THE INFLUENCE OF STUDENT RELATIONSHIPS ON FOURTH GRADE DEVELOPMENT

THE INFLUENCE OF STUDENT PERCEPTIONS OF MICROSYSTEM RELATIONSHIPS ON SOCIAL, EMOTIONAL AND MORAL DEVELOPMENT AND MOTIVATION TO ENGAGE IN LEARNING

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Abstract

This study examined fourth grade students' perceptions of their relationships with the authority figures within their microsystems in order to better understand the role that these relationships play in child development and motivation to engage in academic learning. This study used Self Determination Theory as a lense to evaluate the extent to which these students felt their needs were satisfied by different relationships and the impact on their development. Information for this study was gathered through focus group interviews conducted with fourth grade students at a variety of Colorado elementary schools. The results of this study indicate that student perception of need fulfillment through relationships with authority figures impacts moral development, development of self concept and motivation to engage in learning.

Fourth grade students are in an important social, moral, emotional and academic developmental period. The relationships that these students have in their home lives and school lives influence the way that they develop. This study examined the perceptions that students held about the relationships in their microsystems. The purpose of this study was to gain a better understanding of the influences of these perceptions on student's motivation, moral development, and development of self concept.

Review of the Literature

Fourth grade students, or children (between the ages of eight and ten), spend a lot of time interacting with different people and forming new relationships in their lives. Whether these students are playing with peers, working with teachers or interacting with their family, children at this age are usually supervised or co-existing with others. Elementary age students exist within a fairly small world of relationships, but they spend a significant amount of time interacting with the people in their microsystems. For most students, their microsystems exist of family members, friends, teachers and people in their after school activities (Bronfenbrenner, 1994). Children spend a large portion of their days at schools, so their teachers and peers play significant roles in their lives. Many students of this age also spend a significant amount of time with parents, siblings and peers outside of school. The time spent with these people is influential in children's development as middle childhood, which encompasses fourth grade, contains many important shifts in social, emotional and moral development (Kohlberg, 1971; Wentzel & Watkins, 2011).

According to self determination theory, there are three psychological needs (autonomy, relatedness, and competence) a student must obtain from relationships in order for that student to feel motivated and engaged in life and academic endeavors (Deci & Ryan, 2000). Motivation is

important for students because motivation can predict a student's long term engagement in a task, the level at which they engage with the material and their well-being in relation to the task. Self determination theory asserts that when the perceived support given to students in a certain environment is altered, the student's motivation to learn and engage in learning is also altered (Katz, Kaplan & Gueta, 2010). Since students interact with a variety of relationships within their microsystems, their perception of support can vary between environments. When these three psychological needs have been satisfied, students are more likely to be engaged, motivated and happy in their environments (van der Kaap-Deeder, Vansteenkiste, Soenens & Mabbe, 2017).

The need for autonomy is governed by the students' need to feel independent of someone else's choices and the perceived ability to control decisions in their microsystem (Stefanou, Pererncevich, DiCintio & Turner, 2004). Students need feel supported by the relationships in their microsystems in order to feel that they have control over their own choices and behaviors in their lives. For fourth grade students, these relationships in their microsystem are typically with their parents or teachers who both serve as authority figures.

The types of social environments that these authority figures help to create and the relationships that they cultivate with these students impact students' perceptions of autonomy and motivation to learn in that environment (Stefanou et al., 2004). In their classrooms, teachers create autonomy supportive social environments, controlling environments or environments that contain a mixture of these qualities. In an autonomy supportive social learning environment, students feel like they have ownership over their thoughts, feelings and behaviors (Barber & Buehl, 2013). Students must feel a sense of volition and the freedom to be themselves. If students feel their ability to think, act or feel is being controlled, then they will not feel as that their need for autonomy is not supported. Autonomy supportive environments are beneficial for

students' motivation, as well as the development of their prosocial behaviors (Davis, 2003). In order to foster an autonomy supportive environment, the teacher must be cognizant of his or her own actions and act as an autonomy supportive agent (van der Kaap-Deeder et al., 2017). A teacher that is autonomy supportive will provide students with choices in their tasks. These choices can be procedural, meaning that the students are able to choose how to present their work or choose the materials they work with, organizational, meaning that the students have power over partner selection or seating arrangements, or cognitive, where the students have power over the evaluation or content of their work (Stefanou et al., 2004).

Autonomy supportive teachers will also help foster relevance for the students by relating tasks the students' personal experiences and explaining rationales for learning or learning objects (Barber & Buehl, 2013). These teachers will allow for criticism in their classroom also help to foster an autonomy supportive environment by encouraging independent thinking and allowing students to voice their dissatisfactions. When students feel that they can make criticisms or thinking independently their motivation is positively impacted (Barber & Buehl, 2013). Students in an autonomy supportive environment with an autonomy supportive teacher will feel more comfortable asking questions and responding to teacher questions, which can help them feel more empowered, especially in tasks that they previously found challenging (Furtak & Kunter, 2012).

Parents can also create autonomy supportive environments for their children at home. Since children work on their homework outside of school, their home still acts as a learning environment. Parental involvement levels on homework can impact a students' perception of control as well as their motivation to engage in academic tasks outside of the classroom (Gonida & Cortina, 2014). When parents provide students with hints, promote a child's self regulated

learning behaviors or encourage independent thinking about questions, students are more

motivated to complete academic tasks. When parents interfere in a student's work by checking

for mistakes or completion or actually doing the work for the child, that student's motivation to

engage in academic tasks will decrease since that parent is creating a more controlling

environment (Gonida & Cortina, 2014).

