The Effects of Creating Self-Assessed Work Portfolios on Student Learning Engagement in an Upper Elementary Montessori Classroom

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The Effects of Creating Self-Assessed Work Portfolios on Student Learning Engagement in an Upper Elementary Montessori Classroom

Action Research Report

By Suzanne Clement Thorne
The Effect of Creating Self-Assessed Work Portfolios on Student Learning Engagement in an Upper Elementary Montessori Classroom

By Suzanne Clement Thorne

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In fulfillment of final requirements for the MAED degree

St. Catherine University

St.Paul, Minnesota

Advisor: Nicole Wilcox ____________________ Date ____________________
Self-Assessed Portfolios for Student Engagement in Learning

Abstract

The purpose of the research was to find whether the creation of self-assessed student work portfolios would be effective in engaging students in learning opportunities and lead to self-regulated behaviors. The research project was conducted in an upper elementary classroom. The class consists of twenty-three grade four to grade six Montessori students in a private school. Ten students have had a Montessori education starting in preschool, eight students started in grade three, two were held back a year, two students started in grade four, and two students started in grade six. Fifty-two percent of the class has a form of learning difference; prominently dyslexia. Three students are on the Autism spectrum. The sources of data used in this research included observation forms, self-assessment forms, journal prompts, teacher reflection journal, and student-teacher interviews. The results indicated an increase in engagement in learning and self-regulated behaviors. This was equally evident in the students with different learning needs. Implications are that empowering students with self-assessment and choices of work improves work habits and leads to better quality of learning outcomes and engagement. Students improved the most when they combined their self-assessment with peer feedback and were given direct responsibility for the creation of their own portfolio.
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The Montessori teaching method has the single function of helping the child fully develop. Using purposeful activities to arouse the interest in the child is the teacher’s job. Creating a classroom learning environment must include the freedom for students to work, process information and concentrate on skill development. Teachers, also called guides, need to observe the subtle phenomenon taking place for each child and support appropriately. In order for students to invest in learning and gain intrinsic motivation, they build a trusting relationship with their guides.

Upper elementary Montessori students need support forming their inner selves. If students have become dependent learners through rewards or punishment, re-education in autonomy is required. Intrinsically motivated students demonstrate the learning process by showing interest in a subject, repetition of the work and concentration with the materials or the discovery and mastery of the concepts. These motivated students are what Maria Montessori coined “normalized” or what is now called “self-regulated.” Being self-driven is a key to success. When the power of concentration emerges, intrinsic motivation towards learning follows.

Extrinsic motivators such as the completion of a pre-determined work plan for the sake of completion, undermine the development of intrinsic motivation and long-term, lasting results towards learning. Empowering students with choice is part of the necessary autonomy for intrinsic motivation. Regular conferencing between guides and students gives voice to the desired educational experiences. Strictly using observation to direct students and assess needs is not comprehensive enough to ensure complete success in each student’s development. Research indicates giving a student choices in tasks, content, and collaboration leads to improved performance and motivation. Students in a
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Montessori environment should share in personal work assessments and analyze progress over time in order to adjust their challenges to appropriate levels. The creation of personal work portfolios allows students to participate in the representation and recognition of their abilities. When students accomplish a chosen task at the right level, they feel successful and motivated to continue. Learning investment and making personal choices represents true motivation and self-regulation.

This action research attempts to answer the question, “How will creating student work portfolios for self-assessment affect student engagement towards learning in an upper elementary Montessori classroom?” and occurs in a Montessori upper elementary multi-aged class of nine to twelve year olds. Ten students are new to the classroom this year but only two are new to the Montessori system of teaching. Seven students have designations of learning differences and five more have dyslexia. All twenty-three students will be introduced to the research but only the data from twenty-one will be included due to low abilities and absentees. The objective is to give students a voice in the process and observe them moving away from checking work as completed without regard for quality, and towards self-correction and the internal rewards from learning. The creation of portfolios, where each student would compare the progress of their work over time and assess their own work using checklists and rubrics, teacher conferences and peer feedback, would open the possibilities for engagement in learning to the students.

**Literature Review**

In an authentic Montessori classroom, the environment enhances student learning by providing didactic materials with built-in controls for error, and a safe and trusting community. The use of these materials allows for teacher observation in order to know
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the spontaneous activity choices of each student and for these students to develop self-discipline (Brehony, 2000; Jones Jensen, 2004). Normalization is another term for self-regulation (Lloyd, 2008). According to Lloyd (2008), Montessori borrowed the term normalization from anthropology and it means “becoming a contributing member of society” (p.2).

