Question 3: Are there significant differences between the teacher classroom management profiles with regard to levels of student problem behavior and student social competence?

Table 10 displays the means, standard error and equality tests across profiles of teacher classroom management strategies for the various student level outcomes. The student level variables are split between observed variable and those variables which are teacher ratings. Finally, if the overall model was significant the significant class comparisons are included in the table.

The first variable investigated is the rate of disruption for the classroom. This variable was not significantly different between teacher profiles. The next variable is the rate of aggression in the classroom. This variable was significantly different between the profiles of teachers. The Proficient profile had the low mean score for rate of aggression (M= 0.00) and was significantly different from the Typical (M = 0.03; χ^2 = 13.67, p = .000) and the Ineffective (M = 0.02; χ^2 = 13.07, p = .000) profiles. The next variable, percent of time on-task, was significantly different between profiles of classroom teachers. The Proficient profile had the high mean score for Percent of Time On-task (M= 97.05) and was significantly different from the Typical (M = 92.90; χ^2 = 6.93, p = .008) and the Ineffective (M = 92.10; χ^2 = 7.14, p = .008) profiles. Percent of time Off-task was also significantly different between teacher profiles. The Proficient profile had the lowest mean score for Percent of Time Off-task (M= 2.83) and was significantly different from the Typical (M = 5.330; χ^2 = 3.55, p = .06) and the Ineffective (M = 6.90; χ^2 = 6.15, p = .01) profiles. When compared to classrooms with an Ineffective teacher profile, classrooms with a Proficient teacher profile had a significantly smaller percent of

time off-task. The comparison between Typical and Proficient profiles was approaching

significance (p=.06), with classrooms with Proficient profiles teachers having a smaller

amount of time off task.

Table 10

Means, Standard Error and Equality Tests across Profiles of Teacher Classroom

Management Strategies- Student Variables (n=68)

	Profile 1: Typical (n=38)	Profile 2: Ineffective (n=24)	Profile 3: Proficient (n=6)	Overall test of significance	Significant class comparisons
Observation					
Rate of Disruption	0.72 (0.07)	0.92 (0.10)	0.79 (0.12)	2.90	
Rate of Aggression	0.03 (0.08)	0.02 (0.06)	0.00 (0.00)	24.44***	Profile 1 vs. 3*** Profile 2 vs. 3***
Percent of Time On-task	92.90 (1.18)	92.10 (1.54)	97.05 (1.03)	9.79**	Profile 1 vs. 3** Profile 2 vs. 3**
Percent of Time Off-task	5.33 (.80)	6.90 (1.26)	2.83 (1.06)	6.59*	Profile 1 vs. 3[+] Profile 2 vs. 3*
Teacher Report					
TOCA Emotional Regulation	2.17 (0.09)	2.17 (0.08)	2.16 (0.13)	0.01	
TSC Academic Competence	3.30 (0.09)	3.29 (0.11)	3.13 (0.23)	0.46	
TOCA Disruptive Behavior	1.73 (0.06)	1.76 (0.07)	1.70 (0.10)	0.34	
TSC Prosocial Behavior	3.41 (0.11)	3.24 (0.11)	3.15 (0.19)	1.97	

*** p < .001, ** p < .01, * p < .05, + p < .10

The various teacher ratings of students for Emotional Regulation, Academic Competence, Disruptive Behavior and Prosocial Behavior were not significantly different between the three different teacher profiles. For Emotional Regulation, Typical and Ineffective profiles had an average rating of 2.17, while the Proficient profile had an average rating of 2.16. On the subscale Academic Competence, the Typical profile had an average rating of 3.30, the Ineffective profile had an average rating of 3.29 and the Proficient profile had an average rating of 3.13. For Disruptive Behavior, the Typical profile had an average rating of 1.73, the Ineffective profile had an average rating of 1.76 and the Proficient profile had an average rating of 1.70. Finally, the average rating for the Typical profile on the subscale Prosocial Behavior was 3.41, for the Ineffective profile it was 3.24 and for the Proficient profile the average rating was 3.15.

Question 4: Are there significant differences between the teacher classroom management profiles regarding self-reported levels of burnout?

Table 11 displays the means, standard error and equality tests across profiles of teacher classroom management strategies for teacher reported burnout. The subscales of burnout and total score for burnout are included in the table. Finally, if the overall model was significant the significant class comparisons are included in the table.

