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Improving Students' Interpersonal Communications, Leadership, and Decision-Making Skills Through Integration of Cockpit Resource Management: A Grounded Theory Study of K-8 Educators' Perspectives

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Improving Students' Interpersonal Communications, Leadership, and Decision-Making Skills

Through Integration of Cockpit Resource Management: A Grounded Theory Study of K-8

Educators' Perspectives

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College of Education

Dissertation submitted to the Faculty of the College of Education

in partial fulfillment of the requirements for the degree of

Doctor of Education in Educational Administration

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Abstract

The dissertation in education administration represents innovative and relative research that provides administrators with a process that students may use to enhance their academic, social, and emotional development. This study gathered the perspective and experiences of recruited educators from a K-8 school who had recently engaged and interacted with kindergarten through second-grade students. The primary goal of this study was to generate theory based on the participating educators' perspectives on expanding an aviation training model, Cockpit Resource Management (CRM), into education to improve students' interpersonal communication, leadership, and decision-making skills. This study is a contribution to the study of education in that it provides a method for students to avoid, catch, and mitigate errors that students face on a daily basis. Results of the study show that interpersonal communication has an impact on student development through establishing a classroom community, receiving feedback efficiently, and engaging in event reporting or self-evaluation. Leadership skills also impact student development by providing students with leadership opportunities and effectively engaging in teamwork. Decision-making skills further impact student development by building decision-planning and situational awareness skills. The theory that emerged in this grounded theory study is entitled Classroom-Community Resource Management (CCSS).

Keywords: Community, relationships, leadership, decision-making skills, restorative, communication, empathy, confidence

Dedication

This study is dedicated to my loving grandmother, Mimi, who sparked my love for education and

continually encouraged my path in my own education.

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Chapter 1: Introduction

Introduction to the Problem

While many school administrators show great effort to provide students with character education that teaches students to demonstrate qualities such as responsibility, respect, and trustworthiness, students who struggle with behavior choices continue to show decreased academic development (Learned, 2016). Character education programs can provide significant support for students' social and emotional development, but character building should also be emphasized and utilized in the students' academic development (Stiff-Williams, 2010). For example, students should learn to be respectful to their peers on the playground and to their teachers in the classroom, to be responsible in the lunch areas by cleaning up and throwing away their trash, and to display self-control in emotional situations. The question remains if students transfer these qualities into their learning through showing respect by completing their portion of assignments in their collaborative groups, taking responsibility for their own learning by asking clarifying questions for understanding, or showing self-control and perseverance by pushing through frustration and confusion in their learning.

Although more time, money, and resources are being spent on education than ever before, the high-pressure focus on achievement measured through traditional assessments continues to plague the nation's mainstream education system (Dweck, 2015; Fullan & Langworthy, 2014). Researchers are identifying what characteristics such as tenacity, perseverance (Fullan & Langworthy, 2014), and a growth-mindset could have on academic success (Claro, Paunesku, & Dweck, 2016); however, without the necessary tools, not all students are equipped to apply such important concepts to their academic development (Dweck, 2015). This qualitative dissertation study resulted in the development of a theory based on Cockpit Resource Management (CRM), a

training model used in aviation, that could provide students and educators with the strategies necessary to tackle the needed balance of student development and achievement within the academic, social, and emotional realms of education to improve students' interpersonal communications, leadership, and decision-making skills.

Countless hours are spent in schools addressing social and emotional challenges that students face on a daily basis. Students come to school with a variety of needs, and learning may not be their most urgent need. When students have needs that are not being met, their classroom behavior may reflect those deficiencies, often in a negative and disruptive manner, whether it is in the realm of academic, social, or emotional behaviors (Varghese, 2017). Rubio (2014) explained that discipline concerns have consistently been ranked in the top 10 of the most serious problems in public schools. Traditionally, when students misbehave, teachers have turned to punitive punishments to attempt to change the student's behavior (Payne & Welch, 2015).

Among classroom disruptions, some non-compliant students misbehave by breaking classroom rules such as talking while the teacher is instructing, throwing items in the classroom, or disrespecting other students. On the contrary, some compliant students show excellent classroom behavior, but may not engage academically. Compliant students may sit quietly in their seats, hold their pencils, and appear to be engaged in the assigned tasks; however, in reality they may be confused by the instructions, incapable of completing the tasks, or situations at home or on the playground may have their brains pre-occupied, thinking about something other than the tasks at hand. Regardless, non-compliant and compliant students often are issued punitive punishments in order to learn a lesson for their choices; however, these punitive punishments only exacerbate the situation, rather than support student growth (Kline, 2016; Payne & Welch, 2015; Smith, 2015).

