because it required participants to evaluate their students in a way they may not have previously done very directly. Participants were asked to talk about how

competent different individuals are in making decisions. Question eight asked participants to think about how an individual child's skill in making choices changes over the three years in that class. The question was worded to allow the participant to answer in terms of patterns he sees or to give specific examples that illustrate what an individual process it is in the participant's view. Question nine was the most difficult to answer up to that point in the interview. It asked for the teacher's assessment of his own problem-solving behavior. Participants who had difficulty answering were asked to respond in terms of their experience with a particular student.

The tenth through fourteenth questions focus on obstacles teachers face in providing opportunities for students to choose. They broaden the focus from student and teacher behavior to the role of others. The tenth question asks what the participant thinks ought to be different and what the obstacles are to making it so. The remaining questions ask for the participant's thoughts regarding possible obstacles: first the teacher's beliefs about children's abilities to make decisions, then possible outside influences such as parents, administration, and cultural attitudes toward education. Questions eleven and twelve gave participants an opportunity to name outside influences themselves. Question thirteen asked them specifically to consider parents. Finally, participants were asked to consider the influences of their training and their experience on their own beliefs about children making decisions.

Data Management System

I transcribed the audiotapes of the interviews. Analysis of the transcripts included the following steps adapted from Kvale (1996):

1. Read through the transcripts to get a general picture.
2. Summarized each participant's response to one question. Completed a similar page for every question.
3. Created tables for viewing the data using categories selected from the summarizations. Wherever possible, I included the participants' exact words so the reader could see how I arrived at my interpretation.
4. Examined the data from both interviews and observations to distinguish the levels of agreement with each point on the checklist that was developed for data analysis. The checklist and the process by which it was developed is described below.

The Checklist

The "Checklist for a Montessori Elementary Class that Fully Incorporates Student Decision-making" (Appendix E) made my perspective as a researcher explicit, which served several purposes: it helped me develop an interview and observational protocol that would answer the study questions, and provided a way to compare the data from different participants. In addition, the checklist

was one way to "explicate my procedures" (Kvale 1996) and provide a "control of analysis". As Giorgi explains (in Kvale 1996),

> Consequently, the control comes from the researcher's context or perspective on the data. Once the context and intention becomes known, the divergence is usually intelligible to all even if not universally agreeable. Thus the chief point to be remembered with this type of research is not so much whether another position with respect to the data could be adopted (this point is granted beforehand), but whether a reader, adopting the same viewpoint as articulated by the researcher, can also see what the researcher saw, whether or not he agrees with it. That is the key criterion for qualitative research. (209)

The checklist was developed in two stages: the checkpoints were written in tandem with the observation guide and interview questions. Later, each checkpoint was assigned a point value based on the data. The way points were assigned is described in Appendix F, "Points assessment for the checklist."

In order to create the checklist, I first examined a similar list created by Michael Dorer, director of The Center for Contemporary Montessori Programs in Minneapolis. He presented this list in a 1997 AMS workshop called "Spontaneous Activity in Elementary Montessori Classrooms." The only points on Dorer's list that did not appear in some way on mine were "Self created problems" and "open lesson policy". Dorer believes that, after a child learns a new technique, she should be able to create her own problems to practice the technique's application. He also believes any child should be able to attend any lesson, regardless of the teacher's perception of the child's readiness. I decided not to include these two points because I thought they would be more controversial than the others.

I developed the list further by consulting several AMS pamphlets (1991, 1997), *Montessori Today* (Lillard 1996), the AMI-based Michael Olaf catalog (Stephenson 1999), and AMI resources from the North American Montessori Teachers' Association (Verschuur 1998, Kahn, ed. 1995, Boehnlein 1988). The most difficult checkpoints to decide were those involving child to adult ratio and number of students in the class. AMS resources only mentioned either point in one place (Basic Characteristics 1991): they advocate a ratio of 20:1. Several AMI resources (Stephenson 1999, AMI website no date) recommended having 28-35 students in the class, with one teacher and one assistant. Lillard (1996) mentioned having 30-35 students, with no reference to an assistant. This amounts to a ratio of 14:1 up to 17:1. Boehnlein (1988) used 20-25 children to one teacher and one assistant as part of her criteria for "authentic Montessori". Wentworth (1999) concurred with that number, while recognizing that Dr. Montessori enthusiastically advocated having more students than that in the class.

Having never personally seen a Montessori class with more than 25 students, I decided to use the widest ratio range implied by the AMI resources and the minimum student number implied by the AMS pamphlet (1991) as well as the AMI resources mentioned above. This resulted in my using bare minimums for both checkpoints. The significant omission created by this decision was the AMI stipulation that there be exactly one teacher and one adult assistant in the class.

I sent the checklist to experts from AMS and AMI, the organizations with the most developed and documented criteria for authentic Montessori. Cheryl M. Smith, AMS Director of Professional Services, had the following comments which were incorporated into the checklist:

1. Add computer access along with community resources
2. Assessment and documentation of student progress (via portfolios) is shared with parents during scheduled conferences that are conducted by the student. The teacher is present and teaches students how to prepare and present the conference.

Smith also responded that contracts that are created in the context of teacher/student collaboration are useful. On the checklist, I put the words "adult created" in bold to emphasize that it is this aspect which is objectionable.

Dr. Margaret Loeffler[2] found the first two factors to be contradictory. She pointed out that, "If it is collaborative planning between teacher and student, they should both be aware of the plan and the student should 'own' it." I recognize a distinction between a teacher's plan and a student's plan. Teachers have state or school curriculum objectives and a logical sequence for learning concepts in mind. Students have their own interests and their current understanding built upon their own experiences in mind. Collaborative planning involves reconciling the two perspectives. Dorer (1997) argues that simply

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2 Loeffler is the founder and co-director of the Teachers' Research Network, and faculty member and academic director of the master of education in early childhood program at Oklahoma City University, which offers an AMS credential.

making students aware of the teacher's sequence is tantamount to telling them that is how their learning must proceed. I let both checkpoints stand, but added to the third checkpoint that children are "made aware of outside expectations (benchmarks, standards)."

Loeffler also suggested omitting the word "exclusively" from number eight. Number eight no longer reads, "Subjects are linked rather than exclusively being separated for study." Finally, Dr. Loeffler suggested marking each point on a three point scale: always, sometimes, and never, "since it's doubtful if you will find all these all the time, in a classroom." I decided against using a preset scale, but to decide how to scale each checkpoint based on the data from the interviews and observations. This promoted more honest interpretation of the participants' meaning as opposed to fitting them into my categories.

Checkpoints were not weighted according to how important they were for student decision-making because I had no basis for knowing which were more important than others. Instead, points were assigned on the basis of how many different levels were present in the data. For example, with the first checkpoint, participants reported five different levels of student involvement in planning.

Study Limitations

This study only included the two types of training found in the population: other training organizations may present very different perspectives of student decision-making in Montessori classes. The study is also limited by my possible

biases, having been trained through an American Montessori Society program and being more familiar with that organization. In addition, the demographics of the classes and participants limits the generalizability of the study: only one participant was male, all but one participant was white; the classes were similar to some of the pilot study classes (between 34% and 61% were white, the rest were mostly from Asian backgrounds, some African American, and very few from other backgrounds.)

CHAPTER 4: RESULTS

The purpose of this study was to discover which academic decisions students make in Montessori elementary classrooms, ways in which teachers help students become better decision-makers, and the reasons for particular limits placed on students' freedom and responsibility. I observed each participant's class and interviewed the participant. After transcribing the interviews, I arranged the participants' answers in tables for easier comparison. I also filled out a "Checklist for a Montessori Elementary Classroom that Fully Incorporates Student Decision-making" for each participant to facilitate comparison with each other and with what was found in the literature. The first sections of this chapter describe the participants and school settings. Next, the scores on the checklist are discussed. Finally, the responses to interview questions are reported in three groups, based on which of the three research questions they speak to most.

Participants and Settings

Thirty-four teachers fit the study criteria[3]. Twenty had American Montessori Society (AMS) elementary training and fourteen had Association Montessori Internationale (AMI) elementary training. Six participants from each training background were chosen using a randomized computer model from

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[3] Teachers had taught elementary level Montessori for at least three years at their current school and were certified for the level they were teaching. Participants' schools had an elementary program at least three years old. Participants' classes included a three year age range.

Microsoft Excel. Eleven participants were of European descent and one was from India. Participants represented eight schools: seven were private and one was public. Seven teachers had lower elementary classes and five had upper elementary classes. Table 3 compares the participants' training and experience. They ranged in elementary level experience from three to twenty-one years. Only three participants had taught elementary level Montessori at a different school prior to their current one. Five had taught Montessori at the 3-6 age level.

Table 3: Participants' Training and Experience

	Current school (years)	Lower el (years)	Upper el (years)	Total el (years)	3-6 level (years)	Training 3-6, 6-9, 9-12 (years)	Non-Montessori (years)
1	11	11	0	11	8	AMS, AMS	0
2	28	18	0	18	10	IAPM, AMS	0
3	8	15	0	15	0	None, AMS	Public 7
4	4	4	0	4	0	None, AMS	Private 8
5	17	12	9	21	7	AMS, AMS, Spr Vall.	0
6	6	3	0	3	0	None, AMS	0
7	15	15	3	18	0	None, AMI, AMI	0
8	5	3	2	5	0	None, AMI, AMI	
9	22	9	9	18	0	AMI, AMI, AMI	Private 9
10	4	4	4	8	13	AMI, AMI, AMI	0

	Current school (years)	Lower el (years)	Upper el (years)	Total el (years)	3-6 level (years)	Training 3-6, 6-9, 9-12 (years)	Non-Montessori (years)
11	5	5	0	5	0	None, AMI	0
12	14	7	7	14	3	AMI, AMI, AMI	Private 3

Table 4 displays data on the students in each participant's class, including the number of each age level and gender. It also shows how many students in each class had no Montessori preschool experience. Participants had between 18 and 42 students in their class, the average being 24 students (not including the 42-student class.) Only participants four and nine had significant numbers of students with no Montessori preschool experience. All classes were well-balanced in gender except for participants' four and six. Almost half the classes had a large proportion of one age level in comparison to the others, however.

Table 4: Student information for each class

	Boys	Girls	Total	1st year	2nd year	3rd year	Number who had no Montessori preschool
1	≈ 10	≈ 10	20	6	8	6	About 1
2	≈ 9	≈ 9	18	8	7	3	About 1
3	14	15	29	10	8	11	3
4	15	10	25	9	7	9	6
5	≈ 14	≈ 14	28	8	7	13	0
6	≈ 9	≈ 17	26	11	6	9	0
7	≈ 13	≈ 12	25	9	10	6	2 at most
8			21	7, 5	6	3	Almost all came through their program, which was new then

	Boys	Girls	Total	1st year	2nd year	3rd year	Number who had no Montessori preschool
9	10	12	22	10	5	7	No more than 7, probably fewer
10	11	13	24	7	8	9	2
11	21	21	42	23	12	9	0
12	12	12	24	14	3	7	1

The Checklist Results

A "Checklist for a Montessori Class that Fully Incorporates Student Decision-making" (Appendix E) was developed in order to make clear my procedures and viewpoint. The checklist allows readers to see specifically what "student decision-making" means in this study, and to compare each class not only to the ideal put forth in the study but to each other. Each participant's score will be reviewed in order, from the lowest to the highest. A low checklist score means a number of factors combined to provide a less conducive environment for student participation in decision-making. Likewise, a high checklist score means that participant's class provides a variety of opportunities for student participation in decision-making. The areas which influenced the score most will be highlighted.