Table 11

Means, Standard Error and Equality Tests across Profiles of Teacher Classroom

Management Strategies- Burnout (n=68)

	Profile 1: Typical (n=38)	Profile 2: Ineffective (n=24)	Profile 3: Proficient (n=6)	Overall test of significance	Significant class comparisons
Emotional Exhaustion	18.6	19.5	24.0	3.85	
Depersonalization	4.9	4.9	3.3	3.21	
Personal Accomplishment	41.2	40.5	41.1	.348	
Total Burnout	21.6	21.6	22.9	1.56	

The first subscale is Emotional Exhaustion, which is defined as feeling exhausted

and emotionally overwhelmed from one's work (Maslach et al., 1996).   For this

subscale, teachers with a Typical profile had a mean of 18.6, teachers with an Ineffective

profile had a mean of 19.5 and teachers with a Proficient profile had a mean of 24.0.

None of the profiles are significantly different from each other and according to Maslach

and colleagues (1996) the teachers in all three categories are reporting an average amount

of emotional exhaustion when compared to the teachers in their sample. It is interesting

to note that, while not significant, teachers with a Proficient profile report a higher level

of emotional exhaustion that teachers with the other two profiles.

The next subscale is Depersonalization, which is defined as a lack of feeling or

distant response to one's professional practice or clients (Maslach et al., 1996). For this

subscale, teachers with a Typical profile had a mean of 4.9, teachers with an Ineffective

profile also had a mean of 4.9 and teachers with a Proficient profile had a mean of 3.3.

None of the profiles are significantly different from each other and according to Maslach

and colleagues (1996) the teachers in all three categories are reporting a low amount of depersonalization when compared to the teachers in their sample. For this subscale, while not significant, teachers with a Proficient profile had a lower reported feeling of depersonalization.

The final subscale is Personal Accomplishment, which is defined as one's feeling of achievement and proficiency toward work (Maslach, et al., 1996) and higher scores are desired. For this subscale, teachers with a Typical profile had a mean of 41.2, teachers with an Ineffective profile had a mean of 40.5 and teachers with a Proficient profile had a mean of 41.1. None of the profiles are significantly different from each other and according to Maslach and colleagues (1996) the teachers in all three categories are reporting a desired amount of personal accomplishment when compared to the teachers in their sample.

Finally, the Total Burnout, which is an average score for the teacher across the three subscales, did not result in significant score differences across the three teacher profiles. Teachers with a Typical profile had a mean of 21.6, teachers with an Ineffective profile also had a mean of 21.6 and teachers with a Proficient profile had a mean of 22.9.

CHAPTER V: DISCUSSION

The purpose of this study was to determine profiles of teacher use of classroom management strategies. Rather than focusing on teachers' use of a single strategy, this study sought to determine the combinations of classroom management strategies used by teachers in this sample. Further, the profiles of classroom management strategies were developed using variables which were observed rather than self-reported. Person-centered statistical approaches, such as latent profile analysis, allow researchers to take a more nuanced approach to research questions. Rather than focusing on more variable-centered approaches, LPA affords researchers the opportunity to see how individuals are grouped together, rather than variables.

Investigating teachers' use of classroom management strategies is important for many reasons. The relationship between poor classroom management and student behavior problems has been established (Kellam et al., 2008; Petras et al., 2008; Sutherland et al., 2008). When teachers lack classroom management strategies, their students often display inappropriate behaviors. Further, many students who have behavioral problems also display academic deficits (Reinke, Herman, Petras & Ialongo, 2008). In addition, many teachers who enter the field leave within five years (NEA, 2003) and cite burnout or stress related to classroom management as a top reason for leaving the field (Friedman, 1995; Haberman, 2004; Markow et al., 2006).

The current study was guided by four research questions. The first addressed the profiles of classroom management strategies that would emerge from the observed classroom management strategies. The second question investigated whether teacher self-efficacy of classroom management and background variables such as years of

experience and prior training were associated with the classroom management profiles. Third, the study explored whether teacher classroom management profiles influenced student behavior, both observed and teacher reported. Finally, the fourth question examined if teacher profiles predicted teacher reported levels of burnout.

The following discussion of the outcomes is organized according to research questions. Implications for practice, limitations of the study, future directions for research and conclusions are also discussed.

Research Question 1

What number and type of teacher classroom management profiles will emerge?

A three profile solution emerged as the best solution. The first profile to emerge would be characterized as teachers using a 'proficient' combination of classroom management strategies. Teachers with this profile used higher amounts of praise, moderate amounts of reprimands and had high classroom ecology. In these classrooms, approximately equal amounts of praise and reprimands are used, behavioral expectations are known and an appropriate amount of instructional management is used. The second profile included teachers who utilize a low rate of praise, moderate rates of reprimands and high classroom ecology. This profile of teacher could be characterized as a 'typical' combination of strategies. Teachers with this profile use more reprimands than praise, but the behavioral expectations in their classroom are known and they utilized an appropriate amount of instructional management. The third profile of teachers also utilized a low rate of praise, moderate amount of reprimands, but had low classroom ecology. Teachers with this profile would be characterized as using an 'ineffective'

combination of strategies. Teachers with this profile also used more reprimands than praise; however the behavioral expectations of their classroom are not known and their instructional management is poor. These profiles display some similarities to those found by LoCasale-Crouch and colleagues (2007). Although LoCasale-Crouch and colleagues found a five profile solution, the differentiation between their profiles focused on the positive climate and instructional quality; similar to rates of praise and instructional management in the current study.

