Utilizing Play to Increase Usage of Self-Regulation Strategies

Susan Place

Vancouver Island University

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Abstract

Self-regulation is a prevalent issue in classrooms today; students are increasingly unable to wait their turn, control inhibitions and delay gratifications. Play, among children recently, has been on a downward trend and is continuously changing what it looks like. This study aimed to link the two concepts to see if utilizing play in a middle school classroom of grade six students could increase the students’ ability to incorporate more self-regulation into their repertoire of skills after being taught a set of four by the teacher/researcher. The researcher used a self-made tally sheet to track usage of strategies over a period of three weeks with two observation phases and one teaching phase: baseline observations, teaching strategies and final observations. The research indicated that while the usage of strategies did slightly increase, it is not certain that play had an impact on this increase. Additionally the students were loyal to the strategies they knew previously and did not attempt two of the four strategies taught.
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Chapter 1: Problem to be Investigated

Purpose of the Study

This study explored the connection between self-regulation and play. Research into play and self-regulation is important because play is a part of schooling that primary teachers, from Kindergarten to Grade Three, utilize in their classroom. Play also occurs on the playgrounds during recess periods that occur in elementary schools from kindergarten to Grade Seven. This study was conducted in a middle school classroom of Grade Six students where self-regulation is still needed however the amount of play decreases. This study applies theorists such as McClelland and Cameron’s (2011) connection between play and self-regulation to the classroom environment. The understandings from this study will inform the current researcher’s teaching practices in how to help students learn and apply self-regulation strategies during play, which will hopefully transfer to other times at school. The study will also aid the researcher in understanding the role that play can serve in the classroom environment. The purpose of this study was to determine if students use self-regulation strategies during play with the hope that play would serve as a vehicle for practicing self-regulation strategies for usage in other contexts.

Justification of the Study

Through experimenting and creativity, play helps develop higher mental functions, such as problem solving, that children need to develop, to help them self-regulate (Myck-Wayne, 2010; Sandberg & Heden, 2011). Play, when used as a tool in school, supports and increases ability to self-regulate through the natural relationship that exists between roles the children play and the rules that follow the roles that they have taken on in play. Each role will have a set of rules that accompanies it, which children will have to maintain for the play to be successful. When playing with others, children will gain awareness of rules and later apply them to their
own behaviour (Bodrova, 2008; Elias & Berk, 2002) and thus play helps promote self regulation in children. Play contributes to the development of self-regulation through separating thought and action from external stimuli and relying on ideas to guide behaviour (Elias & Berk, 2002).

However, play in classrooms is disappearing. There is a balancing act performed by teachers between meeting the curriculum outcomes and the children’s need to play (Bodrova, 2008; Ranz-Smith, 2007).

Coinciding with this, there is an increase in the amount of self-regulation issues occurring in schools. This is evident in the number of children being diagnosed with disorders that carry with it a symptom of the inability to regulate their behavior; about 10% of school-aged children have an attention deficit hyperactivity disorder (ADHD) diagnosis (Voeller, 2004). Children with ADHD symptoms have high levels of activity including fidgetiness, running, an inability to sit still, calling out, interrupting, and inability to turn-take. (Mayes & Bagwell, 2008).

In my experiences as a teacher, I see many students who need assistance with choosing the appropriate response for many daily activities; such as staying at their desks, raising their hand when speaking, and postponing bathroom/water breaks. I teach students who have difficulty making the appropriate choices when faced with conflict with peers and teachers in situations such as when they are asked to do an activity they do not wish to do or with sharing materials with peers. I observe students who have trouble staying in the classroom, have lower than average coping abilities and often do not have the language to express their feelings appropriately.

Many students with developmental disorders, such as ADHD, exhibit problems with executive functions, for example self-regulation dysfunctions (Eden & Vaidya, 2008; Shiels &
Hawk Jr, 2010). To facilitate helping children achieve success at school, teachers need to provide strategies for students such as verbal cues, reminders, physical placement in the classroom and rewards/consequences. Play is one tool that helps children become ready for school (Bredekamp, 2004).

Play can help youth with ADHD as it has been found that those youth function better in play settings and in settings that do not require limits on activity levels (Mayes & Bagwell, 2008). Vygotsky’s theory states that self-regulation begins when children can integrate adult prompts into their private speech. This private speech is later internalized into inner verbal thought (Elias & Berk, 2002). Typically, children cannot do such a thing on their own; they require having an adult there to scaffold this growth. A program that effectively involves both teachers and students to facilitate growth in self-regulation is the Promoting Alternative THinking Strategies Program (PATHS). PATHS provides students with real life examples and child-centred lessons to support the development of self-regulation skills. Posner and Rothbart (2000) found that self-regulatory executive attention develops late and continues to develop into the school years. Teaching about emotional regulation will help students who have not fully developed that ability and those that have can help teach others through play.