Participant Four

Participant four's lower elementary class has significantly more boys than girls. They are fairly well balanced across the age levels, but six of the twenty-five had no Montessori preschool experience (Table 4). Participant four has no assistant, even though the program is over nine years old and well past the

start-up phase. Although he has eight years' experience teaching elementary level in a non-Montessori private setting, participant four has had fewer years of Montessori elementary experience than most participants, and lacks the full preschool level training as well as preschool experience (Table 3). His morning work period is broken by a daily fifteen minute recess, as well as PE and music three days a week. He has further broken up the morning work period into math time and language arts time. He is mandated by the school district to give many tests, "…in math alone, since I have three grade levels, I'm expected to give fifteen different assessments per grade level, which would be a total of forty-five assessments." These are many of the reasons for a checklist score of eight (Table 5).

Table 5: Participant four

Total	Possible	Description
1	5	Planning what students will do is a collaborative process between students and teachers. Deciding what to do at a given moment is the student's responsibility.
0	3	While the teacher has a sequence for work in mind, the students are not made particularly aware of it. Thus, worksheets, sequenced task cards, and **exclusively adult created** "work plans" are not used.
0	2	Children are able to follow their own interests but also made aware of outside expectations (benchmarks, standards).
0	2	Students choose where they work and who they work with most of the time.
1	3	Assessment of which skills a child has mastered is primarily done through observation and portfolios--not tests.
1	3	Work is shared with parents during scheduled conferences that are conducted by the student. The teacher is present and teaches students how to prepare and present the conference.

Total	Possible	Description
0	1	There is a lengthy, uninterrupted work period (3 hours) daily, during which many subjects and activities are happening.
0	2	Subject areas are linked rather than being separated for study.
0	2	A wide variety and number of lessons are offered which suggest options for further study.
0	2	Stories, drama, music, and art are primary ways to "spark the child's imagination."
1	1	Materials for the students' use are displayed on shelves accessible to the students. Some are traditional Montessori materials, others are not. (For example, computers did not exist in Montessori's day but are part of a complete set of materials today.)
0	1	Students are able to plan their own outings to follow their interests outside the classroom.
0	2	Immediate feedback is provided that is autonomous whenever possible.
2	3	Students keep records of how they spend their time.
0	1	The usual adult/student ratio is in the range of 1:10 to 1:17
1	1	There are at least 20 children in the class.
1	3	Parents are involved in that they are welcome in the classroom and kept aware of the principles under which the class is functioning.
8	37	Totals

Participant Five

Participant five has taught elementary Montessori more years than any other participant, and has preschool training and experience as well (Table 3). Her class is in a well-established (about 13 years old) elementary program. She emphasizes personal responsibility in her class, and this takes form primarily in the time management required to complete their weekly list of assignments. Sixth year students also have a large-scale project, called “the island project”, in which they are responsible for many aspects over the course of a year.

Participant five retains teacher control in many areas of this study's checklist, however. For example, students do science on Fridays only. They choose which topic they will study from a list for each grade level, however, they are told exactly what to do in order to "cover" that topic. The teachers decide what will be studied each year in history, although students have choices within that framework. Personal responsibility which might emphasize student choice is instead channeled into a tight teacher-made framework. While this participant's "structuralist" style is not inherently against student choice, her near-exclusive use of this style limits how far students can go in taking responsibility for their learning. Her score is fourteen (Table 6).

Table 6: Participant five

Total	Possible	Description
2	5	Collaborative planning
0	3	Fuzzy sequence
0	2	Children's interests plus outside expectations
0	2	Where and who
3	3	Assessment
1	3	Parent conferences
0	1	Lengthy, uninterrupted work period
0	2	Subject areas linked
1	2	Lessons as offerings
1	2	Spark the imagination
1	1	Accessible materials
0	1	Going out program
1	2	Immediate, autonomous feedback
1	3	Students keep records of how they spend their time.
0	1	Adult/student ratio in the range of 1:10 to 1:17
1	1	At least 20 children in the class.
2	3	Parent involvement
14	37	Totals

Participant One

Participant one's class is well-balanced in gender and age, with nearly every student coming from a Montessori preschool background. The elementary program has been going for about 15 years. Several programmatic decisions, however, may be keeping her class from progressing to a higher level of decision-making. With only 20 students, she is skimming the low end of acceptable numbers. Her work period is shorter than recommended.

The most significant factor, perhaps, is the dichotomy between teacher-assigned work, which is done during the morning work period, and choice time, in which students may pick their own activity after they have completed the teacher's assignments. Further separating what children must do from what they want to do, the students are rewarded for completing homework—sometimes with a "no-homework" night.

Participant one believes her class is functioning at a higher level than many, and at a level with which she is satisfied. The many places on the checklist in which she got partial points indicates her emphasis on teacher responsibility for student progress rather than students learning to take responsibility for their own, resulting in a score of 17 (Table 7).

Table 7: Participant one

Total	Possible	Description
2	5	Collaborative planning
1	3	Fuzzy sequence
0	2	Children's interests plus outside expectations
2	2	Where and who

Total	Possible	Description
2	3	Assessment
1	3	Parent conferences
0	1	Lengthy, uninterrupted work period
2	2	Subject areas linked
1	2	Lessons as offerings
0	2	Spark the imagination
1	1	Accessible materials
0	1	Going out program
1	2	Immediate, autonomous feedback
1	3	Students keep records of how they spend their time.
1	1	Adult/student ratio in the range of 1:10 to 1:17
1	1	At least 20 children in the class.
1	3	Parent involvement
17	37	Totals

Participant Six

Participant six's class has twice as many girls as boys and twice as many first years as second years, however, all have had Montessori preschool experience (Table 4), and the class is in a well-established program. Instead of having an assistant, participant six co-teaches with one other adult. Participant six assisted at the same school for three years before taking a teaching position three years ago (Table 3). Her score of nineteen (Table 8) reflects a premise of increasing student responsibility within an fixed structure created by the teacher. When students have taken all the responsibility possible within that structure, they have "arrived" at optimal decision-making.

Table 8: Participant six

Total	Possible	Description
2	5	Collaborative planning
2	3	Fuzzy sequence
0	2	Children's interests plus outside expectations

Total	Possible	Description
2	2	Where and who
2	3	Assessment
1	3	Parent conferences
0	1	Lengthy, uninterrupted work period
2	2	Subject areas linked
1	2	Lessons as offerings
1	2	Spark the imagination
1	1	Accessible materials
0	1	Going out program
1	2	Immediate, autonomous feedback
1	3	Students keep records of how they spend their time.
1	1	Adult/student ratio in the range of 1:10 to 1:17
1	1	At least 20 children in the class.
1	3	Parent involvement
19	37	Totals

Participant Two

Participant two's class is well-balanced in gender but has a high proportion of first years and hardly any third years. Almost all her students had some Montessori preschool experience, and this class is in a well-established elementary program. This year, there is a newly hired teacher as well as the participant and the assistant in a class with only 18 children. This class has a dichotomy between work time and free choice time: in the morning, students may choose from among activities traditionally deemed "work." When they have done three or four of these, then they may choose activities that (presumably) they would rather do. The checklist score is 20 (Table 9).

Table 9: Participant two

Total	Possible	Description
3	5	Collaborative planning
3	3	Fuzzy sequence

Total	Possible	Description
1	2	Children's interests plus outside expectations
2	2	Where and who
2	3	Assessment
1	3	Parent conferences
0	1	Lengthy, uninterrupted work period
2	2	Subject areas linked
1	2	Lessons as offerings
0	2	Spark the imagination
1	1	Accessible materials
0	1	Going out program
1	2	Immediate, autonomous feedback
1	3	Students keep records of how they spend their time.
1	1	Adult/student ratio in the range of 1:10 to 1:17
0	1	At least 20 children in the class.
1	3	Parent involvement
20	37	Totals

Participant Three

Participant three's lower elementary class is well-balanced in gender and age. Almost all her students had some Montessori preschool experience (Table 4). Participant three is the only participant with public non-Montessori elementary experience (Table 3). Her scores are very similar to participant two's, except in the following areas participant three received a higher score: Student record keeping, 20 children minimum, parent involvement.

Table 10: Participant three

Total	Possible	Description
3	5	Collaborative planning
2	3	Fuzzy sequence
1	2	Children's interests plus outside expectations
2	2	Where and who
2	3	Assessment
1	3	Parent conferences

Total	Possible	Description
0	1	Lengthy, uninterrupted work period
2	2	Subject areas linked
1	2	Lessons as offerings
0	2	Spark the imagination
1	1	Accessible materials
0	1	Going out program
0	1	Immediate, autonomous feedback
3	3	Students keep records of how they spend their time.
1	1	Adult/student ratio in the range of 1:10 to 1:17
1	1	At least 20 children in the class.
2	3	Parent involvement
22	37	Totals

Participant Eight

Participant eight's class is the only one with four age levels: There are more third years and fewer sixth years in her class than the other levels. Her sixth year students form the leading edge of that school, so it is newer than the other schools in the study. Participant eight does not have an assistant during the morning work period. She is one of only two participants who reported that they went to a Montessori school as a child. Participant eight's score is identical to participant three's except eight received more for having a lengthy work period and three received more for having a good adult/student ratio. Participant eight's score is 22 (Table 11).

Table 11: Participant eight

Total	Possible	Description
3	5	Collaborative planning
2	3	Fuzzy sequence
1	2	Children's interests plus outside expectations
2	2	Where and who
2	3	Assessment
1	3	Parent conferences
1	1	Lengthy, uninterrupted work period
2	2	Subject areas linked
1	2	Lessons as offerings
0	2	Spark the imagination
1	1	Accessible materials
0	1	Going out program
0	2	Immediate, autonomous feedback
3	3	Students keep records of how they spend their time.
0	1	Adult/student ratio in the range of 1:10 to 1:17
1	1	At least 20 children in the class.
2	3	Parent involvement
22	37	Totals

Participant Nine

Participant nine's class is well-balanced in gender, but almost half is fourth-year students. No more than seven have had no Montessori preschool experience, but this number is larger than most of the other classes. Most structural decisions for this class favor student decision-making. Students in this class had lots of responsibility. This was one of the few classes in which students were present at parent conferences. It was not clear that students had much leeway for following up lessons their own way, however, and command cards were used extensively as well. The score is twenty-eight (Table 12).