The three profiles were similar to what was predicted; however the mean value for some of the indicators was not what was expected. It was expected that teachers with a 'proficient' profile would use more praise than reprimands; however in that profile, there are approximately equal rates of praise and reprimands. When evaluating the rate of praise to reprimands none of the profiles would meet the recommended 4:1 ratio of praise to reprimands (Trussell, 2008). It is likely that many teachers find this ratio difficult to maintain. To maintain this ratio, teachers must be cognizant of each reprimand they make and attempt to provide 3-4 praise statements immediately following a reprimand. With so much happening in a classroom, it is possible that teachers find reprimands the easiest strategy for managing their classroom. As Reupert and Woodcock (2010) found, teachers are more likely to utilize reactive strategies, rather than preventive ones to manage difficult classroom behavior.

Typical and Proficient profiles have similar values on classroom ecology, while the Ineffective profile displays lower levels of classroom ecology. The fact that the Ineffective profile displayed lower rates of Behavioral Expectations is surprising given the fact that all of the participating schools are PBIS schools. One of the central tenants

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of PBIS is having simple, clear classroom expectations that are visible to all (Horner et al., 2009; Sugai & Horner, 2002). The fact that all schools participate in the PBIS program would lead one to assume that the behavioral expectations of the school and classroom are known and that a visitor would be able to quickly find those expectations. However, recent research (see Reinke, Herman, & Stormont, in press) has found that proactive classroom management strategies (which are consistent with PBIS principles) are not utilized at high rates. Thus, although a school may implement PBIS at a high level school-wide (for example, in the hallways and cafeteria) that optimal implementation may not permeate into the classroom. Therefore, it would seem that those teachers would benefit from additional training in the principles of PBIS, especially the importance of having clear, simple behavioral expectations and posting and reviewing those expectations. School psychologists are trained in the principles of PBIS (including prevention and early intervention for problem behavior) and effective delivery of district- and school- wide systems, such as PBIS. Therefore, school psychologists would be the ideal personnel to assist school districts, administrators and teachers to effectively incorporate the principles of PBIS into the school and classrooms. By providing knowledge of the guiding theory and principles of PBIS, training in the practices and support in implementation, school psychologists are essential personnel in the successful incorporation of PBIS principles into schools to prevent and intervene early when disruptive behaviors arise.

The lower levels of Instructional Management are less surprising if one considers that some of the practices within instructional management could differ depending on training or personal teaching philosophy. For instance, teachers may not be trained in or

utilize direct instruction techniques, which encourage a high rate of opportunities to respond and effective error correction (Carnine et al., 2006). The lower levels of Behavioral Expectations and Instructional Management do provide the opportunity for professional development and/or on-going consultation to incorporate some of the classroom management strategies within both areas of practice.

The Proficient profile differed from the Typical and Ineffective profiles on rates of both specific and general praise. The Proficient profile displayed approximately twice the rate of general and specific praise as either the Typical or Ineffective profile. It is interesting to note that despite the teachers with a Proficient profile providing twice the rate of praise as the other two, all three of the profiles exhibited similar rates of reprimands. The Typical and Ineffective profiles have a positive to negative ratio of at least 1:2 and teachers with the Proficient profile have a 1:1 ratio; although the recommended ratio of positive to negative is 4:1 (Stitcher et al., 2009; Trussell, 2008). A higher praise to reprimand ratio has a positive impact on the students, including reducing disruptions (Reinke et al., 2008) and increasing time on-task (Sutherland et al., 2000).

It is unfortunate and surprising that only six teachers in the sample (nine percent) fit in the Proficient profile and used a higher rate of praise. As research has demonstrated in many instances (Brophy, 1981; Leflot et al., 2010, Reinke et al., 2008; Sutherland et al., 2000) increasing praise in the classroom has benefits for students and teachers. By decreasing problem behavior exhibited by students, teachers can improve the environment of their classroom and leave more time for instruction and student learning. However, LoCasale-Crouch and colleagues (2007) also found that the highest quality profile also represented the smallest proportion of classrooms in their study. Previous

research has demonstrated the positive impact praise has had on students, including fostering a more nurturing classroom and promoting positive behaviors (Colvin, 2010; Lane et al., 2011), reducing teacher reprimands and student disruptive behavior (Reinke et al., 2008), and increasing student on task behavior (Sutherland et al., 2000).