Children are experiencing a real deficit in being able to play, alone or with other children. Their encounters with play are typically very organized and regulated, where research has shown that allowing them to experience the ability to just play freely is something that will help them learn valuable skills (Warner, 2008). If not allowed the time to play and develop skills, there are consequences. McAloney and Stagnitti (2009) learned that children who were not able to do elaborate play or substitute objects (pretending that an object is another object) were reported by teachers to be disconnected from peers socially and not engaging with peers.
Conversely, play intervention improves social interaction and lessens disruptive behaviour (O'Connor & Stagnitti, 2011).

As a result of encounters the teacher observed in her classroom, a research question arose to investigate the connection between free time play in classrooms and students’ coping abilities, connections with peers and handling difficult choices.

Research Question and Hypothesis

The following question was proposed for the present study: In what ways will middle school students use self-regulation strategies during play after direct instruction of strategies? It was hypothesized that there would be an increase during play after being taught the strategies.

Definition of Terms

For the purposes of this study play was defined as time where students were participating in an activity in the classroom that was carried out during instructional time but was not completely directed by the teacher. The teacher provided the time and materials for the play to occur however there was no direct instruction as to what the play looked like or how it was to be carried out by the students. Students were given math materials such as dice, base ten blocks, playing cards and played games that involved using math skills. Due to the often spontaneous nature of play, there was the possibility that play took on a wide variety of different forms as the research unfolded.

Bodrova and Leong (2008) defined self-regulation as a deep, internal mechanism that enables children as well as adults to engage in mindful, intentional, and thoughtful behaviors. Self-regulation has two sides: first, it involves the ability to control one’s impulses and to stop
doing something, if needed—for example, a child can resist his immediate inclination to blurt out the answer when the teacher poses a question to another child. Second, self-regulation involves the capacity to do something (even if one doesn’t want to do it) because it is needed, such as awaiting one’s turn or raising one’s hand. Students’ use of self-regulation strategies was measured through observations of four strategies that were explicitly taught in the classroom and school to aid children with controlling behaviours and emotions. The strategies taught were using “When you, I feel” statements, 1 plus 3 plus 10 calm down technique, using a break card, and using their WITS. For this study the observation and measurement focused on impulse control and delaying gratification as described in the definition by Bodrova and Leong.

**Brief Overview of Study**

In the current study, the researcher used a tally sheet that was created specifically for the study. The tally sheet consisted of four strategies that relate to self-regulation and were taught explicitly in the classroom as a means of conflict resolution and way to handle emotions. Observations took place over a span of three weeks beginning in January 2013. The observations were carried out by the researcher. After initial baseline observation, the self-regulation lessons were carried out in class. Then observations were taken again. The instrument was used for both the baseline measurement and observations.
Chapter Two: Review of Related Literature

Play

The discussion of play among children of all ages is a very important topic. There is a trend where teachers are facing difficulties balancing their curricular goals and meeting the children’s need for child-sponsored activity or play. The outcomes that teachers are being asked to meet for children are increasing. That increase is taking away time from the opportunity for free play. Despite the trend, there is evidence that play helps balance child and adult-initiated activities to meet curriculum’s content (Walsh, Sproule, McGuinness, & Trew, 2011).

There has also been a decrease of play outside of school. Ranz-Smith (2007) found that this problem needed to be addressed particularly due to the increase of activities outside of school being structured or electronic based. Ranz-Smith’s study showed that curricular expectations impacted the teacher’s views of play as an item they could defend using in their classroom; as a result they did not employ play in their classroom.

Play has many definitions and interpretations. One that this researcher has found to encompass the variety of meanings in a succinct manner is from Warner (2008): “[p]lay comes in a variety of forms and can be defined as self-managed, creative, light-hearted, and spontaneous, involving rule making and breaking”. Furthering that definition, Bodrova (2008) claimed that there are three components of play – imaginary situation, roles and rules- that help children’s minds to engage both in symbolic thinking, and in intentional and voluntary behaviours.

It is noted that scaffolding needs to happen in play to help students achieve maximum benefit from play (Bodrova, 2008). The adult can provide the materials and the guidance while
the students take over the action to complete the play and tasks involved. Creating classrooms that allow students to express themselves, feel like they belong and are supported, helps students take regulation and apply it to the self (Fried, 2011). Perry (2001) advised teachers to incorporate more unstructured play into the students’ day to allow them to practice conflict solving skills on their own.

O’Connor and Stagnatti (2011) furthered the research that has been conducted on the role of play in facilitating children’s development and learning to include the area of children with developmental delays and disabilities. The analysis of the data demonstrated that those children who were in the play intervention group significantly improved in their social interaction and became less disruptive and disconnected over the six month period than the comparison group which become slightly more socially disconnected and disruptive. Pretend play has been found to be an effective part of developing children’s social competence. The results from this study may help this researcher by validating that play can be used to improve the social skills of students.