Ideally we follow the child, through observation, supporting the development of normalization (Ervin, Wash, & Mecca, 2010). Authentic assessment in this environment is done through observation of the students in behavioral, social, and academic situations with the use of anecdotal records (Brehony, 2000). Chappuis and Stiggins (2002), stated “Classroom assessment that involves students in the process and focuses on increasing learning can motivate rather than merely measure students” (p.40). Making sure assessment is fully reflective of the abilities and meets the needs of the individual student on the path to self-regulation is the question behind this literature review.

**Overview on Formative Assessment**

The research on formative assessment studies shows student-centered learning leads to a feeling of accountability and responsibility, as well as self-confidence (Adams, 2012; Chappuis, & Stiggins, 2002; Cubukcu, 2012; Lloyd, 2008; Roberts, 2000). Students involved in the decision making process invest more time into their work (Young, 2005). Students in a Montessori environment showed increased motivation towards learning compared to non-Montessori classrooms (Ervin, Wash, & Mecca, 2010) and self-regulated students become life-long learners (Clark, 2012). Creating an environment where formative assessment is respectful of each student’s abilities, with opportunities available for self-expression, has been shown to improve the investment into learning and
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into the community by the students and the teachers (Young, 2005). Young’s study concludes that intrinsic motivation occurred when students had control, received prompt feedback, were given high expectations, were able to work collaboratively, and learning differences were recognized (2005).

Formative assessment effects in a student-centered classroom are shown in the studies by Gismondi (2009) and Roberts (2000) to cause improvement in student engagement. Evidence of the increased engagement was observed through goal setting abilities witnessed in the students when creating a portfolio. The creation of the portfolio is multi-faceted in that the students know they will share their work, and the makeup of the portfolio allows each student to see the development of work over time. Students then practice presenting their work, building confidence and pride, as well as choosing goals using work records, weekly checklists, rubrics, and teacher conferences for follow up. Students in this study showed increased motivation and displayed ownership of learning and goal-setting by sharing their work (Gismondi, 2009).

Portfolios are adaptable to suit individual needs. “Requiring students to develop and submit portfolios for evaluation and accountability is a valuable and challenging way to link student learning with assessment. When students are involved in the work choices, then individualized and developmentally appropriate learning will be encouraged and also will increase student motivation and effort” (Kirk, 1997, p.29). Portfolios provide an opportunity for students to celebrate growth across time and for students to choose work that best represents them. Portfolios provide feedback throughout the learning, rather than just at the end, which allows students to focus on areas of learning and teachers to identify areas for review (Kirk, 1997, p.30). Portfolios also successfully encourage
Assessment by Montessorians

In a study conducted by Roemer (1999), the assessment method used most often was found to be thorough observation of each student. These observations include behavior, social, and academic aspects of students in a prepared environment by teachers trained in the Montessori philosophy and pedagogy. Portfolios were also used by Montessori teachers, but it is not clear whether they were student-created or what the process of assembling the portfolio involved. Roemer’s study concludes by identifying the need for more research on assessment methods in a Montessori classroom (1999).

More than Observation Needed for Self-Regulation

The drawback to mainly using observation as assessment is the lack of knowledge or feedback for the student in the direction of learning or the abilities measured (Roemer, 1999). Feedback, according to Nicol & Macfarlane-Dick (2006), helps students to take control of their own learning and to become more self-regulated by empowering them in the process. Andrade and Valtcheva (2009), found feedback and criteria-referenced self-assessment to be essential to achievement.

The difference between conforming to perceived expectations and self-assessment of abilities is important and can be addressed through conversations between students and teachers and by co-creating the criteria for assessment (Andrade & Valcheva, 2009, p.17). Access to clear criteria can be met by introducing a rubric, even one co-created by
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teacher and student and one which can teach as well as evaluate. Self-assessment can be
done on drafts if there are established criteria. The goal of evaluation is not just
determining a grade by the students, but giving students an opportunity to compare their
work to a standard and revise their work until they are satisfied with the process and end
result (Andrae & Valcheva, 2009, p.16).

A regularly established student-guide conference is a key component for student
involvement in the direction of their education and the creation of a portfolio. A trusting
relationship between student and teacher (Marzano, Pickering, & Pollock, 2001), and
increasing motivation and empowerment (Williams, 1999) are shown when students are
involved in the process. Student-led conferencing is a highly successful technique used to
increase involvement, increase confidence, increase motivation, and allow students to see
progress (Roberts, 2012).