Further, prior research (e.g. Moore Partin et al., 2010; Reinke et al., 2008; Sutherland, Wehby & Copeland, 2000) has demonstrated that with training or consultation teachers can increase their rates of praise and in response to the increase in praise the behavior of their students also improves. Thus, the provision of support and consultation services to teachers in order to improve classroom management practices is critical. Simonsen and colleagues (2010) and Reinke and colleagues (2008) have demonstrated that consultation, training and feedback can be effective to help teachers utilize more effective classroom management practices (increasing rates of praise and OTRs), thereby decreasing student disruptions and increasing time on task. Thus, with training and feedback, teacher classroom management practices can be changed and improved. Providing teachers with training and consultation to increase their use of praise, and decrease reprimands, could be a relatively simple way to influence teacher classroom management practices and have a positive impact on student behaviors.

Research Question 2

Are teacher level of self-efficacy with classroom management, prior training in behavior management, education level and years teaching significantly associated with teacher profiles?

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Teachers' levels of self-efficacy with classroom management did not significantly predict teachers' assignment to profiles. This finding was unexpected because it was predicted that teachers who had higher self-efficacy in classroom management would be more likely to be in the Proficient profile. As indicated by Lane and colleagues (2011), teachers' lack of self-efficacy in classroom management may lead to the use of more reactive or harsh management strategies; hence those teachers with a higher level of self-efficacy would be more likely to use more effective strategies. One potential reason for the lack of significant findings could be the low number of teachers in the Proficient profile. Both the Proficient and Typical profiles were slightly more likely to have higher rates of efficacy than the ineffective, but this was not statistically significant. A larger sample may have supported the hypothesis. Another possibility is that teachers in this sample using less effective practices feel efficacious in the practices which they use or those using effective practices do not feel efficacious when using those practices. Given that the lack of a significant relationship between self-efficacy and profiles and the lack of a significant difference between teacher ratings on the TOCA-C and TSC, it seems that those teachers who use more effective practices do not feel as though the students in their classrooms exhibit significantly more prosocial behavior (or less disruptive) than those students in the classrooms in which the teachers utilize effective practices at a lower rate.

Additional variables, including teachers' highest degree obtained, years in teaching and previous professional development in behavior management, were also inserted into the model solution to determine if they influenced teacher profiles. None of these variables significantly predicted teachers' assignment to profiles. The lack of significant findings for these additional variables was surprising. It was hypothesized

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that all of these variables would influence teacher assignment to profiles, considering prior research that has demonstrated a relationship between training, years of experience, efficacy and classroom management practices (e.g. Egyed & Short, 2006; Fives et al., 2007; Pas et al., 2012). It is possible that teachers did not gain additional training in classroom management in their masters' and post-masters' certification classes. Further, as teachers continue in the profession, it may be that they become comfortable with using methods to management their classroom which are less effective and the teachers are resistant to change those practices. Finally, the finding that previous professional development in behavior management did not influence teacher assignment profiles may demonstrates the fact that single professional development sessions, or instructional sessions without practice, may not be enough to transfer those skills into the classroom and have a significant impact on students (see Yoon, Duncan, Lee, Scarloss, & Shapley, 2007). In a review of professional development programs, Knight and Wiseman (2005) found the training models that followed training sessions with coaching or consultation tended to have more positive outcomes (i.e. transfer of skills/attitudes into the classroom). Conversely, additional training, perception of knowledge and actual knowledge may not be related (Stormont & Stebbins, 2005); those teachers may not know which classroom management strategies have been demonstrated through research to be effective. Additional consultation, coaching and follow-up sessions may increase teachers' use of effective classroom management strategies compared to attendance of professional development sessions alone. In fact, researchers have demonstrated that follow-up sessions, coaching or consultation has increased teachers' use and acceptance of effective classroom management practices (Reinke, et al., 2008; Shernoff &

Kratochwill, 2007), evidence-based literacy programs (Carlisle, & Berebitsky, 2011), and effective mathematics instructional practices (Kretlow, Wood, & Cooke, 2011; Rudd, Lambert, Satterwhite, & Smith, 2009).

Research Question 3

Are there significant differences between the teacher classroom management profiles with regard to levels of student problem behavior and student social competence?

When the three classroom management profiles were compared for student level problem behavior and social competence, there were significant differences found for student rates of aggression, percent of time on task and percent of time off task. The Proficient profile had a significantly lower rate of aggression than either the Typical or Ineffective profiles. Further, the Proficient profile also had a significantly higher percent of time on task than the other two profiles. Finally, the Proficient profile had a significantly lower percent of time off task than the Ineffective profile and was approaching significance when compared to the Typical profile. When comparing the Proficient profile to the Typical profile, the p-value of the comparison for percent of time off task was .06, which, while not significant at the p < .05 level, is approaching significance and is mentioned to accentuate the differences in student behaviors between classrooms with different profiles.