Ranz-Smith (2007) explored the changing trends of play and academics. The study involved interviewing first grade teachers with at least three years teaching experience. The analysis of the interviews demonstrated that the teachers agreed on the value of play in relation to growth and development of young learners however this did not necessarily show in their classrooms with the exception of one teacher. There were also differing views of play which resulted in divergent ways of including play within the school setting. Finally, despite evidence that all the participants believed that child-initiated play enhances learning, that belief was overridden by expectations and circumstances therefore play was not used in all of the teachers’ actual practices. This study demonstrated the importance of how expectations of teachers, such as meeting the curriculum and learning outcomes, have an impact on how teachers incorporate
play in the classroom. This study was done with grade one teachers and is important research to begin the discussion of play beyond kindergarten. More research needs to be conducted in all the primary grades up to grade three and beyond to middle school to discover how play is understood and utilized in elementary and middle schooling.

Self-Regulation

Self-regulation is a concern that many educators are addressing in their classrooms. Classroom behavioural demands, such as waiting for a turn, raising hands to speak, and switching tasks, require emotional control, as well as attentional, behavioural and cognitive control (Rimm-Kaufman, Curby, Grimm, Nathanson, & Brock, 2009).

Posner and Rothbart (2000) explained that children’s self-regulatory executive attention continues to develop past toddler and preschool ages and into their early school years, therefore some children will still need guidance to manage emotions and reactions while others might not require such direction. This developmental stage of children’s lives leads to teachers and schools needing to support this piece to manage meeting the needs of the whole child.

Elias and Berk (2002) drew on Vygotksy’s theories to link together sociodramatic play and self-regulation through the imaginative component where children practiced separating thought and action from stimulus outside themselves and learned to rely on ideas to guide their actions. For example, imagining a block is a sandwich requires them to think beyond the present and have more control over their reality. This control over reality will help them to have control in other areas as well; play allows children to practice this control in a safe situation which hopefully carries on in their lives.
Bodrova and Leong (2008) defined self-regulation as an internal mechanism that helps people to act with mindful behaviours. They stated that it has two aspects: first controlling the impulses to stop doing something, such as blurting out answers and second to do something that is needed, even if it is difficult. Self-regulated children can delay gratification and suppress their impulses. The authors differentiated between two kinds of self-regulation: emotional and cognitive. Emotional self-regulation happens during social interactions and cognitive self-regulation occurs during thinking tasks. An example of cognitive self-regulation the authors gave was looking at a picture of a dog where underneath the picture is the word cat. In order to read the word cat, the child will need to overcome the desire to look at the picture and instead focus on reading the word. The authors go on to state that those two types of self-regulation have the same roots in the brain which means that as children grow, they can take control of their feelings and thinking. As well, if they do not utilize this area and use self-regulation behaviours, these areas of the brain might not develop to their full potential. The authors provided four strategies for incorporating self-regulation opportunities in the classroom: Teach self-regulation to all students in the classroom, create opportunities for children to practice the rules of behaviours and to apply rules to new situations, offer children visual reminders about self-regulation, and make play an important part of the curriculum. These strategies were quite useful to the current research; all those strategies were utilized in this researcher’s study. The researcher taught self-regulation strategies, created the opportunities to use them, posted the strategies around the room to remind students, and encouraged and created times for play to occur in the regular school day.

McClelland and Cameron (2011) found that a large body of research suggests that self-regulation measures can predict school success. Additionally they found that children with socio-demographic risks have difficulty planning their behaviours however if they have self-
regulation they will do better than those with weak self-regulatory skills. This shows that self-regulation skills need to be taught to improve student success in school.

Acedo Lizarrago, Acedo Baquedano, Cardelle-Elawar, Iriarte and Ugarte (2003) conducted research on self-regulation, assertiveness and empathy. Through their intervention they saw improvement in various stages of self-regulation such as monitoring performance and paying attention. They also noted improvement in social skills such as identify others’ viewpoints and interacting easier. These findings support the use of self-regulation both in social settings, such as group work, and as a means to improve social skills.

While there is research about both play and self-regulation with a link between the two, this researcher wanted to explore the connection between facilitating children’s development of self-regulation through direct instruction and this being applied in unstructured play times. The research indicates a link between self-regulation and play therefore it should follow that students will use self-regulations strategies during play time.
Chapter 3: Procedures and Methods

Description of the Research Design

The purpose of the study was to discover how students used self-regulation strategies during play time. Since the researcher was looking for a possible change in behaviour of a class of students as a result of explicit instruction in self-regulation strategies and the implementation of play time, a one-group pre-test post-test design was utilized with observations using a tally sheet.

The study took place in the researcher’s classroom of twenty-five grade six students in a middle school. The researcher first observed the students playing various math games with manipulatives (cards, dice, base ten blocks etc.) over the span of one week. The observations were held at the same time daily over the week for a 45 minute block. While the students were engaged in play, observations were marked on the tally sheet if self-regulation strategies were observed. If a strategy was not observed after the time frame “none” was written in the column for that strategy.

After baseline observations of one week, the researcher then taught four self-regulation strategies to the students over the span of a week as mini-lessons with practice time for the students to model the strategies for the class in mock scenarios. The strategies were taught clearly as strategies the students could use in circumstances of problems that they might encounter in social situations.