Montessori guides have the ultimate goal of developing normalized students
(Lloyd, 2008; Roemer, 1999). Using student-involved assessment leads to an increased
investment in classroom learning and higher success for individual students, when
opportunities for self-direction, self-assessment and expression are available (Birjandi,
2010; Sternberg, 2008). A review of the literature validates the importance of student
involvement in Montessori classroom assessment in order to enhance learning and to
provide a comprehensive view of abilities. With the introduction of student-created
portfolios and student-led conferences, students will demonstrate an increased learning
connection. Developing a best practice for assessment will help the teacher and the
student in an authentic Montessori classroom.
Description of the Research Process

This research began at the beginning of the school year. I recorded observations at random times for the first two weeks of each student for self-regulation behaviors using a tally sheet (see Appendix A) designed for this research. I gained consent for this project by describing the research and asking for permission to include students in the data. In order to assure participant understanding, I asked them four questions (see Appendix B) and had them journal their responses. I met with each student with a pre-research questionnaire (see Appendix C) around the idea of self-assessment and how they would feel about sharing their work with others. I asked them to journal around the idea of portfolios by using prompts (see Appendix D) such as, “How do you feel about presenting your work to others when it is completed?” I sent a parent permission letter (see Appendix E). After two weeks, I changed my observations to a general overview of the class (see Appendix F), as I was looking to see how much redirecting was needed overall. I used videotaping during a work block. I also continued observations of individual students.

Students were introduced to the idea of creating a portfolio. They designed covers for the folders and were shown the rubric (see Appendix G) and the checklist for peer editing feedback (see Appendix H). Student-teacher conferences happened every two weeks regarding portfolio content, or more often, as needed. A whole group discussion occurred concerning feedback and the proper way to help a fellow student. Besides peer editing of written work, there needed to be feedback for oral presentations. We used “two stars and a wish,” where fellow students share at least two positive feedback ideas and suggest at least one area for improvement.
The rubric (see Appendix G) required much more time to implement than initially planned due to the class composition. A checklist (see Appendix H) for assessing a writing assignment and getting peer feedback was also introduced at the start of this study. The younger students needed extra time to understand this concept as well.

Students wrote a story with a beginning, middle, and an end. It was supposed to be a short story and only those guidelines were provided. I chose not to show examples as I wanted them to show their abilities at the start of the year and not create pressure to perform at a certain level. Students put their first draft into their portfolios along with the checklist from a peer or themselves. They were given the opportunity to revise after the editing and then put the new publishable story into the portfolio, for comparison. The stories were read to peers in small groups and feedback was given. Eventually, they shared these stories and their progress with their parents.

The students were given a research project and the rubric. The new students were given instruction on research techniques using an index card to write the key words and then complete the project in their own words. Students evaluated their work based on the rubric and I also evaluated that same work. The research was put together in an agreed upon format. Some chose power point, some wrote papers, and some made posters. The research was presented to the class as a whole group and the students were given feedback in the form of two stars and a wish.

During a morning meeting, some students answered the question, “How do you think marking your own work is going for you?” I recorded their answers. Once they were fully into the study, the next journal prompt was about peer feedback and helping
Self-Assessed Portfolios for Student Engagement in Learning classmates. They also wrote about the process of creating portfolios and the responsibility and time it takes.

Finally, students paired up and practiced presenting their portfolios to one another. They then took their portfolios home for the weekend to present their work to their parents. As time was a factor and we could not set up a time for all parents to come to the classroom, this was the best solution. We finished with the post-research questions (see Appendix I) and I scribed their answers.

I recorded anecdotal notes three days a week, throughout this project and more for the students who stood out for on- or off-task behaviors. I wrote personal notes on what I saw working and what changes needed to be made. I made some adjustments to this project as some students were not able to read at grade level and required a different approach, such as access to an Aide or one-on-one attention to feel successful. Their data is included as they were a part of the study. One student with a learning difference, who cannot follow instructions, was not included in this study.

**Data Analysis**

The research began by interviewing each student with the pre-implementation questionnaire form (see Appendix C). Students were asked six questions and answered the questions orally while I wrote their responses. These questions provided data showing how the students felt towards self-assessment opportunities and being accountable for their work. This form was designed to reveal whether students were open to the idea of self-assessment and creating a place to showcase their progress. The results from the pre-implementation student-teacher questionnaire are represented in Figures 1-6. Initially, students were reluctant to check their own work but were open to the idea of a rubric and
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sharing their work with their parents. The majority of the students were open to the idea of making their own work choices for their portfolios. They weren’t as sure about the conferencing with the teacher to decide on the work and asked for longer intervals between meetings.

Figure 1. Checking Own Work. This figure illustrates the answers to the interview question, “Do you think checking your own work is important?”