In addition to experiencing feelings of autonomy, fourth grade students must also feel

competent in every day tasks and perceive relatedness in their learning environments. The needs

of autonomy, competence and relatedness are not separate from one another and a fulfillment of

one need can help inspire the satisfaction of other needs. When students perceive a higher

amount of control in their learning environment, they are more likely to feel competent in the

tasks in which they are engaging.   Feelings of competence are important for all people, but they

are particularly important to fourth grade students because of their developmental stage. As

students develop their self concept, they need to be affirmed in what they are doing. Children at

this age begin understanding that other people exist and are able to compare themselves to their

peers. At this stage, failure becomes very scary to children and they can dwell on moments of

success or failure. If students feel competent in their every day tasks at this age they are more

likely to experience well-being later on (Eccles, 1999).

Students need to feel safe and secure in their environment before they are able to fully

engage in tasks and perceive competence in these tasks. In their learning environment at school,

this would mean that students have strong and secure relationship with their teachers. These

secure relationships can help students take on challenges and interact positively with their peers.

Teachers can create strong relationships with their students through positive behaviors such as

smiling, listening or acting as a calm presence. When students feel they have a strong

relationship with their teacher and feel secure in their environment, they are more likely to ask questions when confused, engage in prosocial behaviors and approach challenges. Feelings of security help to fulfill students' needs for relatedness (Dull, Schleifer & McMillan, 2015).

Feelings of autonomy, competence and relatedness in learning environments will manifest themselves in the students' abilities to engage in learning. When those three needs are satisfied, students are more motivated and willing to learn. Since every child is different, their needs will need to be satisfied differently, their perception of their satisfaction will differ and the manifestation of their motivations and approaches to learning will also differ.

Motivation is typically classified as either extrinsic or intrinsic. Intrinsic motivation is associated with high enjoyment levels, deep meaningful engagement, self regulatory behaviors and overall well-being. Extrinsic motivation is associated with a desire to please others, demonstrate ability, avoid shame and avoid punishment. No one is simply one type or the other and the sources and directions of motivation change with every individual, although students that feel more competent, related and supported are more likely to feel intrinsically motivated on tasks (Katz et al., 2010).

Feelings of motivation can impact the way students approach tasks, cope with failure and engage with learning. When students are approaching tasks, they typically adopt one of four different types of goal mindsets. Motivated students are more likely to set mastery goals that focus on task accomplishment. Students can also set performance goals, which are based around performing or achieving a certain measure of success. Students can take an approach mindset towards performance goals, which means they aim to display their abilities, or an avoidance mindset towards performance goals, where they try to avoid displaying incompetence. These

types of performance goals are more frequently associated with extrinsic motivations (Korpershoek, Kuyper, van der Werf, 2015).

The ways that students approach situations, direct their motivation and feel supported in their learning environment can all impact the types of behaviors they display and the ways they cope with failure. When students experience personal interest, intrinsic motivation or high self efficacy towards a task they are more likely to exhibit adaptive behavior, such as task value, persistence, effort, personal investment and positive coping strategies. When students approach situations with a fixed mindset or a fear of failure, they are more likely to exhibit maladaptive behaviors such as test anxiety, self handicapping, reduced help seeking and negative coping strategies (Dull, et al., 2015; Prigmore, Taylor & De Luca, 2016). Although there are different dimensions of motivation and manifestations of student interest in work, many of the factors that effect student well being and engagement originate from the perceptions that students hold about the relationships in their environments.

In addition to developing valuable academic skills and a love for learning, fourth grade students are also developing important social, emotional and moral skills. The factors that influence motivation, such as autonomy, competence and relatedness also impact the way that children develop socially, emotionally and morally. When children are in fourth grade, they begin to develop more concrete social groups. The friends and peer groups that children interact with at this age are more selective and more important in their lives. As these students broaden their social worlds they begin to develop cooperation skills and are better able to understand other people's want and needs as well as their own (Eccles, 1999). At this same time, children are developing a sense of self, including elements of self-description, self esteem and self concept. A student's self esteem refers to their overall evaluation of themselves and their self-

concept refers to their beliefs and judgments about themselves in different settings in their lives (Harter, 1999). As students begin to develop a sense of self they able to recognize their own needs and their understanding of their own competence in certain tasks increases. When teachers facilitate autonomy supportive environments and create opportunities for students to take control over their learning experiences, students are better able to recognize times when they know what they want or times when they feel they are able to accomplish tasks. When students feel supported in their learning environment, they are more willing to take risks and gain an understanding of their identity (Harter, 1999). Students need to feel a sense of competence and relatedness in their every day activities in order to help develop their self concept (Eccles, 1999; van der Kaap-Deeder et al., 2010).

Children in fourth grade are also beginning to shift their understandings of morality. Children are in early elementary school view morality as obeying orders delivered from authority. As students progress through middle childhood their moral development begins to make a shift towards conventional morality. In this phase, children understand rules as a contract between two people but still view an authority as someone to obey (Kohlberg, 1971). This shift affects the way that teachers and students interact and the way that students can perceive a teacher's desires or orders. These shifts in developments influence the way that children perceive their everyday relationships when in their microsystem as well as the perception of support from these relationships. The same factors that influence motivation also help students to develop their morality. When students feel competent in their tasks, and secure in their environment, they are more comfortable in their every day tasks. When children feel that the authority figures in their lives are helping them to take control of their lives, they feel that they can negotiate for their own needs, which help to develop their morality. The relationships that students have and the

perceptions they hold about those relationships influence important developmental stages and academic skills.