Over the course of the next week, the researcher then observed the students playing during the 45 minute daily math block and noted the usage of the strategies with the same tally
sheet. The researcher followed the same procedure as step one, this time indicating in the second column if a strategy was utilized.

**Description of the Sample**

The research was carried out in British Columbia at AW Neill Middle School in School District 70 on Vancouver Island. The sample was drawn from the researcher’s classroom population of Grade 6 students. Sampling was purposive and consisted of students in the researcher’s class whose parents gave permission to participate in the research. There were ten participants in total out of 25 possible in the class, five girls and five boys. Academically, the students were lower than average when compared across the district and province. Compared across the school, they were typical. Compared across the class, they were also typical. Their behaviour and academics were average for the population in the district the researcher teaches. There were no individual learning plans or behaviour plans for the students. Overall socially, the students were typical for the age and grade level with a few exceptions. Some children were well below average, coming from families experiencing many hardships that impacted the growth and development of the children. Some children were above average, having rich and diverse learning and social opportunities outside of school to draw upon when inside school.

There are two middle schools in Port Alberni. AW Neill’s demographic is primarily composed of a low socioeconomic status however this is fairly consistent across the district. The city of Port Alberni is historically supported by the forest industry and resource-based industries though this has decreased in recent years. Students generally live within walking distance from the school or are bussed in from nearby areas. The school has a mixed cultural component with a large First Nations population.
Description of Instruments and Scoring Procedures

Instrumentation for this study included a tally sheet (Appendix A) made by the researcher. The tally sheet consisted of four strategies that related to self-regulation and were taught explicitly in the classroom as ways to resolve conflict and to handle emotions. The first strategy was using “When you, I feel” statements. These statements, where students say “when you do this action, I feel this feeling”, were taught to be used when there was a situation where feelings get hurt or students are upset and they would typically ask the teacher for assistance right away as opposed to trying to solve the problem on their own. The next strategy was using “1 plus 3 plus 10 Calming Down” technique. In this strategy, when students start to feel sad, angry, hurt or just need to relax, the students first tell themselves to be calm, take three deep breaths, and then slowly count to ten. Another strategy was choosing to safely leave from the situation that is upsetting them and going to the school learning centre. This room is a classroom in our school that students can use when needing a break. In this room they can read a book, go on the computer or work quietly on assignments they need to complete. It is a quiet spot in our school operated by a learning assistance teacher and/or the school counsellor. The last strategy was using their WITS. WITS is an acronym that stands for Walk Away, Ignore, Talk about the Problem and Seek Help. This can be observed during a problem by observing if the participants are having an issue and whether they use one or more of the parts of this; it is taught in sequence and typically students employ the language of WITS when they apply the strategy. These strategies were chosen as a result of what the researcher witnessed being used at her previous teaching position in an elementary school in Port Alberni that were helpful to that school community. They were recommended to our schools by area counsellors and are researched based. When the researcher observed a behaviour listed on the sheet, a tally mark would be
placed in the appropriate column. Observations took place over a span of three weeks beginning in January 2013. The observations were completed before and after teaching the strategies. The observations were carried out by the researcher. The instrument was used for both the baseline and final observations. For each student baseline and final observations were compared to see how strategies were being used.

**Explanation of the Procedures Followed**

At the beginning of October 2012, an informed consent letter detailing the nature of the research was sent home with parents during parent teacher interviews requesting permission to observe and collect data on their children during play. The consent letters were asked to be returned to a drop box in the office by the end of the week that they were sent home.

In order to ensure the confidentiality of the participants, several steps were taken. Firstly, the researcher did not write names on the observations sheets. Once the consent letters were received, they were placed in a safe that was locked and not accessible to anyone other than the researcher or assistants and the supervisor. The students being observed for the research were coded as letters to identify them only to the researcher and the school secretary. Secondly, the researcher conducted the observations on all students in the class; not just the participants. This was done to ensure that outside observers, such as other students, parents, educational assistants, would be less likely be able to discern which students were participants in the study. In addition, all students were being treated equally and no students were getting more attention or receiving preferential treatment. After the observations, the researcher’s school secretary looked at which students returned consent forms, informed the teacher which sheets to analyze using the code to identify the student, not their name, and the researcher then used data from those participants.
When the secretary returned the sheets, she removed the code number to further protect the anonymity, as the researcher did know who the codes related to at the start. The other sheets were returned to the researcher however were not analyzed; they were returned for shredding at a later date.

Observations took place in late January and February during Math which occurred every day. The time and date were noted on the tally sheet along with the participant code. The tallies for this observation were placed in the column that matched the current observation. Each participant was observed once during each phase for a total of two observations: once during baseline and once after they were taught the strategies.