Figure 2. Collecting and Showing Work. This figure illustrates the answers to the question, “Would you like to collect your work over a period of time and then show your parents or family?”
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Students showed an increase in the desire to check their own work after the study as well as a slight increase in collecting and showing work. Students commented on the rubric (see appendix G) as complicated or adding stress to the work, but several also said the rubric was helpful and made them try harder. These types of responses are accounted for in the Maybe answers in Figure 3. Meeting with the teacher became a little overwhelming for some students with the frequency and focus on the creation of the portfolio in such a short amount of time. Some students expressed their opinions in answering this question (see Figure 4).

Figure 3. Creating a Form or a Rubric. This figure illustrates the answers to the question, “Would you like to create a form that will tell you what your best work will look like?”
Figure 4. Meeting with the Teacher. This figure illustrates the answers to the question, "Would you like to meet with the teacher to talk about your work every week and make choices about what to add to your collection?"
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Students were demonstrating a strong affinity for creating their own work choices as the study progressed. Figure 5 reflects a slight increase in the answers to the question, “Do you like adding your own choices to your work chart each week?” In the journal prompts (see Appendix D), students overwhelmingly said they like making their own choices and found themselves trying harder to do their best work. Only one student said she wanted someone to tell her exactly what she should do every day.

Figure 5. Making your own work choices. This figure illustrates the answers to the question, “Do you like adding your own choices to your work chart each week?”
I analyzed the data that I collected from the pre-observation forms to establish a baseline measurement of behaviors towards self-regulation and the need for re-direction. Comparisons were made with the pre-, mid-, and post observation tally sheets data, again looking at behaviors and self-directed occurrences (see Figures 7-14). These on-task behaviors were as follows: working on teacher-assigned or student-chosen work, taking initiative with work, and teaching or helping others. I tried to video the students during a work block but the camera was discovered and it changed the behavior of the students. They immediately started performing for the camera or stopped their natural behaviors.
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**Tallies of Random Observations**

*Figure 7.* tallies of Random Observations. This figure illustrates the tallies of observed behaviours of the students in the pre-, mid- and post-study.

**Observation Categories**

<table>
<thead>
<tr>
<th>Ob 1</th>
<th>working on assigned work</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ob 2</td>
<td>socializing</td>
</tr>
<tr>
<td>Ob 3</td>
<td>needing redirection</td>
</tr>
<tr>
<td>Ob 4</td>
<td>taking initiative</td>
</tr>
<tr>
<td>Ob 5</td>
<td>teaching or helping others</td>
</tr>
<tr>
<td>Ob 6</td>
<td>distracting others</td>
</tr>
</tbody>
</table>

*Key 1.* Observation categories. This key is a guide to the behaviors observed in the study.

The distribution of the observed behaviors over the total number of observed behaviors was also calculated in percentages (see Figures 8-10).
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Figure 8. Distribution of Observed Behaviors over the Total Number of Observed Behaviors. This figure illustrates the percentage the behavior was observed over the total number of observed behaviors, both pre- and post-study.

Figure 9. Observed On-Task Behaviors This figure illustrates the trend of the observed on-task behaviors for self-regulation through the duration of the study.
Figure 10. Observed Off-Task Behaviors. This figure illustrates the trend in the observed off-task behaviors for self-regulation for the duration of the study.

Because students in this age group are highly social, the socialization observations were isolated separately when representing the data (see Figures 11). I wanted to see if the level of socialization changed in the study if students became more self-regulated. Socialization tallies can also be representing work-related conversations. Socialization behaviors went down but not noticeably, and students were able to continue to socialize and increase their engagement in work.
The observation data shows an improvement in the behaviors towards self-regulation. When looking at the average number of times these behaviors occurred during observation times, for the pre-, mid-, and post-study behavior (see Figures 12-14), there is a demonstrated increase in observed on-task behavior occurrences and a decrease in off-task behavior occurrences. Again, socialization is kept separate to show the events continued to occur throughout the study.
Figure 12. Observed Behaviors Pre-Implementation. This figure illustrates the average number of tally marks for the class behavior pre-study.

Figure 13. Observed Behaviors Mid-Implementation. This figure illustrates the average number of tally marks for the class behavior mid-study.
The journal entries from the prompts (see Appendix D) were analyzed and coded to reflect the main themes. I found these entries insightful. It is difficult to know if the students thought they should write answers that supports my research. Even if I was careful with the language to avoid biases, this stage of development in upper elementary students means the students are very loyal. They may have interpreted these journal prompts to reflect on my research and wanted to show success. The following is an example of a response for the journal prompt, “Creating a portfolio is a big responsibility. How do you feel about this process?”