Methods

Participants

Information for this study was collected from fourth grade students at four different elementary schools in a Colorado city (n=22). All the students in the study were between the ages of eight and ten. Both male and female participants were selected, but gender was not a factor in participant selection.

A variety of schools were sampled for this research including a public charter Waldorf school (PWS), a public elementary school (HighEPS) serving mostly high socioeconomic students, a public elementary school in a lower socioeconomic suburban district (LowEPS), and a unique fourth grade only school located in a forest that focuses on environmental education (P4EE).

These participants were selected using convenience sampling methods. The principal at each school was contacted with information about the study and the corresponding instrument. The principal then reached out to fourth grade teachers who were willing to forgo a little instruction time for some of their students. The teachers from each school selected 5-6 students. The teacher had full control over which students they selected.

Instrument

Data for this study was collected through focus group interviews (Appendix A). The interviews were divided into two sections. The first part was comprised of a series of statements regarding independence and engagement in school. The students were asked to rate their attitudes towards the statements on a likert scale. The options for responses to the statements

ranged from strongly disagree to strongly agree. The second part of the interview involved a series of open-ended questions addressing the students' motivation inside and outside of school. The students were allowed to and sometimes encouraged to further their responses or answer questions that deviated from the script.

Procedure

The focus group interviews were conducted with groups of two or three students at a time from the same school. The interviews lasted between 30-45 minutes for each of the groups. Every student was asked the same set of questions and their responses were marked down on their individual question packets. The students were encouraged to answer for themselves even though they could hear their peers' answers. The interviews were recorded using a recording device. After the interviews were completed, the recordings were listened to again and transcribed.

The first part of the interviews consisted of statements rated on a likert scale from strongly disagree to strongly agree. The data from these responses was entered into IBM SPSS © and analyzed using descriptive statistics and independent samples t-tests. When the responses were entered into SPSS, each level of agreement was assigned a number. Strongly disagree was assigned a 1 and the scale continued to strongly agree which was assigned a 5. Neutral was assigned a 3. The independent samples t-tests were conducted to see if any of the mean results were significantly different between the schools. These tests were performed at a 95% confidence interval.

The transcriptions from the interviews, including comments from the first part of the interview and the responses to the open ended questions in the second part, were coded for recurring themes.

Results and Discussion

Teacher Involvement (Microsystem Teacher-Student-School)

Autonomy Supportive Social Learning Environments. The students at the unique fourth grade only environmental education school (P4EE) felt supported by their teacher in their school learning environment. The students at P4EE reported high levels of teacher involvement in the classroom ($\mu=4.5$, Sig 2-tailed$=0.034$ at $p<0.05$), which differed from LowEPS (Table 1), where students reported lower levels of teacher involvement ($\mu=3.5$). The strong teacher support was influenced the students' school enjoyment and sense of well-being. In contrast, the type of teacher involvement at the lower socioeconomic elementary school (LowEPS) focused more on the teacher as an authority figure, while the type of teacher involvement at P4EE focused on the teacher as a figure of support in academic tasks. The students at P4EE have been placed in a yearlong learning environment that is different from their previous educational experiences. In this new environment the students experience lower levels of supervision, which differs from their previous schools and their lives at home. These students felt empowered and trusted at their school in a way that they have not felt in their previous environments. The teachers and activities, such as gardening, at P4EE help to cultivate an autonomy supportive social environment.

The type of relationship between teacher and student at P4EE is typical of an autonomy supportive environment. This type of environment helps students work on the transition in their moral development towards an understanding of rules as mutual contracts by developing their sense of self through autonomous actions. When students understand what they want or need, then they are better able to negotiate with authority figures. For the students at P4EE, the

autonomy supportive social learning environment at school differed from the level of supervision and parental involvement at home. As noted by one of the students, "I am more independent at school than at home At school you feel really independent because they let you choose what you want to do, what you want to be, what you want to say. They let you, they're not watching you this closely all the time. It's nice to be able to walk freely to a job". When the students were at home, some students perceived higher levels of parental supervision. Another P4EE student noted, "At home I feel like I'm always being watched and no one thinks I'm responsible at home". The two environments that the students exist in act as competing factors in the students' moral development and development of self.

The trust and autonomy that students perceived at P4EE helps to increase their sense of well-being and positive feelings towards their learning experiences. Participating in activities requiring responsibility, such as school-based jobs where the students are trusted to accomplish an important task, or choosing topics for projects in the classroom helped the students take ownership of their learning, increased their perception of control in their lives, and gave the students the freedom to be themselves. When students are given the space to make their own decisions and take ownership over their actions they can begin to develop their sense of self, which is an important emotional developmental milestone for students in late elementary grades (Eccles, 1999).

In addition to the support trust given to students and the perception of control that students felt in this learning environment, the students at P4EE also felt they were provided with cognitive choices regarding their learning. One student commented, "When you get to choose what you're doing a lot of times you enjoy what you're doing more", in response to his enjoyment of the projects he had worked on at school.