When the researcher taught the lesson on the “When you, I feel” statement, the researcher defined the strategy for the class and the students took notes of this definition in a self-regulation notebook. Afterwards the class had a discussion about when it was appropriate to use this strategy. This discussion followed the flow of the conversations that arose from the students input. The discussions were beneficial for the class and the researcher as a means to gain insight into how and if the strategies were useful to the students. The class also worked in partners or small groups creating a scenario that this might work in and then role played this scenario for the class. This lesson format was used for all of the four strategies. The researcher defined the strategy, students took notes and the class had a discussion after which the students would create a scenario to role play for the class.

**Discussion of the Validity**

The current study set out to determine if students practiced self-regulation strategies during play. The strategies observed by the researcher were research based and have been taught
in districts across Vancouver Island. They were recommended to our school by our Special Education Teacher and area counsellors. To help improve validity the researcher chose strategies to tally that were applicable to the developmental level of students and which were easily observable.

To help improve internal validity the researcher observed the use of strategies at the same time of day immediately following recess, in the same location and over the same time 45 minute period using the same methods of play. To reduce bias, the researcher ensured that the same amount of time was dedicated to each participant.

Limitations to the study were the short time frame of the study; a longer duration between baseline and final observation might have allowed for a more reliable indication of student use of self-regulation strategies. Another limitation to the study was the unique population in my class, due to the cultural component. Port Alberni has a diverse cultural population with a high percentage of First Nations and a wide range of socioeconomic statuses. These various backgrounds also have their own set of problem solving strategies that differ from the strategies commonly taught at schools. This lessens the student’s potential for implementing new strategies.

The grade level of the population was a limitation in terms of what play resembles. To address this limitation the researcher chose play that suited the activity level and curriculum needs for middle school students using Math as the delivery method and using materials they are familiar with using. Additionally, the researcher did choose strategies that were applicable to the grade level to help reduce this limitation.
Another validity issue is that the students may be experiencing a bad day which can impact the usage of the strategies and their coping ability for stress and disagreements among classmates. The researcher took as many measurements as the research allowed, though this was limited by the duration of the study. The researcher tried to be aware of the mental states of the students and tried to only take measurements when students were not experiencing external difficulties.

**Description and Justification of the Methods of Analysis**

After observations were completed, the researcher compared the amount of tallies in each column, “When you, I feel, 1 plus 3 plus 10 Calming down technique, Using a break card, and Using their WITS, to determine if there was an increase in use of the self-regulation strategies taught. The researcher did this for all the participants and behaviours.

The researcher also compared boys versus girls in their results to see if there was a difference in the way they used self-regulation strategies. This was done to see if there was a strategy used more by girls than boys or vice versa or if they were used equally between genders; this could inform further studies and teacher’s practices when incorporating this into their classrooms.
Chapter 4: Results and Findings

Results

The purpose of this study was to discover if having play inside of a classroom would allow for more usage of taught self-regulation skills which would hopefully carry over to other settings if students found success with the strategies. The researcher observed a class of 25 students, with a sample of 10 who consented to participate in the study. The researcher observed the students in the researcher’s classroom during a block of time for Math that the teacher allotted for Math play. Table 4.1 shows the results of all participants. Table 4.2 shows the results from female participants and Table 4.3 shows the results from the male participants.

Table 4.1

*Results of All Participants (n=10)*

<table>
<thead>
<tr>
<th>Strategy</th>
<th>Baseline</th>
<th>Observation</th>
</tr>
</thead>
<tbody>
<tr>
<td>“When you, I feel” statements</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>1 plus 3 plus 10 Calming Down</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Using a Break Card</td>
<td>4</td>
<td>7</td>
</tr>
<tr>
<td>Using their WITS</td>
<td>7</td>
<td>11</td>
</tr>
</tbody>
</table>

The results from the observations during play did not illustrate a high usage of all of the strategies that were taught and observed. The strategy most often used was using their WITS. This was true before and after teaching the strategies. Seven students used this at baseline and 11 during observations. The second strategy used most often by the students was using a break card to leave the room; four students used this at baseline and seven during observations. Both of
these strategies involve removing yourself from the situation, either to another location in the room or leaving the room entirely. The least commonly used strategies were using “When you, I feel” statements and using the 1 plus 3 plus 10 calming down technique.

Table 4.2

Results from Female Participants (n=5)

<table>
<thead>
<tr>
<th>Strategy</th>
<th>Baseline</th>
<th>Observation</th>
</tr>
</thead>
<tbody>
<tr>
<td>“When you, I feel” statements</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>1 plus 3 plus 10 Calming Down</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Using a Break Card</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>Using their WITS</td>
<td>3</td>
<td>5</td>
</tr>
</tbody>
</table>

Table 4.3

Results from Male Participants (n=5)

<table>
<thead>
<tr>
<th>Strategy</th>
<th>Baseline</th>
<th>Observation</th>
</tr>
</thead>
<tbody>
<tr>
<td>“When you, I feel” statements</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>1 plus 3 plus 10 Calming Down</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Using a Break Card</td>
<td>0</td>
<td>3</td>
</tr>
<tr>
<td>Using their WITS</td>
<td>4</td>
<td>6</td>
</tr>
</tbody>
</table>
There was not a large difference between males and females in their usage of strategies overall. Some differences were that the female students started off using more strategies during the baseline phase than the males and the males showed the greatest improvement, especially in reference to using the break card.
Chapter Five: Summary and Discussion

Summary

This study explored the link between taught self-regulation strategies and play, observing if students employ self-regulation strategies during play time without teacher direction after teaching occurs. The researcher observed students over a week as baseline, taught the four strategies over a week and observed again for a week. The researcher observed at the same time every day for 45 minutes during Math using manipulatives as the instruments for play. The results showed that there was not a substantial increase of self-regulation usage during play by the participants.