Yes it is a humungous responsibility. But that responsibility has made me way more independent. I still am crazy but to me I am improving big time. This process has been a very good learning process. I am proud of what I have become. I think the portfolio idea is good because we may show our parents or friends our best work. I also see my own best work. I would not want a
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different working process, even though its lots of pressure, with all the
assessments but I am becoming what I want to be. I am proud and the
portfolio makes you work harder. I would love this process if we did it next
year too (Lion, personal communication).

When students were asked pre-implementation whether they wanted to create a
form that would tell them what their best work would look like, fourteen students said,
“Yes or sure, they would try it” (see Figure 3). After the introduction of a check list, a
rubric, and peer feedback, students were given a journal prompt asking what they thought
of the process of checking their own work with these tools and the majority of students
wrote, “Using a rubric or checklist was really good and worth the extra work and they felt
happy.” One student, who has shown tremendous improvement in his self-regulation
behavior, added, “I feel really good. It was worth the extra work but all of it was really
hard. Using a rubric helped me try harder.” Observations during this time of
implementation and changing personal expectations revealed an increase in students
performing self-regulated behaviors (see Figure 2).

A generic rubric was introduced for a research project and a checklist for self-
assessment or by peers was introduced for a writing assignment (see appendix H).
Students were given instructions on the creation of a portfolio and were asked to submit
their rough drafts, their assessments, peer assessments, and final copies. From my
anecdotal notes and observations, eight of the students submitted a rough draft and
claimed to be satisfied with this beginning level of work. Twelve students made changes
and tried to improve their work in the process of receiving feedback, and self-assessing
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using the checklist. Three students didn’t really participate in the assignment as instructed but submitted their own version of work into their portfolios.

Students presented their work orally to the whole class and were each given feedback from their peers. Three students from the originally satisfied eight students asked to do a second draft of their work after this presentation and took their work to the next level. Once the students paired off and practiced presenting their portfolios to each other, two more students from the original eight asked to type up their work and to make further changes. After students presented their research projects and received feedback, fifteen students asked to do another research project or another writing piece after this experience. The practice of sharing work and receiving feedback encouraged the students to challenge themselves with further study.

Students practiced presenting their portfolios to a partner. The students then took their portfolios home to present them to their parents. The students were asked individually how this experience was for them. Only three students out of 21 said they did not really enjoy the experience of showing their parents because their parents just looked at it but did not have time for an explanation. One student did not want to take it home at all but had expressed this discomfort in sharing the portfolio in the pre-implementation interview.

The data reveals the students had a positive experience with this process and found the rubric and portfolio helpful for doing their best work. In the post-research teacher questionnaire, the general theme was that 19/20 students used words like proud, improving, best work, independence, awesome and rewarding to describe how they felt about the process of creating their own work for their portfolio using a rubric, checklist,
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peer feedback and presentations. They all wrote about the process being positive. 14/20 students wrote about learning to work harder or trying to do better, 5/20 students mentioned the rubric and it being complicated but they learned from it, 2/20 students said they didn’t really need this process to learn and would prefer not to do this work. The interviews and the journal prompts show the student taking ownership of their learning in the classroom.

Anecdotal notes during the time of this research showed the students who were reluctant learners to start, either because of learning differences or previous educational methods, were invested in this process. One student, in particular, showed tremendous improvement in his self-direction and output levels. Two students both said that being involved with the assessments and process of creating best work allowed them to try harder and to focus on the tasks more. None of these students are yet working at grade level, even with the help of an Aide, but they show pride and investment in their work and now take some initiative with their learning. Of the twelve students in the class who have learning differences or designations, one did not participate and one expressed no enjoyment or gain from this research. Otherwise, the other ten students demonstrated a shift in their behavior and engagement in learning and doing quality work. One student said, “I never thought I could do this kind of work before.”

The scope of the study was to see if the processes involved in creating a portfolio that represented students’ best work, and the work leading up to the creation of the best work, would increase self-regulation in students and engagement in learning opportunities. Due to time constraints, I had to break the research down to one writing piece and one research project in a short time frame. I gave students the option of starting
a new story and most students were enthusiastic to try a new writing project for their portfolio. I wasn’t planning on a second writing project but found many students asking for a new one. Several students were also given the opportunity to do another research project as well.