Variable	PWS	LowEPS	HighEPS	P4EE	Findings
enjoy_school	4.2	3.8	4.4	4	
					MS-SE is sig diff (Sig 2-tailed 0.033 at p<0.05), MS-SW is sig diff (Sig 2-tailed 0.05 at p<0.05)
independent_life	4.8	3.8	4	3.7	
independent_home	4.6	3.8	4.8	4	
independent_school	3.8	3.3	3.6	3.2	
					ST-SW is sig diff (Sig 2-tailed 0.007 at p<0.05), SW-SE is sig diff (Sig 2-tailed 0.007 at p<0.05), ST-SW is sig-diff (Sig 2-tailed 0.007 at p<0.05)
decisions_school	3.4	2.3	2.4	4	
					SW-SE is sig diff (Sig 2-tailed 0.034 at p<0.05)
teacher_involve	3.8	3.5	4	4.5	
enjoy_teacher_involve	4.8	4.3	4.6	4.3	
parent_involve	3.6	3.8	4.4	4.5	
					MS-ST is sig diff (Sig 2-tailed 0.008 at p<0.05), ST-SW is sig diff (Sig 2-tailed 0.019 at p<0.05), ST-SE is sig diff (Sig 2-tailed 0.000 at p<0.05), SW-SE is sig diff (Sig 2-tailed at 0.001 at p<0.005)
enjoy_parent_involve	3.6	3.2	5	4.3	ST-SW is sig diff (Sig 2-tailed 0.025 at p<0.05)
activities_work_school	4.4	4.5	3.8	4.8	
activities_work_home	3.6	2.8	2.6	3.5	
					MS-ST is sig diff (Sig 2-tailed 0.05 at p<0.05), MS-SW is sig diff (Sig 2-tailed 0.024 at p<0.05), ST-SW is sig-diff (Sig 2-tailed 0.000 at p<0.05), ST-SE is sig diff (Sig 2-tailed 0.024 at p<0.05), SW-SE is sig diff (Sig 2-tailed 0.049 at p<0.05)
teachers_work_school	4.4	4.5	3.6	5	
					ST-SW is sig diff (Sig 2-tailed 0.014 at p<0.05), ST-SE is sig diff (Sig 2-tailed 0.12 at p<0.05)
teachers_work_home	3.8	4	2	3.8	
					MS-SW is sig diff (Sig 2-tailed 0.027 at p<0.05), SW-SE is sig diff (Sig 2-tailed 0.003 at p<0.05)
choices_home_work	4	4.2	3.4	2.8	
choices_school_work	4	4	4.6	4.3	

Table 1. A table depicting the mean student responses to the survey questions included in the focus group interviews and the statistically significant findings. This chart was generated using Excel ®.

The students at the lower socioeconomic elementary school (LowEPS) reported the lowest levels of teacher involvement their classroom activities ($\mu=3.5$, Sig 2-tailed= 0.034 at $p<0.05$), which was significantly lower than P4EE, where students perceived a high level of teacher involvement. Students at LowEPS felt a desire to please their teachers, but did not necessarily feel supported, resulting in an uncertain relationship with their teachers. Fourth grade students have a desire to please authority figures in their lives. Because of their moral development (Kohlberg, 1971). Some of these students struggled to explain their teacher's role in the classroom. The students felt they were always being watched by their teacher, but that she mostly gave them instructions and tips instead of sitting and working with them. One of the students explained that, "She tells us what to do sometimes but like for science experiments she tells us what we need to do but we do it on our own. She doesn't like sit down and tell."

These students at LowEPS indicated that they did not feel like they were able to make choices in their learning ($\mu=2.3$, Sig 2-tailed=0.007 at $p<0.05$). The students at LowEPS were not interacting with their teacher as much as some of the others schools, and therefore there were fewer opportunities for discussion about the learning process. The lack of teacher student conversations about the learning process can prevent students from understanding rationales for tasks and voicing satisfaction, which are both essential factors of an autonomy supportive social environment (Barber & Buehl, 2013). The students at LowEPS did not feel a sense of ownership of their learning or their decisions in their learning environments, which are essential for an autonomy supportive and engaging environment (Barber & Buehl, 2013).

The students at the high socioeconomic public elementary school (HighEPS) reported fairly low levels of decision-making abilities in the classroom ($\mu=2.4$, Sig 2-tailed=0.007 at $p<0.05$), which differed from the decision making power perceived by the P4EE students. These

students reported feelings of excitement towards topic selection or fun project work, but felt that the decisions about what they learned in school were out of their control. In fourth grade classroom at HighEPS, the teacher is clearly a figure of authority that has valuable knowledge to pass down to students. One student commented on how she trusted the teacher to decide what was appropriate for them to learn, "The teacher is trying to teach us something so if we did something like we weren't following what we do, we just did something else like draw we wouldn't be learning, we would just be doing whatever. We go to school so we can learn a lesson every day." These student responses indicate that the students at HighEPS did not feel like they had freedom to take ownership of their needs and actions throughout the school day.

The students at HighEPS felt empowered when given the opportunity to make choices related to organizational autonomy. These students felt excited when they were able to choose a topic or a seat in the classroom during work time or a partner for a project. These students actually lost motivation to learn when their partners were assigned to them because they were afraid they were going to have to end up doing all the work, or they wouldn't get along with their partner. Providing these choices to students helped them take ownership over certain aspects of their learning and helped to increase their engagement and excitement towards their work. As students begin to navigate their sense of self and understanding of rules, they are more aware of whether or not they are being provided with choices. As the students at HighEPS become more self aware, they will be able to take more ownership of their decision making powers (Harter, 1999).