Discussion and Recommendations

The study illustrated that the students were loyal to the strategies they were accustomed to using prior to this study and that they did not attach to strategies they were not comfortable with using in their peer groups during play time. The students did not appreciably increase any new skills as a result of being taught however the researcher did learn what strategies were appropriate for their age and what strategies should be taught at the lower grade levels. Additionally, while allowing them to play did allow for a real life setting in which to use the strategies that they either previously found worked for them or they adopted from the lessons, it is not clear that play increased these.

The most interesting finding occurred during the teaching of the strategies and what strategies the students did use and how. During the teaching of the four strategies it became obvious that some students were not going to utilize each of them fully in their practice of dealing with social issues. During the discussions in the teaching phase, the researcher received
feedback on the self-regulation strategies. The students indicated that they were not open to it, that it was not effective for their age, that it would not work when solving a social issue or that they had developed their own strategies that they were comfortable with using in problem situations.

The students displayed loyalty to the self-regulation strategies that they have developed in their homes and from prior schooling and found it difficult to learn or adapt new strategies into their repertoire. Some of the strategies, such as WITS, were well known to the students, which they informed the researcher of during the lessons through being able to define the acronym and explain its use prior to teaching. This strategy was therefore more successful among the students. Others were less successful due to the public nature of how they are used.

**Self-regulation strategies.**

Four self-regulation strategies were taught to the students and tallied in classroom observations: When you, I feel statements, 1 plus 3 plus 10 Calming down technique, using a break card and using their WITS. The results of each strategy will be discussed.

When you, I feel statements: One of the 11 students utilized this strategy during the study with none employing it during the baseline phase. Overall the students were not comfortable expressing their feelings in an open, “forced” manner such as this strategy laid out; they told the researcher this during the teaching phase. During the lessons they displayed their discomfort in class discussions and avoided sharing their feelings during the observation phases. The researcher observed that if students were to express their feelings they would instead use jokes to tell others how they felt, use put-downs or seek out the teacher to have the teacher tell the other students to quit bothering them. A few students reported that if they did tell how they felt when
there was an issue of bullying, for example, that then bullying would just become worse not better. Their response, among two of the male participants involved, was to fight rather than talk about the situation. They felt that this solution was one of their only options to stop the problem from occurring.

The students are at an age and in an environment that, they feel, does not allow them to express their feelings. The students told the researcher that this was not something they were comfortable doing with their peer group, especially in the larger setting of the classroom context. Comparing the boys and girls, the boys were more outspoken about not wanting to express their emotions during the teaching and discussion portion whereas during the play portion there was no observed difference between the genders.

1 plus 3 plus 10 Calming down technique: This strategy was the least utilized of all four; no students utilized it during any phase of the study. This is a common strategy used in the lower grades and is successful. For this age, the students gave the researcher feedback, during lessons, that this is not a strategy they would carry out in front of others. This felt like a “childish” method to utilize in their social setting. The students felt this was a strategy that would draw too much attention to themselves. Students at this age do not like to have the focus on them and will do anything to avoid the focus. The students responded favourably to the options that allowed for the option to solve the issue by taking a break from the group/situation or walking away.