Table 12: Participant nine

Total	Possible	Description
4	5	Collaborative planning
2	3	Fuzzy sequence
2	2	Children's interests plus outside expectations
2	2	Where and who
3	3	Assessment
2	3	Parent conferences
1	1	Lengthy, uninterrupted work period
2	2	Subject areas linked
1	2	Lessons as offerings
1	2	Spark the imagination
1	1	Accessible materials
1	1	Going out program
0	2	Immediate, autonomous feedback
3	3	Students keep records of how they spend their time.
1	1	Adult/student ratio in the range of 1:10 to 1:17
1	1	At least 20 children in the class.
1	3	Parent involvement
28	37	Totals

Participant Eleven

Participant eleven's class is the largest, at 42. It is evenly split between boys and girls, but first-years make up over half of the group. Participant eleven is one of three Montessori certified teachers, in addition to an assistant, in the room. Even though the class fit the study criteria, the participant indicated many decisions about the class are influenced by this being a transitional year for them. Despite these caveats, the class received a thirty on the checklist (Table 13).

Table 13: Participant eleven

Total	Possible	Description
5	5	Collaborative planning

Total	Possible	Description
3	3	Fuzzy sequence
1	2	Children's interests plus outside expectations
2	2	Where and who
3	3	Assessment
1	3	Parent conferences
1	1	Lengthy, uninterrupted work period
2	2	Subject areas linked
2	2	Lessons as offerings
1	2	Spark the imagination
1	1	Accessible materials
1	1	Going out program
1	2	Immediate, autonomous feedback
3	3	Students keep records of how they spend their time.
1	1	Adult/student ratio in the range of 1:10 to 1:17
1	1	At least 20 children in the class.
1	3	Parent involvement
30	37	Totals

Participant Seven

Participant seven's class is gender balanced but is slightly short on sixth years. Almost all have had Montessori preschool experience, and the program is mature. This is only the participant's third year at upper elementary level, and she speculated that she might "mellow" with experience. This seems to mean taking less direct control as a teacher and worrying less about public school curriculum expectations, based on what she said. Her class scored thirty-one (Table 14).

Table 14: Participant seven

Total	Possible	Description
4	5	Collaborative planning
3	3	Fuzzy sequence
2	2	Children's interests plus outside expectations

Total	Possible	Description
2	2	Where and who
3	3	Assessment
1	3	Parent conferences
1	1	Lengthy, uninterrupted work period
2	2	Subject areas linked
2	2	Lessons as offerings
1	2	Spark the imagination
1	1	Accessible materials
1	1	Going out program
0	2	Immediate, autonomous feedback
3	3	Students keep records of how they spend their time.
1	1	Adult/student ratio in the range of 1:10 to 1:17
1	1	At least 20 children in the class.
3	3	Parent involvement
31	37	Totals

Participant Twelve

Participant twelve has twice as many fourth years as sixth years, and even fewer second years, but the class is gender-balanced and almost all of them come from a Montessori preschool background. Given the spectacular level of decision-making in some aspects of this class, the lack in other areas is surprising—awareness of the benchmarks, use of command cards, and taking part in parent conferences, in particular. The participant did not consider those to be important. The score for this class is thirty-two (Table 15), and is the highest score any participant in the study received.

Table 15: Participant twelve

Total	Possible	Description
5	5	Collaborative planning
2	3	Fuzzy sequence
1	2	Children’s interests plus outside expectations

Total	Possible	Description
2	2	Where and who
3	3	Assessment
2	3	Parent conferences
1	1	Lengthy, uninterrupted work period
2	2	Subject areas linked
2	2	Lessons as offerings
1	2	Spark the imagination
1	1	Accessible materials
1	1	Going out program
1	2	Immediate, autonomous feedback
3	3	Students keep records of how they spend their time.
1	1	Adult/student ratio in the range of 1:10 to 1:17
1	1	At least 20 children in the class.
3	3	Parent involvement
32	37	Totals

Participant Ten

Participant ten's class is gender and age balanced. Almost all the students have had preschool Montessori experience. Her school is the only one in the sample that did not have a preschool program of its own. Participant ten is one of only two participants who reported that they went to a Montessori school as a child. She taught at preschool level more years than any other participant.

Participant ten was the only one to mention in the interview that stories, drama, music, and art were primary ways for her to spark children's imagination. Participant ten had fewer materials available on shelves than most other classes. She purposely keeps the materials minimal to encourage "going out." She also emphasized more than anyone else how intensely her whole school works with parents to ensure that home and school are philosophically harmonious. It is interesting to note that participant ten's class is lower elementary level. It is not

clear whether the few ways in which she differed from the checklist were a result of her beliefs or just where she currently was in the progression with this particular class. Her class received a score of thirty-two (Table 16).

Table 16: Participant ten

Total	Possible	Description
4	5	Collaborative planning
3	3	Fuzzy sequence
2	2	Children's interests plus outside expectations
2	2	Where and who
2	3	Assessment
1	3	Parent conferences
1	1	Lengthy, uninterrupted work period
2	2	Subject areas linked
2	2	Lessons as offerings
2	2	Spark the imagination
1	1	Accessible materials
1	1	Going out program
1	2	Immediate, autonomous feedback
3	3	Students keep records of how they spend their time.
1	1	Adult/student ratio in the range of 1:10 to 1:17
1	1	At least 20 children in the class.
3	3	Parent involvement
32	37	Totals

Student Decisions

Interview questions three through six were designed to learn what academic decisions students made in each class. They attempted to sort out "what comes from the teacher and what comes from the student," which David Kahn (1988) describes as the "ultimate question…that perplexes every Montessori teacher." Tables 17 through 20 summarize the findings from these questions.

With few exceptions, participants allow students to choose who they work with, where they work, and the amount of time they devote to each task (Table 17). All the participants plan lessons, expect students to attend the lessons, and expect students to do follow-up work (Table 18). They all expect students to achieve some balance of work in each subject area (Table 19), and for most the balance is expected over the course of a week.

The primary differences between participants occur in how they involve students in decisions concerning **what** students will do and **how**. Five participants directly assign work, while seven couch their expectations in terms of student choice (Tables 17 and 18). Participants differ in how flexible their sequence is, how flexible their follow-up is, and how much student interest is expected to influence what they do.

All participants have a sequence in mind, whether they give assignments or not. Those who do not give assignments guide students through the sequence using lessons, command cards, benchmarks, and/or a weekly meeting with each student (Table 20). "Command cards" tell students step by step what to do so they function as written assignments. Sometimes they are sequenced and in other cases, the student may choose which card to do from a collection. Benchmarks, which are also referred to as "standards", are articulated by the state in some cases, the school district in one case (Participant four), and inferred from state tests by other participants.

Table 17: Students' responsibilities during work time and the decisions they make

	What to do	The order in which to do assigned work	Where to work	With whom to work	How long to spend on a particular work	How to accomplish a task	Other Responsibilities
1	No	Yes	No	No	Yes	Yes	Read finished work to adult
2	Yes	N/A	Yes	Yes	Yes	No	3-4 subjects each morning
3	Yes	N/A	Yes	Yes	Yes	No	Keep track of finished/unfinished work
4	No	No	No, with some flexibility	No	Yes	Yes in math	Focus on their work
5	No	Yes	Yes	No	Yes	No	Organize time well
6	No	Yes	Yes	Yes	Yes	No	Stay on task
7	Yes	N/A	Yes	Yes	Yes	Yes	Refrain from disrupting others' work. Keep records of one's work. Be ready for next lesson.
8	No	Yes	Yes	Yes	Yes	Yes	
9	Yes	N/A	Yes	Yes	Yes	No	Be ready for next lesson
10	Yes	N/A	Yes	Yes	Yes	Yes	
11	Yes	N/A	Yes	Yes	Yes	Yes	Be respectful, tell an adult if you're having difficulty
12	Yes	N/A	Yes	Yes	Yes	Yes	Complete work cycle, stay on task

Table 18: Students' and teachers' responsibilities for planning and reporting

	Students may plan trips outside class to pursue an interest	Who takes bench-marks into account	Students plan ahead what they will do	Students record what they do	Teacher assigns work	Teacher plans lessons, expects follow-up	Student at Parent Confer-ences	Assessment
1	No	Teacher	No	Yes	Yes	Yes	No	Observation
2	No	Teacher	No	Check	No	Yes	No	Observation
3	No	Teacher	No	Yes	No	Yes	No	Observation
4	No	Teacher	No	Yes	Yes	Yes	No	Observation, tests
5	No	Teacher, some	No	Check	Yes	Yes	No	Observation, all work
6	No	Teacher	No	Check	Yes	Yes	No	Observation
7	Yes but need training to avail themselves more	Teacher, some student	No	Yes	No	Yes	No	Observation, Portfolio (student)
8	No, but would like to start	Teacher	No	Yes	Yes	Yes	No	Observation
9	Yes	Both	No	Yes	No	Yes	Yes	Observation, portfolio (both)

	Students may plan trips outside class to pursue an interest	Who takes bench-marks into account	Students plan ahead what they will do	Students record what they do	Teacher assigns work	Teacher plans lessons, expects follow-up	Student at Parent Confer-ences	Assessment
10	Yes	Teacher, some student	No	Yes	No	Yes	No	Observation
11	Yes, although they don't use it for their research much yet	Teacher, would like students to	Yes	Yes	No	Yes	No	Observation, all work
12	Yes	Teacher	Yes	Yes	No	Yes	Sometimes	Observation, portfolio (both)

Table 19: Limits on choices which are important to the proper functioning of the class

	Balance of subject areas	Respect/ Not disrupting others	Class time separated into Work time and Free time	May not avoid what is hard	More limits for those who aren't progressing well/fewer for those who are
1	N/A	Yes	Yes		
2	Covered all areas over course of week, 3-4 'checks' per day		Yes	Yes	Yes
3	Language, math, spelling, handwriting every morning, reading every afternoon, others weekly or as interests lie			Yes	
4	N/A		Yes		Yes
5	N/A			Yes	
6	Yes			Yes	Yes
7	Yes	Yes		Yes	Yes
8	Yes, Language and math daily				
9	Yes			Yes	
10		Yes		Yes	
11	Yes				
12	Yes, five areas daily (e.g. language or grammar, math or geometry)				

Table 20: How the students know what to do during work time

	Assignments, Lessons, Plan, Record of previous work	Command cards	Routine, expectations set	Peer influence	Organizational tools	Weekly student-teacher conference
1	A, L	Yes	Yes		Checklist	No
2	L	Yes		Yes	Checklist	No
3	L, R				Finished/unfinished folder, record binder	No
4	A, L	No	Yes	Yes	Boardwork, contract	No
5	A, L	Some	Yes	Yes	Checklist	No
6	A, L, R	No	Yes		Checklist, Record sheets	No
7	L, P, R		Yes		Work diary	Yes
8	A, L, P	Some	Yes		Reminder sheet	Yes
9	L, R, P	Yes		Yes	Journal, progress report, lesson plan book	Yes
10	L	No	Yes	Yes	journal	Yes
11	L, P	No	Yes		Journal, weekly plan, finished/un-finished folder	Yes
12	L, P	Yes	Yes	Yes	worklist	Yes

The term “benchmarks” also includes the school’s or teacher’s perception of Montessori concepts for each age level.