The students at PWS also frequently commented on their dislike of receiving orders. The students at PWS enjoy having the freedom to choose how they act in a certain situation and many of the students got frustrated when they receive a lot of orders. Since the students at PWS

have more supported decision making power with all the relationships in their microsystem, they have had the opportunity to develop a stronger sense of self. As this concept develops for these students, they become more aware of what they need and are able to further their moral development towards conventional morality, where they can begin to understand rules as contracts between two people (Kohlberg, 1971). This made the students at PWS more resistant to orders, but better at communicating their needs to authority figures.

The students at PWS also valued their schooling more when they were able to make connections to their lives outside of school. The Waldorf curriculum helps to foster relevance for the students by teaching subjects that feel applicable to their lives, and student autonomy is supported in the learning environment when teachers help students make connections with their learning (Barber & Buehl, 2013). These students reported enjoying aspects of school where they were able to see connections between what they were working on in the classroom and their lives outside of school. These students felt empowered to start gardens at home or help their parents with cooking. The students at PWS did not feel very motivated by grades. These students instead enjoyed subjects that excited them and their interest and perceived competence in the subject motivated them. The satisfaction of needs that students at PWS experienced helps them to enjoy their school experiences.

Feelings of Competence. Students at P4EE felt particularly motivated by their feelings of competence in the classroom. Many students cited feelings of competence as their favorite parts of school. They enjoyed school more when they felt they were able to complete the task at hand. One of the students explained, "I find that when you are good at something it's easier to do it. When you're good at something it's more fun. I'm like really good at writing and it really helps me to be motivated to do my best in it". The students at this school were less focused on

receiving good grades, but instead wanted to work on getting better at the subjects they already felt comfortable with. One student commented, "I want to work hard because I want to get better at what ever it is, so I want to get better at things". When the students felt competent in their work they focused on setting mastery approach goals and engaging with their learning experience on a deeper level. These students also had a greater desire for challenges and wanted to work hard in order, "To gain confidence about that thing, whatever it is". When there was less emphasis placed on evaluations or grades, the students were less afraid of failure and were able to focus more of their attention on the activities they already felt good at. Many of the students credited their desire for challenge and their feelings of success and engagement in the classroom to the continuing support of their teacher. The teacher satisfied her students' needs for relatedness, competence and autonomy by supporting them instead of focusing on moments of failure.

The students at HighEPS indicated that they were not as motivated by classroom activities as some of the other schools (μ=3.8, Sig 2-tailed=0.025 at p<0.05), particularly P4EE, where the students where highly motivated by classroom activities (μ=4.8). A lot of the verbal responses from students to this question indicated that instead of the activities in the classroom, grades and fear of academic failure were two of the biggest motivators in the classroom. The students approached many aspects of their learning with a performance avoidance mindset and were focused on not embarrassing themselves in front of their peers or not letting down their parents and teachers. The students wanted to gain the approval of their teacher through exceptional performance because they are in the moral development stage focused on pleasing authority figures (Kohlberg, 1971). When the students did not feel competent in their classroom activities they were focused on not failing instead of engaging or improving. These students

wanted to work hard and succeed so that their peers would not see them struggling on something. The students at HighEPS measured many of their feelings of competence based on the grades and other forms of measureable academic success. Most of these students felt motivated when they were working for a certain grade or trying to please an authority. Many of the students at HighEPS set performance avoidance goals and were working to not get bad grades so that they could stay out of trouble. Some of the students felt particularly stressed about not being at certain levels on their math work on the computer. They felt their abilities were being judged based on their measured progress on that computer activity and were afraid of failure. One of the students explained that this activity, "Makes me feel like I have to rush and it kind of scares me like if I don't do it, I'm gonna get a bad grade in math".

Similar to the students at HighEPS, the students at LowEPS felt competent in their schooling when they received good grades. For most of the students, measureable academic success was their biggest motivation to work hard inside and outside of the classroom. One of the students explained, "Science really inspires me to do really good in science because I like my grade right now, it's an A and if I didn't get more involved in science it would probably be a B". The students saw grades as the greatest indicator of their academic success. Since these students' feelings of competence depended on an external judgment, the students exhibited high levels of stress inside and outside of the classroom.

The classroom environment at LowEPS is a fairly controlling environment. There is high focus on evaluations and extrinsic motivators, such as grades. In these types of environments it is common for students to experience high levels of anxiety and fear of failure. The students commented that they felt frustrated when the work gets too hard and one student mentioned, "It's not a good thing when you get frustrated because you might cry on your paper". These students

have developed performance goal orientations towards their work. The students at LowEPS view their measureable academic success, such as grades, as their main indicator of competence in the classroom, so they have a desire to perform in the classroom.

When discussing the affect of their teacher on their motivation to learn, the students at LowEPS indicated that they approached tasks with a performance avoidance approach. The students valued their teacher and wanted to work hard to make her proud. A student explained, "I like making my teachers proud because I like my teachers, addressed this. I feel like they work hard to teach us the stuff". They also wanted to work hard so that their teacher did not think poorly of them or so they did not appear as failures in their learning. One student commented, "I want to do my best so my teachers know I'm not lousy". Feelings of incompetence in every day academic tasks can lead to anxiety in students (Eccles, 1999).