The rate of disruptions was not significantly different between the different profiles. Also, there were no significant differences among the teacher reported variables including emotional regulation, academic competence, disruptive behavior and prosocial behavior. The lack of significant findings for rate of disruption was unexpected.

However, during observations, disruptions were coded when the teacher gave a reprimand or stopped instruction. Thus, disruptions and reprimands were highly correlated. Since all three classroom management profiles have similar rates of reprimands, it is not surprising that the rate of disruptions did not differ across profiles.

Given that research demonstrates that effective classroom management strategies promote students' prosocial behavior and decrease their disruptive behavior (Sutherland, et al., 2003; Webster-Stratton, et al., 2004) the lack of significant findings between teacher profiles is surprising. One would expect that teachers who use more effective classroom management practices, especially specific and general praise, would report higher levels of prosocial behavior and lower levels of disruptive behavior. Research has demonstrated the positive impact a higher praise to reprimand ratio has on student behaviors, including decreasing disruptions (Reinke et al., 2008), increasing on-task behavior (Sutherland et al., 2000), and slowing the development of hyperactive and oppositional behavior (Leflot et al., 2010). The low numbers of teachers in the profile using high rates of praise, and even those using high rates of praise only used a 1:1 praise to reprimand ratio, could have affected the results of the equality tests and lack of significant differences between the other two profiles. Considering the evidence of the impact on student behavior of a high praise to reprimand ratio, is it possible that because the teachers in the study did not reach the recommended ratio of praise to reprimands, the positive student outcomes did not come to fruition. It may be possible that positive student outcomes due to a high praise to reprimand ration does not occur until a particular threshold is reached of positive to negative statements. It is also likely that with such a small number of teachers (six) in the Proficient profile (1:1 praise to reprimand ratio), the

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ability to detect a significant difference between the profiles of teachers was greatly

limited. Perhaps if the number of teachers with each profile were more equal, perhaps

18-26 teachers in each profile, there would be more significant differences among the

student variables.

Research Question 4

Are there significant differences between the teacher classroom management profiles

regarding self-reported levels of burnout?

There were no significant differences between teacher classroom management

profiles for the three subscales of burnout, emotional exhaustion, depersonalization or

personal accomplishment, or the total burnout. The lack of significant differences

between profiles is unexpected given that students in classrooms with Proficient teachers

had lower rates of aggression and a higher percent of time on task. One would think that

in classrooms with higher rates of student aggression and less time on task (Typical and

Ineffective profiles), teachers would experience more stress, as student misbehavior and

classroom management are often cited as sources of stress and burnout for teachers

(Haberman, 2004; Markow et al., 2006). Therefore, it was assumed that teachers with

students who exhibit more aggression and less time on task would lower reported

burnout, including emotional exhaustion and depersonalization.

Further, teachers in all profiles did not report levels of burnout that would be

considered high. Overall, there was little variability within the sample on teacher

reported burnout. Since none of the profiles of teachers indicated increased levels of

emotional exhaustion or depersonalization or decreased levels of personal

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accomplishment, the lack of significant differences is expected. Even if statistically significant differences were found between profiles, the differences would not be clinically significant. Because none of the ratings were in the elevated range (greater than 27 for Emotional Exhaustion, greater than 14 for Depersonalization, and less than 30 for Personal Accomplishment), teacher levels of burnout are not a concern for this sample at the time of data collection.

One possible reason for the lack of differences in reported levels of burnout is the timing of the teachers' report and collection of student data. The data was collected during the first two months of school, when teachers are still getting to know their students, develop routines and in the beginning of academic instruction. At this point in time teachers may feel low levels of stress, and therefore low levels of burnout, for a couple reasons. At the beginning of the school year academic content and instruction is reviewing previous years' material. As the year goes on instruction transitions to introducing new material, which some students may find difficult. The introduction of new, difficult material may cause frustration for students, who have trouble understanding and utilizing the new material, and teachers, who want their students to understand and utilize the material. Also, standardized academic assessment of students, which causes teachers stress, has not occurred. Teachers feel pressure to ensure that their students are able to apply new material on the assessments and do well on those assessments. Future research might investigate teachers' level of burnout at the end of the year, after standardized academic assessments and students' disruptive behaviors may have reached the point of intolerance for teachers.