Students were encouraged to do all five journal prompts but they had many projects happening and not everyone managed to complete this work. I ended up asking them the last journal prompt and scribing their replies instead of finding time for them to write. Some new students expressed anxiety from the pressure. Factors such as 1) didn’t want to write anything negative so didn’t complete the journal task, 2) was bored or uninspired to do journal, 3) they felt they had seen this line of questioning from other viewpoints, 4) time management, or 5) incapable of writing in the journal could definitely be considered for the lack of enthusiasm for these last journal prompts. Even with these factors, the study does demonstrate a more engaged group of students.

From the data presented here and my anecdotal notes from the study, research shows students did increase self-regulation behaviors and engage in the quality of their work through the creation of portfolios. Students became aware of their own learning process and took ownership of the quality and choices of their work. I have observed an improvement in the intentions of the students as they put more effort into the process of doing their best work. Students are helping peers with the feedback on their work and how to improve. Watching and listening to presentations of students’ best work led other students to put more thought and effort into their work as well.

One noticeable improvement came from the students who have been designated with a learning difference. The learning output they demonstrated at the start of this
study to the end was noticeably better. They wrote in their journals about being surprised that they could do the work but now feeling good or proud. Those students who used to say their work was complete after one or two incomplete sentences in a journal entry are now able to revise their work into approaching or meeting grade level. This happened with little or no teacher influence, as well. Students’ productivity has definitely increased but it isn’t as much quantity as quality. Students have expressed positive feelings towards using portfolios and the process involved in creating their best work.

Goertz (2001) summarizes the benefits of giving children choices by saying, “There is an essential difference between helping a child take responsibility and show accountability and giving a child assignments, deadlines, and grades. Appropriately presented, the array of possibilities gives children the context, content, and tools they need to do their work. Their innate drive toward self-development and their satisfaction in self-evaluation impel the children to master the curriculum to the best of their abilities” (p.209).

**Action Plan**

After seeing the impact of this action research, the next step would be to extend the success of self-assessment to all areas of the students’ work, not limiting it to the portfolio. It would be beneficial to see accountability through formative assessment across the curriculum.

Other projects would be to create a form of some type for math problem solving, operations, and geometry. Even though these materials have built in controls of error, the
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students may increase their investment in this work if they were able to self-assess how they were doing and if it was their best work.

The use of peer feedback proved valuable and motivating. Previously satisfied students responded to seeing the work of their peers by increasing the quality of their own work. After sharing their portfolios and getting positive feedback from family members, students also increased their attitudes towards their work and the desire to keep building their portfolios. I would like to extend this research by giving the students more powerful language to use during feedback. For example, instead of saying, “I liked your project,” it would be more helpful to say, “I liked how you told us about….” Because of the strong formation of community in the Montessori environment, students are usually kind to each other and I wonder if the use of feedback in more directed ways would also increase motivation and engagement in doing their best work. It would also be beneficial for them to know how to ask questions for clarification. I think this would increase their awareness of their personal abilities.

For the purpose of this study, students were given one writing assignment, one research assignment, and some math questions. Seeing personal growth might encourage students to participate in creating their best work all year, across the curriculum. It would be great testimony if students ask for rubrics or checklists for their next work choices, and if they asked their peers for feedback.

Follow up to this action research would be to see if other teachers use formative assessment in the form of portfolios, rubrics or peer feedback and then do a comparison to try to measure student behavior towards self-regulation. It would be interesting to
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know if the expectations from the teacher towards the quality of the students’ work impacts the results as well.

By the end of the research, students showed growth in pride and accountability. They expressed a positive attitude towards self-assessment and the process involved in creating a portfolio. I would like to further the study into the ownership of tasks by having students help generate the rubric and the checklist for peer feedback. Would this increase their understanding of the requirements for quality of work and/or alleviate some of the frustrations caused by the complicated rubric in the study?

Another interesting study would be the impact of self-assessment for children with special needs. I saw tremendous struggle with accepting responsibility for choices eventually followed by pride as these students began to realize their own potential and the possibility of improvement of their work. I saw noteworthy effort and growth, and definite self-regulation behaviors, despite the challenges of the study. As the roots of Montessori education are coming from observation and education of special needs children, it is only very natural that the environment, which empowers children, should provide great stimulation and support. I would like to design a study with the same objectives for students who are low-ability readers or with low-contributing skills, using self-assessment tools that are more accessible to them.