Participant nine (a higher-scoring participant) uses all four methods of guiding students through a sequence and, as a result, students are guided on a fairly narrow path. She used to think the students need to follow a teacher-determined sequence but has become convinced that math is the only area that really needs to be “totally sequential”. Participant five, who gives assignments, believes, “They need to go through a sequential path. We’re really the ones that have to determine that sequential path.” Participant two considers the sequence to be “pretty lockstep” in that, in math and language, “once they’ve got a presentation …they have nine or ten more opportunities to just go ahead and finish that.” She allows the sequence to vary according to student interest in the cultural subjects.

Participant five assigns follow-up work specifically geared to the individual student—but the teacher is the one who assesses what and how much is appropriate for a particular student. Participant seven places more responsibility on the students for determining how much follow-up and what form it will take. The main requirement for follow-up is that it include a writing component.

> In math lessons, once they’ve gone through all these steps with fractions they end up with a rule: they need to write it, explain it and illustrate it….if I’m gonna give the next fractions lesson and they don’t remember, they get their book out and read what they wrote. Just like in our albums. They read what they wrote and it makes sense to them, and they’re ready for the next step…We’re doing that with both math and language. They write a little table of contents…It’s a wonderful resource (participant seven).

The way follow-up is done and the amount of follow-up is flexible, the criteria being that the student understands enough for the next lesson.

> …if it's botany, they need to write those words, they need to define them, they need to illustrate them and they need to apply it. Now, some people that would be a little booklet, some will do it as a poster, some will draw ten flowers and illustrate those parts. What they do, how they do it is very open. But that they do something is the main requirement. They need to do enough so that they can build on it (participant seven).

Participant twelve has a similar latitude in the nature of students' follow-up. Some lessons will generate minimal follow-up or students' simply following the teacher's suggestion. Others, like the one described below, will take on greater proportions,

> I gave the fourth grade girls the animal classification chart invertebrates and they have turned it into a major piece of work. Actually, they're on their third week with it. Of course they're not doing it at all times, but they took it upon themselves to really make this up. It's not something I told them how to do or showed them how to do. I just said 'you can work with this piece of material next time. You might want to see what fun things you can do with it'.

Several participants demonstrated openness to students following their own interests. Participant seven had a student who organized and carried out a spelling bee and another who decided to plant peas. Participant eight was in the process of discussing with her oldest group their initiative to have a student government. Participant twelve's assistant was a catalyst for two projects. When four boys saw her balancing her checkbook, they became interested in the process and so she made them each checkbooks and showed them how to use them. Another time, the assistant was checking the stock pages of the

newspaper and a group of students decided to pick some stocks to follow for several months.

Participants seven, nine, ten, eleven and twelve provide "going out" opportunities for the students in the traditional Montessori sense: students may arrange to go to a place outside the school as suggested by their research (Table 18). Participant seven said that part of her program was "woefully inadequate" because, although she has a full file of resources and suggests outings to individuals on a regular basis, the students don't tend to use the opportunity. "I do think that's a really really critical part of their decision-making". Participant eight also would like to set up going out as an option but has not done so yet.

Three participants made a distinction between "worktime" and "free time" or "choice time", while three spoke out specifically against that dichotomy. Participant one allowed choice time whenever students finished their assigned work for the day, which usually meant in the afternoon. If a student "got to choice" in the morning, they were allowed to choose regular work from the shelf or to help other students. In the afternoon, however, choice expanded to include games, art, and practical life activities. Participant two had similar rules for choice time, which began when a student got their required number of "checks" and was available two afternoons a week. Participant four allowed "game time" for everyone on Friday afternoons.

> I distinguish between class work time and play time or game time or time outside. . .And so I expect the kids to do certain kinds of work in here that

> they might not necessarily choose to do, if I just gave them free reign to do whatever they wanted.

For all three participants, work time is spent doing what the teacher expects students to do and free time is spent doing what students want to do. Participant three is bothered by the students' attitude that splits work and play, "They really have…the work/play separation. That work is not play and play is not work. That there's work and it's hard and it's not fun. And then there's play and it's dribbly, and supposedly fun." Participant twelve takes issue with the idea that a student's work is ever "done."

> I have a system that—say they're doing Monday's work and they finish it. They can't go on to Tuesday's work. They have to choose extra credit for Monday. And then report back. I don't want the kids to say they got all their work done by Wednesday. Because it's not a matter of getting all your work done. It's a matter of the whole process of working, of doing the work. And I don't want them to get in the habit of just chalking off this and this and this and this.

Participant eight gives assignments but uses several methods to promote student responsibility and choice. She holds a conference with each student weekly, during which they can tell her what they would like to do. She gives them opportunities to make decisions in special activities like the play. The older students proposed a student government and so she is giving them opportunities to discuss that. She wants to promote the students' feeling that they have a voice at school, "…the more decision-making you give children the better they are at making them." Participant eight justifies the control she takes by saying

one must "prepare the environment" and without such preparation, children will not necessarily make good decisions.

All participants have students either record what they did or get a 'check' from the teacher when they have completed work (Table 18). The importance attached to these records and the ways they are used varies widely. Participant four does not check whether students have filled out their contract. Participant five makes sure they have gotten items checked off on their checklists, but relies only on her own records for long-term data. Participants three, seven, nine, ten, eleven and twelve have the students keep all their work records and refer back to them.

How Teachers Help Students Grow in Decision-Making Capability

Interview questions seven through nine elicited teachers' perspectives of decision-making and how teachers help students become better decision-makers. Question seven learned how participants thought about decision-making by having them talk about particular students who are good or poor decision-makers. Question eight focused on whether they noticed a change in individual decision-making capability during the students' three years in class. Question nine concludes this section, "What do you do to help a child learn to take on more decision-making responsibility?"

All participants would probably concur with the description participant eight gave of a poor decision-maker's behavior,

> …he twirls his pen, he goes for a drink, he goes to the bathroom, he'll try and talk to his friend, he'll walk back and find that he has to get something else, he'll twirl his papers some more, he'll make a hole in his desk.

Another child would sound familiar to many participants, "His entire realm of decision-making is his friend…He has no responsibility for his work. He has no particular enthusiasm for learning…he just wants to be with [Josh] instead of what's appropriate for him" (Participant seven). Participants described a lack of concentration, focus, self-control, motivation, responsibility for work, understanding of the expectations, and ability to identify with a group (Table 21).

Good decision-makers have those missing characteristics. In addition, they can foresee the consequences of their decisions, have strong wills, make balanced choices, and know how to get around obstacles. Participant three said,

> …they come in knowing what they want to do and about how long it will take and what they need to do to get the work accomplished. And sometimes even if they don't get the work done that they wanted to, they'll ask to take it home because they really want to finish that piece of work.

Participant ten (who scored highly on the checklist) believes most children make decisions that attend to their needs. It comes naturally to do those things which they need. If someone needs more practice multiplying they will tend to choose to do the checkerboard. She estimated that at any given moment about 75% of the children are like that—but it's different children at different times.

Table 21: Recognizing good and poor decision-makers, and whether individuals improve over time

	Characteristics of good decision-makers	Characteristics of poor decision-makers	Decision-making capability increases with years in class
1	Serious in studies, thorough, competent, stick with it, work is meaningful	Can't concentrate, can't complete work, don't ask for help, lack self-control	Yes
2	Self-motivated, hardly need teacher input, complete work, ability to balance social and academic, understanding what is expected	Lack self-control	Yes
3	Responsible, make balanced choices	Lack self-control, can't focus, are unsettled, won't work without constant adult attention, chit-chat	Yes
4	Know what is expected, know the routine	Have difficulty focusing, lack ability to follow through and complete tasks, chit-chat	Yes, particularly over the first half of the first year
5	Motivated, mature, leaders	Won't make progress without teacher and parents constantly watching	Yes
6	Regulate themselves	Don't have sense that they are in school to learn, may have medical issues, be immature, chit-chat	Yes
7	When they check in, the teacher may make a suggestion and then "poof" they're gone	No sense of responsibility for work or enthusiasm for learning, choose based on buddy not needs or interest	Yes

	Characteristics of good decision-makers	**Characteristics of poor decision-makers**	**Decision-making capability increases with years in class**
8	Know how to get around obstacles like missing materials, know how to follow through on something they are interested in.	Lack self-control, endlessly fiddle and find distractions, some may have medical issues, chit-chat	Yes, then said in some ways it goes down and in other ways stays the same
9	Identify with their group, whether it's family or class	Don't have experience making decisions within a community context, may have medical issues	Yes
10	Most make decisions that tend to their needs, Stronger lead the weaker	Wander, find distractions, chit-chat, some medical	Yes, they desire more complex work and with that comes more decisions
11	Organize time well, choose balanced work	Get stuck by organizational problems, sometimes medical	Yes, even on a weekly and monthly basis
12	Can foresee consequences of their decisions, have strong wills/personalities, Stronger lead the weaker	Lack foresight, may have medical issues	No

Three participants (five, nine and twelve) associated good decision-making with the ability to identify with a group. Participant nine described one child who was asked to leave the school even though he had attended since he was 2 ½. His parents emphasized the sovereignty of the individual at the expense of the group; the boy could choose without considering the needs of his family or class. Participants seven and eight agree with the other three that group decision-making is an important skill their students are working to develop. This includes all the participants who have upper elementary classrooms.

All participants except number twelve agreed that students increase their decision-making capability over the course of their three years in the class (Table 21). Participants one, three and six all cited examples of boys who improved. They started out "not finishing one piece of work—not even art" (Participant one), "rolling on the floor" (Participant three), or "very adult dependent" (Participant six). Participant seven told of a girl who used to have poor work habits, was very socially distractible, and was afraid of math. This year she has been choosing math every day without prompting. Participant five thought the biggest difference was the level of confidence students gain over the three years of building up accomplishments. Participant ten said students want more complex work as they get older and the level of responsibility for decision-making increases with the complexity.

Three participants said students are not as good at decision-making in their first year because they spend so much time watching the older students, as well as learning to balance their social needs with academic responsibilities. They make good decisions when they get older because they have "learned the system" (Participants two and four) and "know what is expected" (participants three and four). Participant eight agreed that older students "know what they need to get done" but had a different perspective on the younger students' watching, "I love the watchers. Watching is one of my favorite things about Montessori…The watching is so key to what goes on."

Participant twelve emphasized that those who have difficulty when they arrive in the class tend to still have difficulty when they leave and those who make good decisions when they enter will continue to do so. She associated good decision-makers with "strong personalities" or "strong will" who also identified with the group. She may have focused her comparison on sixth year students with fourth years and not individuals from their fourth year to their sixth, however, she did seem to think that individuals did not change personality traits much over the course of their time in her class.

Participant eight initially said that good decision-making equated with older students. As she talked, she began to realize that some of her younger students are very good at choosing work that challenges them and some of the older ones choose easy tasks in order to finish quickly. While her older students are better (on the whole) at overcoming obstacles and organizing their time and

space, some of them prefer following the teacher's direction to following through on their own interests. The participant began to think some aspects of decision-making related to maturity, but others were personality or character-driven.

The ways participants help students become better decision-makers include the following (Table 22):

1. Limit choices until they can manage more.
2. Lead them through the process.
3. Point to tools that help.
4. Inspire.
5. Enlist the help of others.