Using a break card: four students utilized this strategy at baseline and seven after teaching. This strategy was popular to use, before and after instruction on self-regulation strategies. The students were familiar with this strategy and comfortable using it as it is a strategy I employ in my classroom regularly. I offer this as a means of conflict resolution
beginning in September; I explain this strategy during the rules and in reference to the sign-out sheet that must be utilized whenever leaving the classroom. Elementary schools in the district that I have worked at use this strategy often as well; the students are given a card similar to a hall pass which allows them permission to remove themselves from the class momentarily with the understanding that the classroom environment is not helping them learn the best they can. There are multiple reasons for the removal such as but not limited to: social reasons, personal reasons or related to frustration with learning the material, such as if it is too difficult for them. The students employed this strategy as a way to remove themselves from the situation. They appreciated being able to walk away from the circumstances and come back when ready to rejoin the group. This is a strategy that the students utilize often during instructional time as well. Sometimes the students would remove themselves for a quick walk, a bathroom break, a quick trip outside (our classroom is right by outside doors) or to room 204 which is operated by a teacher at all points during the day. The students would decide what it was they needed and they felt more in control of the situation having a variety of options open to them. The male participants showed the greatest increase in frequency of use of this strategy. In the baseline phase males did not utilize this strategy and after teaching three of the five boys employed it. One observation in particular among the boys was during a game of multiplication war. One male was unhappy with the outcome of the game, becoming frustrated and agitated with the other boy in the game. The frustrated child came over to me and asked to sign out for a break, explaining their unease with the situation they were in with the game. After leaving for a quick walk, they came back, checked in with me and resumed playing. There was no further discussion on this matter; they joined in the game and carried on playing.
Using their WITSSs: seven students utilized this at the baseline phase and 11 students after the teaching phase. The students were taught this strategy in their elementary schooling as part of their conflict resolution and anti-bullying strategies. This was evident as the most popular strategy among both male and female participants. This strategy incorporates a series of well-laid out steps for the students to use to solve their problems, one of them being a variation of the break card. Students would not necessarily walk way to a new location, just walk away from the issue they were facing and move to a new location in the room to play with other members of the class or simply ignore the issue and carry on playing, sending a message to the person that they did not appreciate the encounter. Sometimes the students would talk out their issue in a variety of ways. They would do this directly: telling the person to stop the behavior “Stop cheating!” Sometimes the students would do this with humour: “Wow, you are really a bad cheater! I can show you how to do this better!” As stated before, students at this age don’t like the negative spotlight attention on themselves and therefore they find creative ways to go around issues with friends. The last step, seeking help, was less utilized, however I did have students come to me or other adults at times for help. If they sought help in a real issue, this would be done at a time when they felt secure that the information would be confidential and not shared with others in the resolution process. Another way that students would seek help is through a system set up in my classroom. If there is an issue that is happening that they feel I need to be aware of and they want to remain anonymous in the reporting, they write on a sheet of paper what is happening or what they need help with and place it in a sealed box in the classroom. This allows them the safety of reporting without even me knowing who reported. It cannot be linked to this study as there can be no way to tell when it happened or who reported however it is a way for students to possibly incorporate this strategy on their own.
As a result of this study and their reaction to this teaching and observation, the researcher believes that it is important for strategies for self-regulation and problem solving to start early in the schooling years. The students show loyalty and were capable of using strategies they were taught early on during their elementary school years such as using their WITS therefore if we teach a variety of strategies for self-regulation in situations that require it students will be better prepared to handle situations when they are older.

Since self-regulation skills involve others, it is also important to teach skills that will build on their ability to work with others and talk about their problems in a productive manner. If the students become comfortable with using strategies that involve talking about their feelings in an open manner or calming themselves down before becoming angry, this might help to curb some of the miscommunication that happens in middle school as well as fights that occur due to instant reactions.

The early years in school set the foundation for how students view problem solving and in forming their schema of what school looks like. Those introductory years can help set students up for a productive school career through teaching the students the ways to wait their turn, share ideas and materials appropriately, handle conflicts and not disrupt the classroom. This is especially true for those that have learning disabilities that impact their ability to control impulses.

These self-regulations strategies are important to teach not only to help the students be successful, they also link to the British Columbia Performance Standards for Social Responsibility. These standards are assessed from kindergarten to grade 10 with the same four headings: Contributing to the Classroom and School Community, Solving Problems in Peaceful
Ways, Valuing Diversity and Defending Human Rights, and Exercising Democratic Rights and Responsibilities. (British Columbia Ministry of Education, 2013). These four strands all relate to self-regulation as defined for this study by Bodrova and Leong (2008) as a deep, internal mechanism that enables children as well as adults to engage in mindful behaviours. The social responsibility strands address concepts such as getting along with others, being respectful, how they add to the community in a positive way, and thinking about others before themselves.

Links to literature.

Ranz-Smith (2007) indicated that there is a deficit in play and I observe this daily as a teacher. Students in my classroom and school are consistently seen using hand-held devices at school and tell stories of being on gaming devices often when outside of school. Facebook, texting and gaming are becoming more commonly how youth interact and play. This change influences the way that youth solve problems when in a face to face manner, such as in school.

I also witnessed that Perry’s advice was correct regarding incorporating more unstructured play into the classroom (Perry, 2001); allowing the unstructured play was helpful for the boys especially to practice their conflict solving skills, such as the examples of boys playing multiplication war. Prior to this, the boys were resolving their issue through arguing and fighting.

I do see a lack of self-regulation in many of the areas that relate to common classroom demands (Rimm-Kaufman, Curby, Grimm, Nathanson, & Brock, 2009). This was not fully addressed with the strategies this study incorporated however it is a growing issue in classrooms and one that will hopefully decrease as the awareness of self-regulation needs increase in education. The research is becoming more common to address this need.
McCelland and Cameron (2011) found that children with risks do have difficulty planning their behaviours, and while this is true in my class this was not limited to those students. Many students experience this difficulty regardless of their background. I believe this is due to attending school and having social encounters with a wide variety of people. This is why I believe it is important to teach self-regulation strategies to all students, not just at-risk students, and starting young so that appropriate habits can be formed early.