Implications for Practice

The current study provides insights into teachers' use of various classroom management strategies and their impact on student behaviors and teachers' burnout. The final profiles of teacher classroom management included five classroom management strategies. Of those strategies, all teachers used similar rates of reprimands. Those strategies which differed were behavioral expectations, instructional management, general praise and specific praise. This finding demonstrates the variability of classroom management strategies used and the rates in which those strategies are used. Hence, there is not a single method to work with teachers in order to improve their classroom climate and improve student behaviors. Gathering data to determine the strategies used and the rate of those strategies is essential to ensure that the suggested strategies will have an effect in the classroom.

Of the teachers in the sample, only six teachers were classified into profiles which used a higher rate of praise. Praise has been demonstrated as a simple way to improve classroom climate and student behavior (Reinke, et al., 2008), thus more attention to increasing praise in the classroom should be given. Teachers who wish to improve the climate of their classroom and decrease student misbehavior can focus on purposefully incorporating more praise statements into their daily routine. Furthermore, in this study, teachers in the profile which utilized more praise had lower rates of aggression and off task behaviors than those classrooms in which lower rates of praise were used. Thus, this underscores the importance of teachers utilizing more praise in their classrooms to impact and improve their students' behavior. Further, the current study found that prior education, years in the field or professional development in behavior management did not

impact teachers' assignment to profiles. This finding underscores the importance for ongoing consultation, especially following professional development, to help teachers incorporate more effective classroom management practices.

When consulting with teachers with high levels of aggression and off task behaviors, focusing on increasing use of praise for appropriate behaviors may optimize student outcomes. School psychologists can help teachers to implement evidence-based techniques to reduce student misbehavior (Reinke et al., 2011). Thus, continued consultation with teachers to incorporate more praise statements and other effective classroom management techniques is a necessary responsibility for school psychologists.

Limitations

Although this research study was conducted in a manner to contribute to the scientific community, it is not without its limitations. First, this study is a cross sectional analysis of student and teacher variables and thus a causal relationship cannot be determined. The data in this study were collected during a particular time point in the school year and the results can only determine associations between the variables, and not if one variable (i.e. teacher profiles) causes another variable (i.e. student rates of aggression). Follow up data collection at the end of the school year might add to the findings to determine if more significant differences arose between classrooms with different classroom management profiles.

Also, the low number of teachers in the Proficient profile, and therefore an uneven distribution of the sample across the three profiles, may have led to limited power to detect significant differences between the profiles. With one profile including only six

teaches, the results of follow up analyses, including the covariates, student outcomes and teacher outcomes, could have been affected. Perhaps a more even distribution of teachers across the three profiles would have yielded more significant differences between the profiles for the covariates and dependent variables. Another a limitation of the sample is that all of the participating teachers and students are from one school district in one state. Thus, the results of this study cannot be generalized to all teachers and all students.

Further, classroom observations were conducted during a short period of time, with all observations of one classroom often occurring in the course of a single day. While these observations provide researchers with a snapshot of the classroom management strategies and student behaviors which occurred during the observation period, it cannot be assumed that those are the behaviors in which the teacher and students engage every day. Participants often behave differently when they are being observed and researchers often conduct many observations in classrooms to counter this effect, assuming the teacher and students will become accustomed to being observed and act in their normal manner. Therefore, because the observations in this study were often conducted over the course of a single day, they cannot be generalized to the actual behavior of the teachers and students.

In addition, the use of the CEC to develop teacher profiles is a limitation. The CEC is a relatively new observational tool and has not been thoroughly researched to determine its reliability or validity. Thus, the CEC has little psychometric information supporting its use in research studies.

While this study included many of the critical aspects of effective classroom management, there are some factors missing because of the feasibility of data collection. Teachers' instructional practices significantly contribute to the classroom climate and some practices were not included in the Instructional Management section of the CEC. Those practices include instructional support for learning (Curby et al., 2009) and matching instructional material and students' knowledge (Gickling, & Armstrong, 1978). Curby and colleagues (2009) demonstrated that students whose teachers had high levels of instructional support and moderate levels of emotional support scored higher on vocabulary and academic assessments than students whose teachers had different profiles. Further, when the instructional material is too difficult for the students, problem behaviors are more likely to occur (Martens & Kelly, 1993). Future research would include teachers' instructional support and students' instructional match as indicators in profiles.

Finally, the MBI and OSTES were given to teachers to complete once, during the first months of the school year. Through provision of these measures to teachers only once, at the outset of the school year, it assumes that burnout and self-efficacy are static constructs. However, this does not consider that perhaps feelings of burnout and self-efficacy fluctuate according to time of year, student behaviors, work-related pressures, or personal factors. Thus, the measures of teacher reported levels of burnout and self-efficacy used in the present research may not completely account for the variability of these constructs.