Five participants occasionally limited a student's choices until they felt s/he was capable of taking on more. Participant six's ways of limiting are representative of the others',

> We might start out at the beginning of the year by setting their priorities for them: Today you're going to do this, this and this. And then next step would be: you can choose which one of these you want to do first but they all have to get done. And then slowly wean them off that sort of thing.

Participant eight said, "I might number it for them. I might give them specific time limits for things, more concrete: What they're gonna do in the morning, what they need to do in the afternoon." Participant nine said,

> …you give them as much structure as they need and little by little you wean them off. Into more independent choices…in a sense you have to help them with the choice without letting them constantly know you're helping them.

Table 22: Ways to help a child learn to take on more decision-making responsibility

	Limit Choices	Lead student through the process	Point to the student's tools	Inspire	Enlist others' help
1		Ask questions, break process into steps		Positive support	Parents
2	No data				
3	Make suggestions or directly write follow-up on their record sheet	Students try an experiment: they agree to do 15 minutes daily of a 'hard' work of their choice. After a week, discuss how they feel about that 'hard' work.	Look at the shelves, check record binder	Give more lessons till something "sparks", Build on successes	
4	Make suggestions	Ask questions			
5		Wean		Build on accomplishments	Peers
6	wean				
7		Make a plan together	Graph which areas they've worked in over a given period so they see what they have slighted, remind them about their goal sheets	Call attention to their responsibility	
8	Yes	Ask questions		Build on successes	

	Limit Choices	Lead student through the process	Point to the student's tools	Inspire	Enlist others' help
9	Wean, build up in increments				Parents, peers, especially in group decision-making
10				Give more lessons, tell stories, connect them to their role, Call attention to their responsibility	Parents, peers
11		Ask questions	Look at work journal, help them organize their cubby		
12		Break it into steps	Look at the shelves	Give more lessons	Peers, especially in group decision-making

Participant ten demonstrated an excellent example of helping subtly during the observation, although she did not mention it as a method in the interview. She asked a couple of children who were giving a lesson that had run its course when they thought they'd be finished. They named a time about twenty minutes away and she responded with a suggestion of five minutes. They ended the lesson shortly with their own sense of control intact.

If an individual does not choose to work on something they got a lesson in, she gives the lesson again with a twist. She uses a different manner or approach. She cautions that the teacher must be subtle. The child might say, 'I had that already' and the teacher responds, 'Ah, but I'm going to show you a little more this time' (and she doesn't, really, she just approaches it differently.) For example, she might tell a story about a mathematician that relates to the math lesson.

Five participants said they ask questions or break the process into steps to help students learn decision-making (Table 22). Participants three and twelve lead the child to the shelves on occasion. Participants three and eleven go over the student's work record with them. Four participants inspire by giving positive support or building on a student's successes.

> …the biggest thing is just walking them through it as long as they need it, as long as they need to hear it from the outside, I provide that. And I'm constantly asking questions like "Well, what do you think?" and having them try to puzzle it out in their own mind, and giving them positive support when they do come up with the right one, or if they come up with the wrong idea or answer, providing them with steps to get to the correct

> place. So a lot of helping them figure it out on their own by only giving them the clues they need to figure it out and not the answers so that they have to pull it out of themselves. (Participant one)
>
> I think it has more to do with that kind of weaning process I was talking about. You stay really supportive of a child and get them in so they're accomplishing what you hope them to accomplish with your help and then you start backing off and you don't want them to flounder but the goal is to get them off of our direction. . .I think it has mostly to do with providing them with really positive support and then starting to back off. (Participant five)

Three participants said they give more lessons in order to inspire a student to make good decisions (Participants three, ten and twelve). Participant ten said she gives a lesson to get wanderers back on track. She demonstrated this during the observation by writing the names of three children on the board with a message that they were to gather for a lesson at 11:15, five minutes from when she wrote the message. The entire room got quiet, with an air of expectancy, as she wrote the message. I heard no comments from students about the reason those children were chosen. In fact, the fact that they were wandering, off-task students might have escaped my notice if I had not just heard the participant tell about this strategy.

Participants seven and ten call attention to the students' responsibility in order to inspire them to make good decisions. Participant ten further inspires by telling stories, capitalizing on students' tendency to have heroes, and connecting students to their role in the world. For example, she talks to a child about how her particular hero had to do certain things to get where he is today. She

encourages the child to believe she could be like that, too, but only if she does the work to get there.

Three participants mentioned the role of parents in helping students improve at decision-making, while four mentioned the value of peers. Participant one gave specific exercises to parents to help their child at home. Participants nine and ten focused on the importance of parents' philosophy and practices being compatible with that of the school's. Participant ten described how thoroughly parents are educated about the school's approach from the moment they begin to consider the school for their child.

The participants who referred to peers saw the ones who are good at decision-making as role models for those who found it difficult. Participants nine and twelve particularly thought the group decision-making times were important for the opportunity strong decision-makers had to lead the weak. They seemed to think the group experiences would influence the individual's decision-making experiences.

Participant twelve told about how group and individual influences interact and build on each other. The whole class read an article in *Scholastic News* that said their state has the highest rate of hunger in the country. One student said they should do something about that and it led to the class writing to parents, talking to other classes, collecting food and money, and volunteering at a soup kitchen together.

Another time, a boy was trying to hatch quail eggs and ran into difficulties. He learned of someone who raises ducks and arranged to meet the man. The rest of the class cheered him on when the boy hatched his own duck. They decided the duck needed a companion and settled on a chick when they couldn't find another duck. The rest of the students followed along as the boy kept growth charts for the animals. The project sparked the idea of raising frogs for a couple other students.

Participant twelve said this sort of student-driven curriculum "doesn't just happen, we work on it." She might start a class discussion by saying, 'Maria Montessori said children should have 'freedom with limits'. What does that mean? What should our limits be?' Between the group discussions and stronger children taking the lead, those who are not as capable at making decisions are in an environment that helps them improve.

In a different illustration of how the strong lead the weak, participant ten pointed out a group of students who had been studying rocks together for at least twenty minutes and asked if I could tell which one of them had ADD. (I could not.) The participant said she usually waits for a student to correct another who is out of line. Just as she had said, during the observation, a student called another back who had left for a lesson without putting away his work.

Obstacles to Increased Student Choice

Questions one, two, and ten through fourteen of the interview examined possible obstacles to increasing the level of student decision-making. Question one asked about the gender, age, and Montessori experience of the students (Table 4) because of the possible obstacles to choice presented by an imbalance in the first two cases or a high proportion of non-Montessori experienced children in the third case. Only three classes were well-balanced in all respects and had very few non-Montessori experienced children. Question two discovered whether classes had a long, uninterrupted work period and which subjects, if any, were isolated for study (Table 23).

Table 23: Length and nature of the work period

	Morning Work Period (in hours)	Afternoon Work Period (in hours)	Interruptions to the work period	Comments
1	2 ¼	1		Afternoon considered 'free choice': includes games, practical life and art in addition to 'regular' activities
2	2 ¼	1	Writing three afternoons	Same as above two afternoons
3	2 ½	1 ½ often used for writing or cultural lessons	Most of Wed., parts of other days: Spanish, Atrium, Music, computer, Japan culture	Hopes to interrupt the work period less next year

	Morning Work Period (in hours)	Afternoon Work Period (in hours)	Interruptions to the work period	Comments
4	1 math, 1 language arts	2 Reading, science, drawing as directed	Music, computer PE. And library	‘game time’ Friday afternoon, similar to number one
5	1 ½	1 ½	Spanish, music; science on Fridays	History or island project 45 min. daily after morning work period
6	2	1 2/3	music, Spanish, penmanship	
7	3	1 ½	French	French at the beginning of the period to minimize the interruption
8	3	2	PE, music morn. Great Books and creative writing aft.	
9	3	1 ½	Wed aft and all Thurs: computer, Spanish, art, music, Atrium, PE	Next year, art and music will be integrated into work time and some others will be optional
10	3	1 2/3	Spanish in class	
11	3	almost 2	music and art, Spanish in class	Plan to integrate Spanish and art into work time
12	3	almost 2	specials all Thurs.: computer, Spanish, music, art, and PE	

Five participants (one, two, four, five and six) have skimpy work periods. Participant four divides it even further into subject areas, as does participant five, to a lesser extent. Six participants (three, four, five, six, eight, and eleven) have significant interruptions to the morning work period. Participant eleven is working

to integrate more next year and avoid interruptions. Participant three also plans to minimize interruptions next year because she found that the interruptions for special classes have hurt her students' ability to focus and to choose more in-depth projects this year.

Participants were asked for their own perception of obstacles to student choice and reasons for them in question ten. Question eleven investigated how the participant's beliefs might affect the level of decision-making in their class. Part two of that question explored possible ways the person's beliefs interacted with outside pressures to limit student choice. Questions twelve and thirteen further investigated the role of outside pressure and the last question came back to teacher beliefs.

Participant one thought there were no aspects of decision-making she would like to incorporate but had been unable. Her students were "…pretty much doing what I would expect to be normal and I guess compared to some classrooms, they're pretty responsible and doing a lot more than what's usual for their age and their abilities."

Several participants expressed a desire to see their students go deeper. Participant two was frustrated that students see the 'checks' system as a minimum and they don't often go deeper on their own in their 'free choice' time. She would like to throw the checklist system out but does not see how that

would be possible and does not want to get rid of choice time because she believes it is important.

Participant four also wanted to see more depth and interest. He wished students had more opportunities to pursue something on their own. This seemed to be in conflict with the participant's desire to ensure they were getting "enough accomplished" and were "comprehensive". In the service of those goals, he "feel[s] like I have to keep the kids busy, otherwise things degenerate…" Not having an assistant makes it difficult for him to help individual students pursue a topic in greater depth.

Participants five and seven want to see certain kids "stop taking short cuts" and "taking the easy road all the time". Participant five would like to have their "inner ambition to do well start to surface." Participant seven blames TV and computers for having a negative effect on some kids' ability to focus and motivate themselves. In addition, she believes many students are socially isolated and so they have greater social needs at school than in previous times. "For some, the social is so intensely distracting they can hardly function."

Participant nine cited a similar reason for the difficulty she has had getting students to stay on task more when they work in groups. She believes they benefit from the stimulation of group work but often can't balance their social needs with the work at hand. She said many of her students are only children and "their social world isn't big enough". They do not get enough opportunities

to simply sit and talk with other children. Like participant seven, she believes television and computer use have caused children in recent years to have difficulty focusing for very long.

Participant three also attributes some of the lack of interest, lack of focus, and work/play separation she sees to television and computer use. She wants to figure out "how to get the same kind of work out of them without just saying 'you have to do it'." She sometimes resorts to keeping children in from recess who have not done enough work, and would like to see good work choices come from the children instead.

Participant six rued the withholding of recess as well, but said sometimes it is the only thing she can think of to get a child to finish his work. Participant six would like to allow more choice in the cultural and language areas. She believes there simply is not enough time to give the individual attention required for individual pursuit of the cultural subjects and feels that space limitations preclude allowing more choice in the area of language.