Teacher Student Relationships and Perceptions of Relatedness. The students at P4EE credited a lot of their motivation to work hard in the classroom to their teacher's support and involvement ($\mu=5.00$). This extremely positive response differed from PWS ($\mu=4.4$, Sig 2-tailed$=0.024$ at $p<0.05$), HighEPS ($\mu=3.6$, Sig 2-tailed$=0.00$ at $p<0.05$) and LowEPS ($\mu=4.5$, Sig 2-tailed$= 0.049$ at $p<0.05$).When the students felt supported by their teacher, they felt secure in their learning environment and were more willing to take risks in their learning. They also felt less concerned about reaching certain expectations or avoiding failure. The students at P4EE explained this with statements such as, "My teacher encourages us to try lots of new things", and "My teacher really encourages us and influences me to do it, to do my best". None of the students were as motivated by their teacher to work hard in their classroom as the students at P4EE. These students mostly cited their teacher's supportive and encouraging qualities as the main reason they felt motivated to work hard. When a students' psychological need for

relatedness is satisfied by a secure teacher student relationship, a student's well-being increases as well as their motivation to engage in the tasks at hand.

The students at P4EE indicated that they enjoyed the level of teacher involvement experienced in the classroom and they reported positive attitudes towards their teacher's behaviors in the classroom. Many students felt their teacher was patient, helpful and encouraging. These qualities helped to empower the students and motivate them to learn in the classroom. These students felt their teacher made time for them when they were confused about something and supported them when they made mistakes in their work. One of the students explained, "Some teachers, they're like don't talk I'm trying to deal with this at all times even when she's not busy at all. Like instead of you made a mistake, she's like you made a mistake let me fix it". The teacher's patient and calming attitude helped students feel comfortable in the classroom, which in turn helped instill a desire for challenging tasks in the classroom.

The students at LowEPS exhibited fairly low levels of satisfaction regarding feelings of relatedness in their classrooms. The students did not clearly indicate which source was most significant in creating these feelings of anxiety, but both contributed. The students did not feel supported by their classmates during the school day. They were clearly upset by a lot of the conflicts between students that occurred throughout the day, particularly at recess. Some of the students commented that they did not always feel safe during recess times and wanted more teacher support. Feelings of security are a significant part of relatedness, so lack of this can increase student anxiety in that learning environment.

The students at PWS indicated that their teacher's attitudes and behaviors in the classroom motivated them to work hard on their classroom activities ($\mu=4.4$). This response was different from the students at HighEPS ($\mu=3.6$, Sig 2-tailed$=0.05$ at $p<0.05$) who were not

motivated by their teachers' involvement and P4EE ($\mu=5.0$, Sig 2-tailed=0.024 at $p<0.05$) where the students were highly motivated by their teacher's involvement. Feelings of comfort regarding ownership of behaviors and feelings and the ability to ask questions typically occurs when students feel that their need for autonomy has been supported by an authority and when they feel secure in their environment. The students at PWS really enjoyed the relationships they had with their teacher and the level of involvement that the teacher had in the classroom The students at PWS commented that they had an easier time working hard in school when their teacher exhibited a positive attitude towards them. When their teacher made them feel secure and supported in the classroom, the students at PWS experienced satisfaction of the need for relatedness and therefore felt more comfortable taking on challenges and working at their own pace (Dull et al., 2015).

The students at PWS exhibited signs of very secure teacher student attachment. These students felt that they were able to make decisions regarding their actions and feelings throughout the day. They understood that they were not able to make many decisions about curriculum, since that fell under the jurisdiction of the school, but they enjoyed making decisions about behaviors such as pacing, participation and question asking. Some of the students commented with explanations such as, "I get to choose if I am independent or not and I get to choose kind of like what she said, you get to choose how you act and if you participate our not". The students at PWS also felt secure enough in their relationship with their teacher to ask questions and voice dissatisfaction and concern. One student explained this comfort by commenting, "I just feel like asking questions can help get you anything that's troubling you out and also be able to know that your teacher is listening to you".

The students at HighEPS exhibited low levels of teacher impact on motivation to learn in the classroom (μ=3.6). This response is lower than PWS (μ=4.4, Sig 2-tailed=0.05 at $p<0.05$), LowEPS (μ=4.5, Sig 2-tailed 0.024 at $p<0.05$) and P4EE (μ=5.0, Sig2-tailed=0.00 at $p<0.05$). The students at HighEPS were fairly in tune with their teachers' attitude throughout the school day and the impact that it had on their motivation to learn. The students were frequently motivated to please their teachers, but when their teachers had bad attitudes, the students no longer had that same desire to work hard. The students felt afraid, unmotivated and stressed when their teachers yelled at them or seemed upset. One of the students responded that she felt unmotivated to learn, "When teachers yell or when kids get in trouble for something they didn't do". These students wished that their teacher would exhibit more patience and calm support when they made mistakes. One student mentioned, "Maybe teachers can kind of, if we're working as hard as we can, not be that mean. Maybe they could say it's okay, you can take your time". When students do not feel secure or supported in their learning environment, it is more difficult for them to engage in challenging tasks (Davis, 2003).

The students at HighEPS were also afraid of failing in front of their peers. One student explained that when she gets something wrong, "I will have to redo it and she will call me to the back table. And some kids laugh at other kids when they have to go to the back table and I just don't like that". This student did not feel supported by her peers in her learning environment and some of the other students expressed similar fears of failure. A learning environment that makes students afraid of failure can contribute to stress and many of the students at HighEPS felt worried that they would let people down or embarrass themselves when they failed. These feelings do not supporting the students' need for relatedness in their learning environment and increased the students' desires to avoid failure. These feelings helped the students achieve good

grades, but seemed to negatively affect their well-being by causing stress in their learning environment.