Future Directions for Research

The current research study took a cross sectional look at teacher classroom management strategies, student behavior and teacher burnout. As part of a larger intervention study, classroom management indicators and teacher and student level variables could only be examined at baseline, due to the division into control and treatment conditions after baseline data collection. Future research would investigate how the teacher classroom management profiles affect student behavior and teacher burnout as the school year progresses. The current study found significant differences in student level aggression, but not disruptions among students. Future research would investigate how teacher profiles would affect student levels of aggression and disruptions throughout the school year.

Further, if teachers with the Proficient classroom management profile had students with higher levels of on-task behavior and lower levels of off task behavior, would that translate to higher standardized academic assessment scores at the end of the year? It is assumed that when students are more on-task during academic instruction they are more engaged in the lesson and absorbing more of the information. Future research can investigate if nine months of increased amounts of time on task translates into increased scores on academic assessments compared to classrooms which have lower levels of time on task.

The lack of differences in teacher reported levels of burnout was surprising, but might be explained because of the timing of the data collection. Future research can investigate if teachers with Typical and Ineffective profiles have increased levels of burnout as the year progresses. It is assumed that all teachers will have increased levels

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of stress and burnout as the year progresses, however do the three profiles differ significantly in their levels of burnout? If classrooms with the Proficient profile of classroom management have lower levels of aggression and disruptions, and higher levels of academic achievement at the end of the year, perhaps teachers in those classrooms will have lower levels of stress and burnout. However, it is also possible that teachers who have better student outcomes become stressed and burned out by using all of their energy to achieve those outcomes.

Next, while a model solution was found, many of the hypothesized indicators were not included in the final solution for statistical reasons, including OTRs and pre-corrections. It is possible that these variables, among others significantly contribute to teacher profiles and student behavior. Using a larger sample, researchers may find other classroom management profiles that include those strategies.

Finally, researchers should continue to investigate strategies of classroom management. The current research investigated profiles of multiple classroom management strategies, but found minimal significant relationships between student outcomes and no significant relationships between teacher outcomes. However, researchers investigating single strategies have found significant relationships between classroom management strategies and student and teacher outcomes, including, but not limited to: rates of praise and teacher self-efficacy in classroom management and harsh reprimands and teacher emotional exhaustion (Reinke et al., in press); OTRs and student disruptions and time on-task (Haydon et al., 2010), praise to reprimand ratio and student disruptions and time on-task (Leflot et al., 2010) and self-efficacy and burnout (Fives et al., 2007). Thus, combining multiple teacher strategies into profiles may not be the

optimal may to investigate teacher classroom management and its relationship with student and teacher outcomes. Additional research utilizing both multiple and single strategy methods could add to the literature to provide the field with a more informed manner of the best way to pursue further research.

Conclusions

Effective classroom management skills are essential for children to develop the social and academic skills they need to become contributing members of society (Colvin, 2009; Walker, 2009). Research has demonstrated techniques that improve student behaviors and promote a positive classroom climate (Kern, & Clemens, 2007; Simonsen et al., 2008), including praise (Brophy, 1981; Sutherland et al., 2000), clear behavioral expectations (Sharp et al., 1995; Sugai, & Horner, 2002) and appropriate instructional management (Burns et al., 2010; Carnine et al., 2006). However, teachers often feel a lack of preparation to manage their classrooms (Markow et al., 2006) and cite student misbehaviors as a top reason for leaving the profession (Haberman, 2004). To prevent student misbehaviors and teachers from leaving the profession prematurely, teachers would ideally use a variety of effective classroom management techniques to reduce student misbehavior.

This study identified profiles of multiple classroom management strategies and evaluated how those teacher profiles were associated with teacher efficacy, burnout, and student behavioral and social competence outcomes. The findings demonstrate that teachers used several classroom strategies at varying rates. Also, teachers who used more praise, had clearer behavioral expectations, and better instructional management had less aggressive and off task behaviors in their classrooms.

The results highlight the need for teachers to receive more pre-service training in effective classroom management strategies and opportunities to practice those strategies and receive feedback prior to entering the field. Further, once they are in the field, teachers should be provided on-going consultation related to classroom and individual behavior management. School psychologists often have the training and expertise to provide these services to teachers in order to prevent high quality instructors from leaving the field. Hopefully by aiding teachers to implement effective classroom management techniques, teachers will have more time to teach and the students will experience greater academic success.

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Appendix A: MOOSES Codes

Teacher Behaviors

Opportunities to respond. An opportunity to respond (OTR) is defined as an instructional prompt that requires immediate academic response to the teacher. OTRs include statements, gestures, or visual cues.

Examples:

- "Wendy, what is 2 + 2?"

- The teacher directing the class "Please write the answer to number five on your white boards and hold them up when you are finished."