Action Research has the potential to transform a classroom and the success of the students’ learning potential. This action research project has revealed a positive effect on self-regulation after empowering students with self-assessment through the creation of a portfolio. This is just one glimpse at the potential of using action research as a tool to enhance the quality of a Montessori education.
References


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Appendix A

Observational chart using tallies Pre- and Post- Implementation of Portfolios for self-assessment:

(observations made per student, randomly, during uninterrupted work time)

<table>
<thead>
<tr>
<th>Student name</th>
<th>Time of Observation</th>
<th>Working on teacher-assigned or student-chosen task</th>
<th>Socializing needing redirection by the teacher or a peer</th>
<th>taking initiative with work</th>
<th>Teaching others</th>
</tr>
</thead>
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</table>
Questions for assurance of Participant understanding:

1. What would you like your animal name to be for my records so I can maintain your confidentiality?
2. How would you explain to someone in another classroom what I am doing for my research?
3. What questions do you have for me about my research, if any?
4. At this time, are you comfortable being part of this project?
Pre Portfolio Teacher-student questionnaire:

Questions:

1. Do you think checking your own work is important?

2. Would you like to collect your work over a period of time and then show your parents?

3. What do you think about creating a form that will tell you what your best work will look like?

4. Would you like to meet with the teacher to talk about your work every week and make choices about what to add to your collection?

5. Do you like adding your own choices to your work chart each week?

6. Do you think you have enough choices in your work?
Journal Prompts for Action Research Project

1. What do you think about the idea of creating portfolios this term?
2. How do you think you will feel about presenting your work to others when it is completed?
3. What do you think about helping your classmates with feedback for their work?
4. If you had to teach someone how to decide what work to put into their portfolio, what would you say to them?
5. When you make choices about your work, how do you decide?
6. Creating portfolios and making choices about how you spend your time in class is a big responsibility. What do you have to say about this process?
Dear Parents,

As you may know, I am pursuing a Master of Arts in Education at St. Catherine University. As part of my graduate work, I am going to do an Action Research project.

**Description of Study**

As the teacher of your child in Lambda, I have chosen to learn about self-assessment in a Montessori classroom because the research shows students involved in goal-setting will have increased confidence and motivation towards learning. Evidence shows that using student-involved assessment leads to higher student success. There is no risk to your child as this work will be done through student-created portfolios, designed to meet individual learning needs.

I will be summarizing my research project and writing about the results. However, none of the writing that I do will include the name of this school, the names of any students, or any references that would make it possible to identify outcomes connected to a particular student. Other people will not know if your child is in my study.

When I am done, I will share my final research report in the St. Kate’s library. By sharing what I learned, I hope to help other teachers who are also trying to improve their teaching and student learning.

**Next Steps**

If you decide you DO want your child’s data from this project to be included in my final report, you do not need to do anything at this point. The data I gather will include rubrics, surveys, conference notes, and observation notes.

1. If you decide you do NOT want your child’s data included in my final report, please note that on this form and return it by September 30, 2014.

There is no penalty for not having your child’s data included in my study. I will simply delete his or her responses from my data set. All children will receive the same treatment in my class, regardless of your decision on this matter.

**Questions**

If you have any questions, please feel free to contact me, suethornemma@gmail.com. You may ask questions now, or if you have any additional questions later, you can ask me or my instructor, Siri Anderson, 651-690-6121. If you have other questions or concerns regarding the
Self-Assessed Portfolios for Student Engagement in Learning

study, and would like to talk to someone other than the researcher(s), you may also contact Dr. John Schmitt, Chair of the St. Catherine University Institutional Review Board, at (651) 690-7739.
Self-Assessed Portfolios for Student Engagement in Learning

Appendix F

General Tally Observations of the Whole Class

Self –Assessment in a Montessori Classroom   **At a Glance**   date: _______________

Tally marks for having to regulate a student throughout the day:

<table>
<thead>
<tr>
<th>Time</th>
<th>9-10</th>
<th>10-11</th>
<th>11-12</th>
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</thead>
<tbody>
<tr>
<td>Morning</td>
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<tr>
<td>afternoon</td>
<td>1-2</td>
<td>2-3</td>
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</tbody>
</table>

Tally marks for self-regulation (working with concentration, taking initiative, progressing) observed throughout the day:

<table>
<thead>
<tr>
<th>Time</th>
<th>9-10</th>
<th>10-11</th>
<th>11-12</th>
</tr>
</thead>
<tbody>
<tr>
<td>Morning</td>
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<td></td>
</tr>
<tr>
<td>afternoon</td>
<td>1-2</td>
<td>2-3</td>
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</tbody>
</table>

Tally marks for helpful, respectful behavior towards the environment and/or the community throughout the day:

<table>
<thead>
<tr>
<th>Time</th>
<th>9-10</th>
<th>10-11</th>
<th>11-12</th>
</tr>
</thead>
<tbody>
<tr>
<td>Morning</td>
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<tr>
<td>afternoon</td>
<td>1-2</td>
<td>2-3</td>
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</tbody>
</table>
Appendix G