Participant eight would like to start a going out program, but has been held back by her own "paranoia", parent concerns, lack of time and lack of administrative support. Participant ten believes that complete student responsibility for decision-making is the ideal and her goal is to take them there. Participant eleven would like to curb her tendency to make decisions for them when she gets frustrated and to have the children realize their learning is up to

them, which she hopes is a goal of all Montessori teachers. I failed to get an answer from participant twelve.

When asked what differences, if any, there were between preschool and elementary age children in ability to make decisions, five participants referred to societal expectations (Table 24). Participant one said younger children just want to do what they choose to do and not what others expect them to do. Elementary age children learn to do what is expected. Participant two initially said there was a vast difference and then decided there really was no difference. Both ages are good at knowing what they want and need to do. In elementary, their freedom isn't as complete because they must fulfill outside requirements. Participant four agreed that it wasn't so much that ability is different as that expectations are different.

Table 24: Comparing preschool and elementary levels: students' decision-making ability and teachers' freedom to allow students to choose

	Children choose what they need naturally	Preschool focus well, elementary are distractible	More expectations placed on elementary by…	Participant taught preschool or had full preschool training
1			Teacher (society implied)	Both
2			Public curriculum	Both
3	Preschool	Yes	Society, upper elementary	No
4		Reverse	Society and culture	No

	Children choose what they need naturally	Preschool focus well, elementary are distractible	More expectations placed on elementary by…	Participant taught preschool or had full preschool training
5		Children increase capability to make good decisions as they get older; their capability at any given age is very individual		Both
6		Reverse	Society	No
7		Yes	Public curriculum	No
8	Preschool		Society	No
9	Upper		Upper el has more freedom than others	Training
10	Both			Both
11			Upper el has more freedom than other levels	No
12	Both		Upper el has more freedom than other levels	Both

Participant eight thought preschool students "are generally pretty good at choosing things that are good for them naturally" but elementary students can't see the big picture of societal expectations and their future and so teachers must make plans that take such things into account.

Participant seven has a slightly different perspective. She said at preschool level, "follow their interests" is of primary importance. At elementary level,

students must learn how to manage more than one thing at a time because they work together so much more than preschool children do.

> …just the fact that you have a PE class or that people are gonna get together and share their stories interferes, interrupts somebody else's work. And because you do more group work, and sometimes whole class work, which is very rare in a primary so that their focus gets interrupted and they have to learn how to manage two things at once. 'Well, gee I had this clock I was working on but now I have this lesson on the universe and what do I do with the clock?'

The same participant also noted how intensely preschool children focus and how distractible elementary children are. Participant three lamented that as well,

> And the last time I went down [to Children's House] I was impressed that the guide had half a dozen kids on the line and she had some sort of rhythm instrument that she was marking a rhythm and they were dancing barefoot on the line and there were other kids all around the room completely immersed in their work, not paying attention at all and I'm thinking 'Man, that doesn't happen in a lower elementary room!' A glass breaks and half the class rushes over to see what's going on! (laughs) The kid that's sitting here isn't quite sure what's in front of him but he knows exactly what they're talking about over in that corner.

Participants four and six had the opposite impression, although six said she didn't have experience with preschool level and was taking a guess from what she has heard. Four was unsure, saying at one point that he did not really see a difference and at another that preschool children couldn't focus as well, concluding, "But if they can't really focus in preschool, it's not really that big of a deal." The elementary level children are the ones who have societal expectations to shoulder.

Two participants think preschool children choose what they need naturally while elementary children need help because of the societal expectations.

> I understand in Children's house you're supposed to let them do what they need to do. They need to wash tables every day for three weeks? That's an internal need that they have. My kids in here would have an internal need to draw horses for six weeks, you know! (laughs) So then you get out a book about horses and say, 'why don't you look in the encyclopedia or here, I have a book about horses. Pick two or three of your favorite ones and read it and put this information in your own words and then draw a picture to go along with it.' Because you're always trying to get something academic along with the "fun" stuff. And a lot of them, once they fight me and fight me with doing things and then I'll sit down and teach them a lesson and they'll practically pull the stuff out of my hands wanting to do it and they all want to do it next then. (Participant three)

One participant thinks upper elementary children choose what they need naturally as long as you tell them what is expected from society, but younger children are not able to see what they need.

> I think in children's house it's pretty much I think teacher orientated because they know the child and what the child needs whereas the child doesn't know himself…I think within the children's house you have to limit it all the time. You just give them two choices. You don't take them to the whole closet of clothes and say, 'ok, what do you want to wear?' You'd be there a long time…But I think at the upper elementary, at the 9-12, you can say, 'these are your choices, what would you like to do?'…or have no choices at all, just say 'this is the math area, these are the things you need to do in math, what do you want to do first?' (Participant nine)

Two participants believe that both preschool and elementary age children tend to choose what they need naturally. Participant ten said that all human beings come equipped to make decisions. In primary, children's choices are limited to what will develop their own self. In elementary, they are making

choices about how does 'me' fit with 'we'. Participant twelve expressed it in a similar way, "…the decisions that [elementary children] make are more connected to the greater world around them. Like this food drive that we have. And the decisions that little children make are more geared to their self-creation." Participant twelve goes so far as to say that developing a child's natural ability to choose at each level is central to Montessori.

> The preschool child can make decisions, like what kind of work to select after they've had a lesson on it. In fact that's what we try very hard to promote, is for the small child to complete a piece of work, put it back, take out another. And that's the whole premise of the Montessori program is the child makes his or her own choice, within limits. It's called freedom within limits.
>
> By the time the child's in lower elementary, he or she should have a wider selection of things and do the follow up activities. And spend more time researching. They're not interested in creating a pink tower. They want to look in books and find out more about this thing and that thing. And they're allowed to do that. In upper elementary, they continue to make decisions for what they're doing, but they're more involved. A child might say 'I need to go work in the garden.' Maybe it's something that will calm them down. Or something that will give them peace of mind. But it's just like the kid doing the pink tower. Had to keep doing it until it got right. It's an inner command for that kid to do the tower. In upper el with the garden, it's an inner command, 'I've got to get out of here. I've got to go work in my garden.'
>
> So you would never let a children's house kid go work in the garden alone, but an elementary child could. You could trust him with taking the tools out and working properly in the garden and coming back, cleaning the tools and then go back to indoor work…Again, it's the freedom within limits.
>
> And so the limits that are set for All of them, for everybody, the common limits are, the parameters are that no one will get hurt. Ok, so there's going to be physical safety and there's going to be psychological safety. Children have the right to work; no one can interfere with that right to

> work. No other child can interfere with another child's right to work. All of those things apply to all three levels. But maybe you could say they widen more as the child gets older because he's in a different developmental stage. He still has to have freedom within limits but the limits are different. And he still has to have freedom to do his work. The work is much more collaborative in the elementary, especially the upper el. And so the group has a right to do their work. And if they come up with something different, if they come up with something that I would never have expected or encouraged, they're allowed to do that.

Table 25 displays the answers participants gave to the question of what has bearing on how the children spend their time in class. The question originally did not include the last phrase, but participants invariably answered that it was

Table 25: Who or what has bearing on how the children spend their time in class, besides the teachers and the students

	Parents	State bench-marks	Standard-ized testing	Cultural Expectations	Area Public Schools	Other
1						Teacher
2	X				X	
3	X	X	X			
4		District	X	X	X	
5			X			Teachers
6	X	X	X		X	
7	X	X	X	X	X	Every-thing
8	X					
9	X	X	X			
10						Nothing
11	X	X			X	Albums
12		X				Albums

the teacher, the students, or both. In table 25, two participants are shown answering "teacher" even after being asked about other influences. Direct answers to this question do not tell the whole story, because in the course of

answering other questions, teachers often revealed influences that they did not admit to in this question.

For example, participants one and five both focused on the primacy of teachers in influencing what students do (they give assignments), but also revealed some of what influences the teachers. Participant one thinks a lot about what students will be expected to know if they go to other schools. She did not make clear where her perception of what other schools expect comes from. She and the other lower elementary teacher at her school agree on one year-long topic to focus their preparations for cultural studies, but aside from that, participant one makes her own decisions independently of other teachers at the school.

Participant five dismissed standards set by other schools or the state as being too low to merit much notice, although they did incorporate more writing into their math assignments as a result of that emphasis in the state tests. Participant five, who is both a teacher and an administrator, said,

> we [teachers] pretty much make our own decisions about what we want to have here. It's what we consider to be the Montessori curriculum. It's the cosmic studies. And it's also what is developmentally appropriate. All the stuff they do with lower el is what's developmentally appropriate and we think history content is more upper el appropriate. We just love all the cosmic studies.

Participant ten said nothing influences what the children do, but she did say she takes Montessori curriculum and state benchmarks into account when selecting what lessons to give. She also makes the benchmarks available in

simplified form to her students. In fact, interpreting the whole of what each person said, no participant held the position that society, through official benchmarks or tests, should not influence what children do in Montessori elementary classrooms.

Participant twelve admits, "I gear a lot of it [which lessons to plan] on where I was in sixth grade. What kinds of things was I doing. And then I work with my fourth graders on it. (chuckles) My sixth graders are doing what I was doing in ninth grade."

Seven participants thought parents have some bearing on what students do in class (Table 25). Participant two thought a child was afraid of math partly because her parents were so overly concerned about the subject. The participant felt a conflict between the need to help the child relax about math and respond to parent concern by not letting the child avoid it.

Six participants reported having students whose parents tell them what to do when they get to school (Table 26). Participant seven (who is white) said that happens at the younger levels in their school but slacks off when the children know how to read.

Table 26: Parents' role in children's academic decision-making

	Tell children what to do at school	Parent philosophy affects children's decision-making capability	Parent education meetings
1		Parents can help a child improve	X
2	X	Responsibility, choices	
3	X		X

	Tell children what to do at school	Parent philosophy affects children's decision-making capability	Parent education meetings
4		Attention, consistency, responsibility	Letter
5		Lackadaisical or disorganized parents, responsibility	
6	X	Raised to be adult dependent	
7			X
8		Responsibility, compatibility with school	
9	X	Choice with limits, responsibility, compatibility with school	
10	X	Crucial influence— compatibility with school	X
11	X		
12			X

She meets with parents who seem anxious about how quickly their child is learning. She tries to accommodate their needs while asking them to trust her with aspects she considers to be the highest priority.

> Some of this is a cultural thing. We have a large population of East Indian families and education is absolutely paramount. And sometimes it's hard with the young ones, getting them [the parents] to trust us. And letting it happen. Whereas with the older ones (pause) once they can read and write, it's OK. It doesn't interfere. The only thing I keep saying is 'please don't teach them about pi! Let me do that!' There's a few things and I let them know at the beginning. And I meet with them actually and I ask them, do your kids do homework at home? What do they use? Let me see their workbooks. I go through and tell them, 'don't let 'em do this yet' If I know their parents can't wait, I give them a lesson quick so they'll have the concrete part before they memorize the other part. With a few I've had to let that go because they're in such a hurry. They're in a huge hurry.

Participant ten (who is East Indian) said parents who tell their children what to do at school get a call that very night telling them not to.

Eight participants related students' decision-making skill in school to the way parents operate. Most often mentioned was children having responsibilities and decision-making opportunities at home. Participant two related the difficulties one girl has at school to the fact that she doesn't even choose what to wear each day.