- For OTRs that are choral responses, each discrete response was coded as an OTR. For example, if the teacher were pointing to letters in the alphabet, "A, 'a', apple" would count as one OTR and B, 'b', bat" would count as another.

- Instances of students reading lines from a play for each time a student read his/her part.

Non-examples:

- Singing.

- Dancing.

- Stretching.

- Spelling tests.

Praise. Praise statements were classified as being general or specific. General praise is defined as a praise statement or gesture which indicates approval and does not name a specific behavior. Specific praise is defined as a verbal statement or gesture which indicates approval and names a specific behavior. Specific and general praise are coded

during each observation depending on whether they are directed toward the target student or another student. If praise is directed at the whole class or a small group in which the target student is part, it is coded as praise-other.

Examples:

General praise:

- "Thank you."

- "Great job."

- "Correct answer."

- "Good question."

Specific praise:

- "Thank you for answering."

- "Good thinking."

- "Thank you for sitting quietly."

- "Aaron has his eyes on me."

- "I'm looking for line basics. Sarah has line basics, so does Jenny. And Claire does too." (Coded as three specific praises.)

Reprimands. An explicit reprimand is defined as a verbal comment or gesture made by a teacher to indicate disapproval of behavior; it is concise and in a normal speaking tone. A harsh reprimand is defined as a verbal comments or gesture which indicates disapproval of behavior using a voice louder than typical for setting or harsh, critical or sarcastic tone.

Examples:

Explicit reprimands:

- "Eyes on me please" (when students are not looking at the teacher and should be).

- "Hands to self" (when one student is touching another student).

Harsh reprimands:

- Teacher saying sarcastically "What a surprise, your work isn't finished."

- Teacher raises voice to say "Look up here, I am talking".

Pre-corrections. Pre-corrections occur when the teacher provides specific prompts or reminders about the behavior expectation before a behavior is needed. Prompts regarding academic expectations were not coded as a pre-correction.

Example:

- "Remember to raise your hand if you have a question".

Non-example:

- "Remember to raise your hand to answer" (if stated after several students shout out an answer).

Student Behaviors.

Disruption. A disruption was coded when a student displays a behavior which disturbs or has the potential to disturb the class. Disruptions were coded when the disruption was performed by the target student or any other student in the class.

Example:

- When a student would ask a question or make a comment that was unrelated to the subject matter.

- When student calls out and teacher reprimands. "I have to use the restroom!" followed by "Not now. Use the pass later."

- A disruption will be coded if the target child was not following teacher directions and the teacher provided proximal praise to a student who was following directions. If the teacher says "I like how Bill raised his hand! Yes, Bill?", after Ann calls out, a disruption would be coded.

Non-example:

- A 'call out' was not coded as a disruption if the teacher ignored it. "I have to use the restroom!" followed by no response from the teacher.

Aggression. An act of aggression was coded when a student was physically or verbally aggressive toward an object, peer or teacher. Since aggression is a form of disruptive behavior, when aggression was coded, disruption was not. Aggression was coded even if there was no teacher reprimand, as often aggressive acts occurred when the teacher was not looking.

Examples:

- Hitting a peer.

- Swearing at a peer.

- Flipping off the teacher.

- Yelling "shut up" at a peer.

- Two students were calling each other names would be coded as two aggressive acts.

On-task, Off-task and Downtime.

On-Task: Being on-task is defined as the student being engaged with instructional content or activity by choral responding, raising hand, responding to teacher

instruction, listening, writing, reading or otherwise completing assigned task. If the student was passively engaged, he/she was coded as being on task.

Off-task: The target student is coded as being off-task when he/she is obviously not working on the assigned task or attending to the task or lesson. To be coded off-task, the student was obviously off-task.

Downtime: Downtime was coded when there were no clear classroom expectations. A five second rule was used prior to switching the duration code to downtime.

Example: When the teacher stops teaching to answer the phone and remains on the phone for more than 5 seconds.

VITA

Ann Girard (Tweet) Clare was born in Omaha, Nebraska on September 16, 1982. She is

the daughter of Donald K. Tweet and Susan D. Taylor. She was raised in Ashland,

Nebraska and graduated from Ashland-Greenwood High School. She then attended the

University of Nebraska-Lincoln, where she majored in Biological Sciences, with minors

in Spanish and Psychology. She earned her Bachelors of Science degree from University

of Nebraska-Lincoln in December 2005. Ann worked for Cedars Youth Services from

May 2005 until July 2008. Ann entered the school psychology program at the University

of Missouri-Columbia in August 2008. She earned her Master of Arts in School

Psychology in May 2011. She is completing her pre-doctoral internship at Devereux's

Professional Psychology Internship Training Program.