As adolescents develop, their focus on peers and peer relationships increase as well as the need to be accepted socially by said peers while also choosing friends that reflect the views their parents model at home (Eccles, 1999). Eccles additionally illustrates that adolescents’ negative reaction to school increases for a variety of reasons, such as self-consciousness, which decreases their concentration levels for learning. This social need is common among many adolescents. As a result of this development stage, it is important to facilitate self-regulation strategies in a manner that includes a mindfulness of their social needs, such as group work, as well as awareness and sensitivity to the various familial values that the students arrive with at school.

Acedo Lizarraga et al. (2003) utilized a tool they found effective for navigating through self-regulation with middle school students. They entitled this a “portfolio” with a series of topics throughout, that the students were instructed on over a whole academic year for a total of 30 hours. I believe that this tool would have had a positive impact in my classroom as well due to the similarities of the classes and their struggles as well as addressing the needs in a longer time frame.
Limitations of the Study

The limitations for this study were the time constraints experienced by the researcher, the upper grade level relating to play and the amount of response sheets received by the researcher.

**Time.**

The amount of time available for study was a limitation. The time available to observe students using the strategies during play did not allow for repeated observations and more data. Time was limited due to factors beyond the researcher’s control such as having to meet curriculum outcomes, obtaining data for report card writing and when the researcher obtained ethics approval. In order to have the baseline, teaching and observations happen in timing that was linear and flowed, the study needed to be shorter for the greatest impact on the learners and the greatest outcome for results despite the brevity.

**Grade level.**

Play with grade six students appears different than play with younger grades. The ability and motivation to take on imaginary roles is not the same as it is with younger grades. Sociodramatic play is a strong vehicle to try on other roles and try out these strategies using a character rather than yourself, such as playing house or dress-up. Middle school students do not play this way therefore it was challenging to find ways to reenact this. The play had to be authentic to them for the results to be authentic as well. Due to the nature of hiring at many school districts, teachers are often placed in new grade levels every year with placement occurring late in the school year. Previously, the researcher taught in a primary level classroom where play is more common and self-regulations strategies are incorporated into many lessons taught to the students. This study, the researcher believes, would work well in a primary grade
where play is more often utilized and the students would have more opportunities to both use and be observed using the strategies. However, self-regulation strategies, without direct link to play, should be taught throughout and this is an age where they can have a positive impact. Schonert-Reichl and Stewart Lawlor (2010) argue that these years, ages nine to 12, are a time when students are reflective, self-aware and are developing a further sense of right and wrong therefore they are able to take in lessons on being aware of their habits more fully.

**Response levels.**

10 responses out of 25 limits the amount of data analyzed. A higher amount of results would have made the results more meaningful and reflective of the classroom as a whole. The data then would also be more readily translated to other classrooms if there were more data to analyze to give the strategies more support.

**Recommendations for Further Research**

To further this research, it would be interesting to compare it to other grade six classrooms in the district or in other areas to see if the strategies are commonly accepted by other grade six students. It would be beneficial to compare play versus non play to test this in a further study. Possibly observing self-regulation during group work would work better than play for the older students.

The common thread among the self-regulation strategies was that the students were comfortable with the strategies they knew therefore it would be beneficial to try this study with primary aged students. The research from that age group could be compared to the older students to see if more of the strategies would be used or if the results would be the same. This data would give feedback about whether the strategies are appropriate to carry on to the older grades.
The strategies are research based however they need to be reviewed to ensure they work with all populations or age ranges.

The researcher recommends that this study be conducted over a longer time frame. Allowing for the students to fully practice and feel more comfortable with utilizing the strategies taught would potentially increase their chance of using them on an increased basis.

I am going to utilize the portfolio method of teaching the strategies over a longer time frame such as used by Acedo Lizarrago et al. (2003). This adaptation would allow for deeper understanding and a larger sample of strategies to choose from in solving social issues than the current study allows. I believe this will work in a variety of ways in a classroom situation with a variety of learning and social needs.

While the play aspect did not seem to correlate an increase in their usage of self-regulation strategies, it would be beneficial to conduct this again with the recommended changes along with altering what the play looked like; such as observing the students at the playground, during recess or other socially geared, not teacher directed activities. I often utilize the play equipment outside my room and this time would work for me to assess their ability to get along with others, wait their turn and plan their movements in a setting that is truly reflective of them; not in a more scripted classroom setting.
References


### Appendix A: Observation Tool

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<tr>
<th>Strategy</th>
<th>Baseline Observation (initial observation)</th>
<th>Observation Two (after two weeks)</th>
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<td>“When you, I feel” statements</td>
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<tr>
<td>1 plus 3 plus 10 Calming down technique*</td>
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<td>Using a break card/TLC Room</td>
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<tr>
<td>Using their “WITS*”</td>
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* 1 Tell yourself to be calm, Take 3 deep breaths, Count to 10 slowly

*Walk away, Ignore, Talk about the problem, Seek help*