Participants eight and nine told of students who ended up leaving the school because their home life worked against what the school was doing. Participant eight was astonished when one mother proudly reported that her seven year old had poured his own cereal for the first time. Participant nine felt that the parents of another child offered choice with no limits and did not understand the need for limits in the classroom.

Five participants offered that they had meetings for parents in order to explain how the class worked and get parent support for operating that way. Some of these participants did not mention the importance of compatibility or the influence of parents, but it may be inferred by the fact that they held parent education meetings. Not all participants who mentioned parents' influence said they had meetings for parents.

Table 27 shows the participants' responses to the last question, "How, if at all, has your understanding of children's decision-making in Montessori elementary classrooms changed since your training?" Two spoke of raising their own expectations for children. Five emphasized their increasing trust in the

process or the children while two thought they controlled more than they used to. Both of the latter had reasons for their shift and felt pretty comfortable with it.

> I don't feel bad about it because I really think that's helping them see what needs to be done. As long as there's enough flexibility for individuals and like I said, giving them the opportunity to have their opinions matter and to have their decisions matter. (Participant eight)

Participant two stressed balance in a different way: she has learned to discern when to tip the scales toward freedom and when to tip it towards limits.

Table 27: Changes in teachers' understanding of children's decision-making

1	Has higher expectations now. Believes children appreciate being challenged. When her expectations were low, she had more disruptive behavior and used 'time out' more.
2	She knows better when to step in and when to hold back. With some students she is more proactive and she lets others choose their path more.
3	She trusts children more now to pick what they need to learn (within bounds) and to choose how long to spend on a project.
4	Has not changed really. Has always believed Montessori is good for some and not for others because some children simply cannot handle much choice. They do not know how to proceed and are lost in the stimulation of materials, conversations, and activity.
5	Believes more and more that children want to be challenged and to have lots of responsibility.
6	Not much has changed. Some find it harder to make decisions than others and need more help to learn—but she has always thought that.
7	Used to trust more but also let kids slide through the cracks. Now she is more conscientious but wonders if sometimes she controls too much and nags too much. Generally thinks she is being more responsible for children's progress now. If she is too tight, thinks that may balance better with more years experience at upper elementary level.

8	Is more directive than she thought she would be—and is comfortable with that. Children don't see the big picture, don't see their future.
9	Thought she had to control everything until a sixth year student told her, "It needs to be as much our classroom as yours." That conversation changed her whole approach and now she is accused by some of allowing the students too much decision-making opportunity.
10	Believes that experimenting away from the ideal gets you into trouble. She was a Montessori kid herself and knows it works. Believes controlling the information flow between students is the greatest impairment to decision-making, and finds it to be the hardest part for her.
11	Belief in the process has continually strengthened over time.
12	Allows students more freedom than before. Trusts the children to make appropriate choices more now—is better at assessing whether or not a selection is benefiting the child.

Summary

All participants plan lessons and follow a sequence, although not all reveal the sequence to students. They all take some form of benchmarks into account, but some share the information with students as well. Nearly all participants allow students to decide how long to work on a particular task, where to work, and who to work with. They all use observation as the primary assessment tool. The greatest differences between participants are in the following areas: approach to follow-up work after lessons, student record-keeping, regularly scheduled student/teacher conferences, "going out," length and nature of work period, child/adult ratio, and communication with parents.

No patterns were discerned between participants' answers and years of experience at elementary level, training or experience at preschool level, or beliefs about different age levels of children. None of the participants have students prepare and lead the conferences with parents. While some work to

provide nearly immediate feedback, none structure the feedback to be autonomous. (In other words, the students depend upon the teacher for knowing whether something is correct, rather than being able to check for themselves.)

CHAPTER FIVE: DISCUSSION

Introduction

This project involved interviewing Montessori elementary teachers and observing their classes in order to learn what decisions students make, the ways teachers help students learn to take on more decision-making responsibility, and the reasons for particular limitations on students' freedom. In particular, this study investigated the perceived disparity between the level of decision-making called for in Montessori literature and that observed in practice. The first part of this chapter will discuss aspects of the study's design. Next, the study results will be compared with the literature. The final sections will provide recommendations for Montessori elementary teachers and recommendations for researchers.

Study Design

For the most part, the criteria for whom to interview were sound. It was important to interview teachers who had at least three years' experience, although it may not have been necessary for it to be at the current school. The criteria as they stood were difficult to get across to the directors of schools when I was compiling the list of eligible teachers; if I had asked for which teachers had taught at least three years straight at any school, I would have compounded the confusion.

Limiting the study to classes with a three-year age span was probably useful. The two teachers I interviewed whose classes had less than a three-year span (and consequently were not included in the study) indicated that it would have lowered the level of student decision-making represented. One teacher said it made a big difference and explained the special measures she took to mitigate. The other teacher told me flatly that students in her class don't make their own decisions.

I sometimes felt my inexperience with interviewing was keeping me from getting the most I could from the questions. I was often tempted to ask more specific or direct questions, but refrained because I was uncertain about when I might be biasing the results by leading the participant more than I led others. The participants are numbered in the order they were interviewed, with the exception that I switched three and eight so I could keep track of patterns with training easier. Was my learning curve part of the reason the first six I interviewed are at the bottom end of the checklist? That may have been a factor, but there are enough other clear factors that I do not think it affected the study significantly.

The entire process of scoring the checklist was undertaken twice, with similar results both times. The results of the checklist scoring are accurate enough to be useful for finding patterns and comparing the data with my perspective as the researcher, however, the instrument is not sophisticated

enough to render small differences in scoring meaningful. Thus, not much can be said about participant eleven compared to participant twelve, for example, with regard to the checklist scores. Moreover, because I was the only one scoring the checklists, the study lacks inter-rater reliability.

Conclusions

Overall patterns are intriguing (Table 28). The top five scores vary by only four points. There is a five point gap to the two middle scores, which not only are the same but reflect the median and the mean for the group. The differences are so striking that, if I were to have made errors in scoring such that the bottom five moved up three points and the top five moved down three points, the mean and median would have remained the same and two distinct groups would remain.

The top five scores on the checklist were from teachers with training from Association Montessori Internationale (AMI). The American Montessori Society (AMS) trained the bottom five. The middle two scores, which were the same, came from an AMS-trained teacher who works exclusively with AMI-trained teachers at her current school and an AMI teacher in the Seattle area, where AMS dominates. Teachers in Portland ranked higher than those in Seattle, except for the two cases which Seattle teachers were AMI trained.

These results suggest either regional or training differences, but because the two variables correlate with each other so closely in this study, it is hard to tell which is causing the greater difference. The differences in approach

Table 28: A Pattern of Training or Regional Differences

Checklist Score	Participant	Training	City
32	10	AMI	Portland
32	12	AMI	Portland
31	7	AMI	Portland
30	11	AMI	Seattle
28	9	AMI	Portland
22	8	AMI	Seattle
22	3	AMS	Portland
20	2	AMS	Seattle
19	6	AMS	Seattle
18	1	AMS	Seattle
14	5	AMS	Seattle
8	4	AMS	Seattle

Between the two organizations, as noted in the literature, suggest that training differences may be significant.

Two of the three participants who have taught Montessori elementary at schools prior to their current one were in the top five. This is not enough to draw conclusions about, but it does raise the point that interaction between teachers at different schools could be worth the work required to make it happen.

Student Decisions

This study asked, “What decisions do students make in Montessori elementary classes?” Students in the higher scoring classes participate in a wider

variety of ways, including decisions about what to study, how to show what they learned, how long to spend on a task, record keeping, planning and decisions in various non-academic areas. Higher scoring participants don't permanently relinquish teacher control in all these areas; they allow for student participation in them, as they deem appropriate. Students in the lower scoring classes are more limited in the ways they may participate. In many cases, they are limited to the non-academic aspects or to time management decisions.

David Kahn (1988) argues that, while there is room in the Montessori approach for both a "structuralist" style and an "essentialist"[4] style, teachers do great harm when they become "engrossed by their own ideologies." Practicing only one style all the time leads to problems.

> …the dialectic is constantly active in the mature elementary teacher…The real success lies in the cultivation of a structuralist-essentialist balancing perception which shifts according to the exhibited tendencies of the individual and /or the class. (Kahn 1988, 43)

One of the top five scorers, participant seven, expressed it thus:

> The whole challenge of Montessori is a balance. It's the freedom and discipline and it's the structure and it's 'whose discipline is it' and it's—the definition of balance is it's not static. It doesn't stay there. So there's always this little shift and I feel like we go through our year and our lives bouncing back and forth. Sometimes I'm happier with it and sometimes I feel like I'm doing too much of this and…you caught me in a week when I was adding more structure again.

[4] Structuralists are more likely to emphasize a logical sequence and give assignments. Essentialists plan lessons based on observations.

Kahn (1988) believes there is an "increasing need for elementary Montessorians to say directly what their classroom techniques are, and how they meet Montessori criteria" (42). This study provides a glimpse of how twelve teachers answer Kahn's challenge, as well as a good basis for further discussion. "What are Montessori criteria?" is a valid question with no specific answer yet. This study provides one attempt to designate criteria (the checklist) and uses participants' responses to determine which aspects are most important.

Obstacles to Student Participation in Decision-Making

Several structural or programmatic aspects of classes merit serious consideration for the effect they may have on student participation in decision-making. The top scorers (who are AMI-trained) protect a full three-hour work period from interruptions. AMI standards for schools (online) and other AMI-based resources (Boehnlein 1988, Kahn, et. al. 1999) specify a three-hour work period. The lower scoring group had both a shorter work period and more interruptions. Their training affiliation, AMS (1997, no date [online]) calls for "large blocks of uninterrupted time" but does not specify how much.

All five highest-scoring classes are within the study's range for the adult/student ratio and minimum number of students. The study used the widest latitude suggested by the literature, however, and even the highest-scoring participants did not meet AMI's (website, Lillard 1996, Stephenson 1999) recommended number of students or AMS's (AMS 1991) recommended ratio. All

but three classes in the study were too small, and most had too many adults for the number of students.

The top five participants allow "going out," while the other participants do not. "Going out" is described as crucial to Montessori in *Montessori Today* (Lillard 1996) and *What is Montessori Elementary?* (Kahn, ed. 1995) Both are AMI perspectives. "Going out" is not even mentioned in AMS publications (AMS 1991, 1997, website) or *The Montessori Controversy* (Chattin-McNichols 1992), a seminal work by a leader in AMS.

Each of the three foregoing aspects was given only one point on the checklist, but the top five participants' scores were more than three points higher than the others'. Perhaps the presence of these characteristics made some of the other characteristics possible. For example, regular student/teacher conferences may be more likely when the class has the recommended ratio of students to adults.

The five highest-scoring participants also emphasize student record keeping more than the others. Students not only write down what they did, they refer back to it frequently. This may be another important aspect of a class that allows full student participation in decision-making.

Both lower and upper elementary classes are represented in the top five, which shows that it is possible to have a high level of student decision-making at both levels. Given that most participants thought decision-making capability

increases with age, perhaps many lower elementary teachers are not expecting as much as they could from their students in this area. One of the two participants who scored the highest said complete student control of decision-making is her ultimate goal. This suggests that teachers may, in part, select how far their students go by the height of their expectations.