Parental Involvement (Microsystem: Parent-Child-School)

  Supervision levels and Perceptions of Independence. One of the most important relationships in a child's life is their relationship with their parents. Although students spend a lot of their time at school, time spent at home is valuable in shaping their values, opinions and sense of self. The students at P4EE reported fairly low levels of independence ($\mu=3.7$, Sig 2-tailed$=0.05$ at $p<0.05$) in their every day life relative to students at PWS ($\mu=4.8$) and similar to HighEPS ($\mu=4.0$) and LowEPS ($\mu=3.8$). The students at P4EE were particularly cognizant of their levels of supervision in the different environments that they exist in. They reported feeling independent at home when they were left home alone and able to make their own plans, but most of the time when these students were at home they felt supervised and not trusted, "It's mainly at home, but I feel like I'm always being watched and no one thinks I am responsible". These students felt that their supervision levels at school were very different than at home. The autonomy they felt during the school day was greater than the autonomy they perceived in their home environment. The students at P4EE felt they were trusted at school and their decision-making powers are supported. These factors help students to develop their sense of self because they have moments of independence where they are able to make decisions for themselves (Harter, 1990).

  Even though the students at P4EE recognized the different levels of independence and supervision in their lives at home and their lives at school, they were still comforted by parental involvement and craved parent help on homework because they were used to a prominent authority figures in their lives. The transition towards independence and development of self-

concept is not a fast transition, so these students are learning to navigate the different levels of support they feel in different environments.

The students at PWS reported very high levels of independence in their lives (μ=4.8). These were the highest levels of feelings of independence compared to the other three schools, particularly compared to LowEPS (μ=3.8, Sig 2-tailed=0.033 at $p<0.05$) and P4EE (μ=3.7, Sig 2-tailed=0.05 at $p<0.05$) where students perceived much lower levels of independence in their every day lives. Many of the students at PWS felt that their parents let them be independent when they were at home. Some of the moments when students reported feeling independent were mainly when they were able to do an activity all on their own, such as a bike ride.

The students at HighEPS felt fairly independent in their every day lives, particularly when they were doing chores at home. Many of these students felt empowered when they were able to positively contribute to their households and help out their families. One of the students explained, "I feel like I really want to help. Then at school I feel really good after I helped and the next day I have a good time sleeping and I just feel good about myself and I want to work hard". The opportunity to contribute to their families made these students feel capable in other aspects of their lives, "Helping at my house because it helps me feel like I'm just capable of doing everything because if I do chores I can do this, I am cable of doing this". When these children felt like they were able to contribute to their house they viewed their actions as valuable to the higher authorities in their lives. This is an important satisfaction of these students' needs for autonomy and competence in their lives because a lot of the students also felt pressure to achieve good grades in order to please their parents.

Parent homework help. The trusting relationships that a student has with the authority figures at their school also helps to promote moral development as the students are learning to

navigate rule as agreements instead of orders (Kohlberg, 1971). The students at P4EE reported high levels of enjoyment towards their parents' involvement in their school work (μ=4.3, Sig 2-tailed=0. 001 at $p<0.05$), which differed from the students at LowEPS who experienced much lower levels of enjoyment towards their parents' involvement (μ=3.2).The students at P4EE indicated that this type of independent environment that they existed in at school was different from the microsystem of their home. Since the students at P4EE are experiencing a one-year disruption in their typical schooling track by attending this small, environmental based school, a lot of these students struggled to understand their feelings towards different levels of supervision in their different environments. At the same time though, these same students indicated high levels of appreciation for parental involvement in their academics. These students really enjoyed homework help and hints.

The students at HighEPS reported high levels of parental involvement and high levels of enjoyment of their parent's involvement in their schooling (μ=5.0), this level of enjoyment differed from PWS (μ=3.6, Sig 2-tailed=0.008 at $p<0.05$), LowEPS (μ=3.2, Sig 2-tailed=0.000 at $p<0.05$) and P4EE (μ=4.3, Sig 2-tailed=0.019 at $p<0.05$). The students at HighEPS commented on their appreciation of parental hints as well as their desire to reach their parents' expectations. The enjoyment of parental involvement levels for the students at LowEPS (μ=3.2) were much lower than the students at HighEPS (μ=5.0, Sig 2-tailed=0.00 at $p<0.5$) and P4EE (μ=4.3, Sig 2-tailed=0.001 at $p<0.05$).Some of the students at LowEPS felt that they were too busy after school or that their siblings were too busy and felt very stressed about finishing all of their work on time and impressing their parents while doing so. Some of the students craved more individual parent attention or wanted more assistance from their working parents. These students seemed to really enjoy moments when their parents did offer homework hints, although they became flustered if

their parents didn't understand the exact methods they had been learning in school. Since the

students at LowEPS are still developing their sense of self and understanding of morality, they

crave approval of an authority figure, and in this case the students at LowEPS wanted even more

from their parents.