Rubric for Research Report: (For portfolio)

Teacher Name: Miss Sue

Student Name: __________________________________________

<table>
<thead>
<tr>
<th>CATEGORY</th>
<th>4</th>
<th>3</th>
<th>2</th>
<th>1</th>
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</thead>
<tbody>
<tr>
<td><strong>Topic and sequence</strong></td>
<td>Graphic organizer or outline is <strong>creative</strong> and shows one <strong>clear</strong>, well-focused topic. <strong>Main idea</strong> stands out and is supported by <strong>detailed</strong> information.</td>
<td>Graphic organizer or outline is creative and shows a clear, main idea but the supporting information is <strong>general</strong>.</td>
<td>Graphic organizer or outline has been started and includes a main idea that is somewhat clear but there is a <strong>need for more supporting information</strong>.</td>
<td>Graphic organizer or outline has not been attempted and the main idea is <strong>not clear</strong>. There is a seemingly random collection of information.</td>
</tr>
<tr>
<td><strong>Flow and Rhythm</strong></td>
<td>All sentences sound natural and are easy-on-the-ear when read aloud. Each sentence is <strong>clear and has an obvious idea</strong>.</td>
<td>Almost all sentences sound natural and are easy-on-the-ear when read aloud, but <strong>1 or 2 are stiff and awkward</strong> or difficult to understand.</td>
<td>Most sentences sound natural and are easy-on-the-ear when read aloud, but <strong>several are stiff and awkward</strong> or are difficult to understand.</td>
<td>The sentences are difficult to read aloud because they sound awkward, are distractingly repetitive, or <strong>difficult to understand</strong>.</td>
</tr>
<tr>
<td><strong>Grammar and Spelling</strong></td>
<td>Ready for publication, thought-provoking, <strong>memorable</strong> writing.</td>
<td><strong>Some</strong> grammatical, spelling or punctuation errors, but still could be published.</td>
<td>A <strong>couple</strong> grammatical, spelling, or punctuation errors and <strong>some editing</strong> required.</td>
<td>Many grammatical, spelling, or punctuation errors, and <strong>not ready</strong> for publication.</td>
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<tr>
<td><strong>Creativity and presentation</strong></td>
<td>Presents an excellent and creative project with a strong and clear voice, making eye contact and engaging audience</td>
<td>Presents an excellent and creative project with good eye contact and participation of audience mostly</td>
<td>Presents a good project with a good attempt at using a strong voice and eye contact</td>
<td>Project is fairly presented with some attempt to use a clear voice and eye contact</td>
</tr>
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</table>

**Final mark by student:** ______/16

**Final mark by teacher or peer:** ______/16

Highlight the areas you think apply to your work. Have a friend or the teacher review your work for feedback as well. Compare your results. Conference with Miss Sue.
Self-Assessed Portfolios for Student Engagement in Learning

Appendix H

Checklist and Peer Feedback

Name: __________________________ Peer Editing Feedback Date: ______________

Topic: __________________________ Reviewer: __________________________

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<th></th>
<th>Needs Work</th>
<th>Good</th>
<th>Outstanding</th>
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<td>1. Writing holds the readers' interest.</td>
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<tr>
<td>2. Writing is well organized, with an introduction, body and conclusion.</td>
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<td>3. Grammar and spelling are correct.</td>
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<td>4. Sentences and paragraphs are punctuated properly.</td>
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<td>5. Sentences are clear and concise.</td>
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<td>6. Handwriting or typing is neat.</td>
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<td>7. Piece of writing has a title, author line and bibliography (if required).</td>
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<td>8. Piece of writing is the required length.</td>
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<td>9. Best parts of this piece of writing:</td>
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<td>10. Areas needing more work:</td>
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Appendix I

Post-Portfolio Teacher-student conference

Questions:

1. What do you think about checking your own work?

2. Did you like collecting your work over a period of time and then showing your parents? Why or why not?

3. What do you think about a rubric that helps you know what best work looks like?

4. Did you find meeting with the teacher to talk about your work and making choices about what to add to your portfolio helpful? What did you notice?

5. Do you like adding your own choices to your work chart each week? Why or why not?

6. Do you think you have enough choices in your work? How do you feel about your portfolio right now?

Additional Questions not included in the pre-implementation interview questions:

7. Is there anything you would suggest we change about this process going forward?

8. What else would you like me to know, if anything, about your work, building the portfolio, doing peer feedback, sharing with parents, or your self-assessment process?