While none of the participants spoke directly to normalization, the highest scorers seem to think of normalization as a state required for further progress. Montessori's metaphor of normalization as a state of health that could improve and decline is consistent with these participants' attitudes. In addition, normalization, like good health, is not an end in itself. Good health enables growth; normalization enables growth toward autonomy. This perspective could account for high-scoring participants' use of many different strategies: offering more latitude of choice sometimes and taking more control at other times.

By contrast, at least some of the lower-scoring participants appear to view normalization as a point of arrival. Participant one was satisfied with what her students were doing. Rather than the students' behavior resulting in increasing levels of responsibility for their learning, it seemed to be the desired result in itself.

Obstacles to student participation in decision-making based upon societal pressure seem fairly minimal. Only two participants (two and four) reported changing what they do because of external pressure. For participant two, it was

the demands of the schools her students would be entering when they left her school, and parents. For participant four, it was the demands of the school district and the more nebulous demands of the dominant U.S. culture.

The fact that other participants did not report pressure from outside the classroom may be as much an indication that they agree with the direction taken by outside forces or are unaware of outside influences as that they simply refuse to bow to the pressures. If teachers are unaware of external influences on their approach, an appreciation for the dialectic Kahn advocates requires that they become more aware.

Recommendations for research

I would like to see a study like this done somewhere else in order to learn whether there are training differences or regional differences. Other studies might examine one variable in relation to student decision-making. For example, they might test for a correlation between length and character of work period and depth of student decision-making. Another interesting area of investigation might be to single out particular aspects of student work: how much research students do compared to skill building in isolation, how teachers structure student research, and perhaps the stages in the development of ability to research one's own ideas.

It would be interesting to study the effect of class size and student/teacher ratio on the level of student decision-making. This study used

the low number of 20 students. AMI's recommended number is so much higher (28-35); it makes me curious what effect numbers really have. It may also be interesting to examine the effects of less than a three-age grouping. AMS requires "multi-age" classes—is two levels 'enough'? Finally, is there any relationship between levels of decision-making and student academic outcomes?

A Final Word

Ann Burke Neubert (1992) expressed the goal of AMS thus, "…to establish the teaching of Montessori's insights in an American cultural setting, as opposed to a dogmatic presentation of Montessori's principles in a culture-free manner" (66). One can be sure Neubert is specifically distinguishing AMS from AMI with this statement. Tim Duax (1993) provides one AMI response: "Good Montessori practice is not static and immutable but adapts appropriately to cultures and times. Experienced Montessorians…simply desire the organization, constancy, and collective experience that emerge when a strong framework is maintained" (6).

AMS blends so well into mainstream U.S. culture at times (by making classroom practice standards so vague they could mean many different things) that it is sometimes hard to distinguish Montessori as a separate educational approach. AMI's framework, on the other hand, seems arcane when specific standards are unaccompanied by the reasoning behind them. Studies like this may help to define specific standards and the reasons behind them. Perhaps

Montessorians could then agree on a model of “core practices” toward which anyone considering themselves Montessori would be working. Such a framework would provide a context for those who differ in a particular aspect: the reasons for doing differently could be articulated against that framework for more meaningful discussion. Then fewer people would be tempted to follow the indirect but very apparent “boundary marking” exclusionary model that some are using now.

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APPENDIX A: OBSERVATION GUIDE

1. Record the organization of materials in the classroom. Look for computers, a community resources box and conversational references to "going out."
2. Look at any student records or work journals, teacher-made work plans. Listen for references to how these are used or perceived. Where is work kept?
3. Look for evidence of art, stories, music, and drama.
4. Record lessons witnessed.
5. Do a spot check what specific activities are happening.
6. Look and listen for evidence of a work sequence.
7. Record examples of students or teachers checking their work.
8. Record student decision-making that I witness.

APPENDIX B: DEMOGRAPHIC QUESTIONNAIRE

Name ____________________________

How long have you been at the current school? ________________

Montessori 3-6 level: complete years taught____

certification program ________

Montessori 6-9 level: complete years taught____

certification program _______

Montessori 9-12 level: complete years taught____

certification program _______

Public Montessori: complete years taught____

Public Non-Montessori: complete yrs taught____

certification program _______

Private Non-Montessori: complete yrs taught ___________

Check the professional organizations to which you have

belonged or now belong:

American Montessori Society_____

Association Montessori Internationale_____

National Center for Montessori Education_____

Pacific Northwest Montessori Association______

North American Montessori Teacher's Association______

Other, please specify _______________________

APPENDIX C: INTERVIEW QUESTIONS

1. Describe your class in terms of gender, ages, and previous Montessori experience.
2. What is your daily schedule?
3. What are your students' responsibilities during worktime? What types of decisions do they make?
4. How do the students know what to do during the work period?
5. What are the students' responsibilities with regard to planning and reporting what they do? [What are your responsibilities?]
6. What limits on choices do you consider important to the proper functioning of your classroom?
7. Describe the range of decision-making capabilities you have in your class right now.
8. Have you noticed a change in decision-making ability in individuals from their first year through their third?
9. What do you do to help a child learn to take on more decision-making responsibility?
10. What types of academic decision-making, if any, would you like to see your students take on but have been unable to incorporate so far? Why?

11. What differences (if any) do you see in children's ability to make decisions between preschool and elementary levels? In your freedom to allow them to make decisions?
12. Who or what has bearing on how children spend their time? How or when is that input given?
13. What role do parents play in children’s academic decision-making?
14. How, if at all, has your understanding of children’s decision-making in Montessori elementary classrooms changed since your training?

APPENDIX D: COMPARISON OF PILOT INTERVIEW WITH FINAL INTERVIEW

Question	Final Interview	Pilot Interview
1.	Tell me about your students in terms of gender, ages, and previous Montessori experience.	Describe your class in demographic terms: number of students, gender, ethnic background, number with Montessori experience, socioeconomic background.
2.		What does every student have to do in a given day or week?
3.	What is your daily schedule?	How do you establish your expectations so the children know what they are supposed to do?
4.	What are your students' responsibilities during worktime? What types of decisions do they make?	Describe a particular work period in terms of decisions you and the students make.
5.	How do the students know what to do during the work period?	Tell me about a particular student who is very good at making decisions about their work.
6.	What are the students' responsibilities with regard to planning and reporting what they do? [What are your responsibilities?]	How do you know when a student is having trouble handling the responsibility?
7.	What limits on choices do you consider important to the proper functioning of your classroom?	Describe the strengths and weaknesses of a student who has trouble handling the responsibility of making their own decisions.
8.	Describe the range of decision-making capabilities you have in your class right now.	What have you done to help a child who is struggling with decision-making responsibility?

Question	Final Interview	Pilot Interview
9.	Have you noticed a change in decision-making ability in individuals from their first year through their third?	What experience have you had with structuring a child's time rather tightly & gradually giving her more responsibility for making her own choices?
10.	What do you do to help a child learn to take on more decision-making responsibility?	Do you notice a pattern as to which children have difficulty?
11.	What types of academic decision-making, if any, would you like to see your students take on but have been unable to incorporate so far? Why?	Why do you think these children have difficulty? What skills do they lack?
12.	What differences (if any) do you see in children's ability to make decisions between preschool and elementary levels? In your freedom to let them?	What are the most common concerns or questions you get from parents?
13.	Who or what has bearing on how the children spend their time in class?	Which state or national tests do your students take and how are the results used?
14.	What role do parents play in children's experience of academic decision-making?	How do you develop your academic expectations?
15.	How, if at all, has your understanding of children's decision-making changed since your training?	What developmental differences between preschool and elementary do you see in children's ability to make decisions?
16.		What differences do you notice between preschool programs and elementary programs in terms of the amount and types of choice the children have?
17.		How is Montessori's theory re: student choice relevant (if it is) to us today? Why?

APPENDIX E: CHECKLIST FOR A MONTESSORI ELEMENTARY CLASS THAT FULLY INCORPORATES STUDENT DECISION-MAKING

Total	Possible	Description
	5	Planning what students will do is a collaborative process between students and teachers. Deciding what to do at a given moment is the student's responsibility.
	3	While the teacher has a sequence for work in mind, the students are not made particularly aware of it. Thus, worksheets, sequenced task cards, and **exclusively adult created** "work plans" are not used.
	2	Children are able to follow their own interests but are also made aware of outside expectations (benchmarks, standards).
	2	Students choose where they work and whom they work with most of the time.
	3	Assessment of which skills a child has mastered is primarily done through observation and portfolios--not tests.
	3	Work is shared with parents during scheduled conferences that are conducted by the student. The teacher is present and teaches students how to prepare and present the conference.
	1	There is a lengthy, uninterrupted work period (3 hours) daily, during which many subjects and activities are happening.
	2	Subject areas are linked rather than being separated for study.
	2	A wide variety and number of lessons are offered which suggest options for further study.
	2	Stories, drama, music, and art are primary ways to "spark the child's imagination."
	1	Materials for the students' use are displayed on shelves accessible to the students. Some are traditional Montessori materials, others are not. (For example, computers did not exist in Montessori's day but are part of a complete set of materials today.)
	1	Students are able to plan their own outings to follow their interests outside the classroom.
	2	Immediate feedback is provided that is autonomous whenever possible.
	3	Students keep records of how they spend their time.
	1	The usual adult/student ratio is in the range of 1:10 to 1:17
	1	There are at least 20 children in the class.
	3	Parents are involved in that they are welcome in the classroom and kept aware of the principles under which the class is functioning.
	37	Totals

APPENDIX F: POINTS ASSESSMENT FOR THE CHECKLIST

Checkpoint one had five aspects. Each aspect was given a point.

1. Students chose how long to spend on each task.
2. Students chose the order in which to do work.
3. Students chose what to do as they went along.
4. Students had a weekly conference with the teacher.
5. Students planned ahead what they were going to do.

Checkpoint two involved three points: one point was given if the class did not use command cards or sequenced worksheets extensively. Two additional points were given to those who did not generally give direct assignments. Participants who gave assignments but allowed for student input were given one point, and those who relied exclusively on teacher assignments received zero additional points.

Checkpoints eight, eleven, twelve, fifteen, and sixteen were each worth one point because classes either had them or they didn't. Checkpoints three, four, five, six, seven, and thirteen had more than one point because there were several aspects that classes might have. The remaining checkpoints were assigned more than one point in order to distinguish levels of agreement found in the data. These were not "either you have it or you don't" points, but "to what degree do you demonstrate it" points.

Checkpoint ten was worth two points if the participant mentioned its relation to “sparking the imagination” in the interview or it was directly observed in the observation. One point was given if more than one was observed or described but it was unclear whether they were integrated with other work to “spark the imagination.” Checkpoint fourteen had three points in order to distinguish gradations of student record-keeping: one point was given if the class got a teacher check on finished work, two points were given to those who had students write what they did but did not particularly hold them accountable for it, and three points were given to those who used student record-keeping extensively. The last checkpoint had three points for gradations of agreement based on what was found in the data.