In response to their parent's involvement in their lives and the affect on their motivation,

the students at PWS indicated fairly neutral feelings of enjoyment about these parental

involvement levels (μ=3.6), which differed from the students at HighEPS's high enjoyment

levels of parental involvement (μ=5, Sig 2-tailed=0.008 at $p<0.05$). Some of the students at

PWS explained that they didn't always want their parents' help on homework. They felt

competent in what they were doing and didn't want their parents to interfere with that. The

students at PWS rarely noted their desire to please or impress parents as one of their main

motivations. The Waldorf academic philosophy supports individual construction of knowledge,

so many of these students spend time working on tasks at their own pace and with their own skill

set. This philosophy helps to promote a faster development of self concept and self esteem

because students are given the time and pace to figure out what they like and how they like to

work on tasks. The individual construction of knowledge helps these students make a transition

from viewing rules as orders from a higher authority towards viewing rules as a contract between

two people. This transition means students are able to better collaborate with authority figures on

tasks and engage in negotiations about what they want or need. Many of these students enjoyed

spending time with their parents or working on projects of mutual interest such as cooking or

gardening. One of the students commented, "Both of my parents, without even knowing it they

help me with the schoolwork, so if I were in school I mean it does help for them to teach me the

work, but I think out of school it teaches me more than in school, because it's a mixture of both

of them". These students enjoyed learning with their parents outside of the classroom learning environment and are able to do so because of their progression in moral development.

     Impacts of Grades. The students at HighEPS were motivated by grades but in a way that was different from LowEPS. At LowEPS students were motivated by grades and also wanted to show off to their parents. The students at HighEPS wanted to get good grades in order to not let down their parents. Many of the students at HighEPS adopted a performance avoidance goal mindset when thinking about how their parents affected their motivation at school. Some of the students were afraid of being yelled at by their parents for getting bad grades, "My parents want me to have good grades and I try my hardest but when I hear people say you've got to be at this percentage and then I'm at a low percentage and then I'm gonna get yelled at". There was little talk during these interviews of going beyond parental expectations or wanting to get a good grade for personal reasons. These students view their parents as authority figures that they need to obey and please. This view of morality means they feel they have little decision making power in their lives and also makes it more difficult to develop their sense of self and negotiate what they need. Students also referenced extrinsic rewards set in place by their parents. The parents of students at HighEPS really wanted their children to have good grades and sometimes implemented positive reinforcements in order to motivate their children. One student mentioned that, "My mom said that this year if we get really good grades for the whole year ten she might get us a Wii". This type of controlling learning environment, focused on performance and extrinsic incentives, can cause anxiety and a fear of failure in children.

     The students at LowEPS were highly motivated to get good grades in order to please their parents. These students wanted to prove to their parents that they were successful in school and many of the students even wanted to show their parents that they could do better than their

parents did in school. They also wanted their parents to engage in their work with them. One student explained, "I just like to get grades because my dad likes to see them and it makes my family happy when I'm getting good grades. My dad says that he didn't get even close to what I got. My dad got C's and D's". Students at this developmental age are beginning a transition in their views of morality and rules. For the next several years, students will shift to understanding rules as mutual contracts between people instead of orders to obey. The students at LowEPS are stuck in the mindset of obedience. These children view rules as fixed orders from an authority. These students have a desire to use their measurable success in their academic tasks in order to please the authority figure in whichever environment they currently exist in. In the microsystem of their home life, the students want to make their parents proud. The students at HighEPS indicated that they perceived low levels of decision making power in their lives and because of this, they continued to remain in the moral development stage of "good boy/good girl", which focuses on obedience.

These students at LowEPS were also frequently motivated by rewards created by their parents in the form of positive reinforcement. Some of these students experienced rewards set in place by their parents. One of the students explained, "I have to get 85% and above for al my things in my Thursday folder all my work sent home over the weekend and if I do that I unlock computer, Wii, all electronics for the weekend. That motivates me to work hard and get my work done". The students' desires to receive these rewards from their parents or get good grades to impress their parents meant that they measured their competence based on external judgments. This mindset caused high levels of stress in the students and did not help to empower them by providing them decision making powers or ownership of their actions.

APPENDIX A

Focus Group Interview Questions

Background Questions

1. Age
2. Years attending this school

Independence:
1. How would you define independence? (Provide definition afterwards)

To what extent do you agree with the following statements?

Question	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
I enjoy going to school					
I feel independent in every day life					
I feel independent in my life and activities outside of school					
I feel independent in my activities inside of the classroom					
I get to make decisions about what I learn at school					
My teacher is involved in my classroom activities					
I enjoy my teacher's involvement in my classroom activities					

My parents are involved in my school work					
I enjoy my parent's involvement in my school work					
The activities at my school make me want to work hard during school					
The activities at my school make me want to work hard on homework outside of school					
My teachers make me want to work hard during school					
My teachers make me want to work hard outside of school					
The choices I get to make outside of school make me want to work hard on my school work.					
The choices I get to make in school make me want to work hard on my					

schoolwork.					

Attitudes towards school:
1. What aspects of your schoolwork do you enjoy most? Have these changed as you have changed grades and teachers?
2. What aspects of your schoolwork do you dislike? Have these changed as you have changed grades and teachers?

Motivation (In school)
3. What parts of your school inspire you to work hard when you are inside your classroom? Have these changed as you have changed grades and teachers?
4. What parts of your school do you feel hold you back from trying your hardest or achieving your best? Have these changed as you have moved up each grade?
5. What could be done at your school to encourage you to enjoy school more?

Motivation (Outside of school)
1. What parts of your life outside of school inspire you to work on or think about your schoolwork outside of the classroom? Do these change between grades?
2. What parts of your life outside of school hold you back from engaging in or thinking about your schoolwork outside of school? Have these changed as you have changed grades?
3. What could be done in your life outside of school to encourage you to become more interested in or passionate about your schoolwork outside of school?

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