When students are issued forms of punitive punishments, their access to a quality education is compromised (Cole, 2013; Kline, 2016; Rubio, 2014), relationships are harmed (Davidson, 2014; Evans & Lester, 2012; Kline, 2016; Suvall, 2009), and the problems often are exacerbated due to the exclusionary nature of the consequences (Kline, 2016; Payne & Welch, 2015; Smith, 2015). As problems intensify as a result of punitive measures, people will often respond with protest and distress due to the harmed relationships, which can lead to further problems for students academically, socially, and emotionally (Baumeister & Leary, 1995; Ryan & Ruddy, 2015).

To encourage more positive behaviors in school, districts and schools have developed and adopted various character education programs that teach attributes such as responsibility, conflict resolution, and decision-making skills (Stiff-Williams, 2010). While these programs can be successful in developing quality characteristics in students, students continue to struggle with their social and emotional development, which may then negatively affect their academic progress (Kline, 2016). The compliant students may have strong social and emotional development, but lack the skills to advocate for their academic development. This doctoral study developed a theory to be used in education that is drawn from an aviation training model, Cockpit Resource Management (CRM), where pilots strengthen their interpersonal communications, leadership, and decision-making skills to mitigate errors in high-pressure situations. Administrators could use such a process to help students also strengthen their interpersonal communications, leadership, and decision-making skills to navigate through challenges they face while progressing in their academic, social, and emotional development.

Background and Conceptual Framework for the Problem

CRM is a human-factors training program that was designed to increase the effectiveness of pilots and crew members throughout the aviation industry (Flin, O'Connor, & Mearns, 2002). The primary focus of CRM training is to improve the performance and safety of flights through reduced pilot error by improving pilots' interpersonal communications, leadership, and decision-making skills (Cioffi, 2009; Martinez, 2015). Airlines around the world have developed and implemented CRM training into their annual flight training for all personnel involved with flight operations (Flin et al., 2002). For example, a CRM training model available through Flight (2017) includes elements such as communications, situational awareness, problem solving, decision-making, and teamwork. Strengthening and improving crews' knowledge, skills, and attitudes in these areas enhance the efficiency of flight operations. As crew members notice threats, they utilize CRM to avoid accidents and incidents in flight (Flight, 2017). In the education setting, students could also use elements of CRM to recognize and manage efficiently threats and distractions to keep from interfering with their academic, social, and emotional development.

From the time CRM training was introduced to airlines in 1979 to improve the safety and efficiency in the cockpit, a number of other professions have adopted CRM training including nuclear and offshore power industries, aviation maintenance, air traffic control, and the healthcare industry (Flin et al., 2002). High-pressure industries rely on highly effective functioning teams to ensure safety and efficiency in achieving their goals. It is the expert team, rather than individual experts, that provide the team's attitudes and behaviors that are necessary to achieve success (Crichton, 2017). This form of collaboration is also present in education as

students are assigned to schools, classrooms, and sub-groups in which they are expected to cooperate and achieve success for the team, as well as individually.

As other industries have shown success in implementing CRM, the purpose of this study was to develop a theory that extended CRM into education. Where pilots face threats in the cockpit, students face threats "at home, at school, and in the community each day," (PeacePartners, 2017, para. 7) for which character education programs attempt to provide support whether the threats pertain to the academic, social, or emotional realm of development. Academically, students may face threats including confusion, distractions, time pressure, or fatigue; socially, threats may include an unfamiliar student, a large number of students at recess, hurt feelings, or a misunderstanding during a game; and emotional threats may include a change in schedule, lack of assertiveness, or a feeling of disconnect. Regardless, a process like CRM could help students in a systematic and logical approach use proper defenses against such threats as students become stronger in their interpersonal communications, leadership, and decision-making skills.

The first CRM training model was developed in 1981 by consultants working with United Airlines (Helmreich, Merritt, & Wilhelm, 1999; Taggart & Carroll, 1987) following a 1979 investigation of a United Airlines DC-8 accident in Portland, Oregon (Backer & Orasanu, 1992). The investigation by the National Transportation Safety Board (NTSB) led to an operational implementation of cockpit resource management to reduce accidents caused by non-technical pilot errors (Backer & Orasanu, 1992; Cioffi, 2009). The National Aeronautics and Space Administration (NASA) also researched the causes of aviation incidents and found that pilot errors were the reason for most accidents in the areas of interpersonal communications,

decision making, and leadership (Flin et al., 2002; Helmreich et al., 1999; McKeel, 2012). Cioffi (2009) defined error as an action or decision that resulted in an unintended negative outcome.

Cockpit Resource Management (CRM) has progressed through five generations of growth and development beginning with the model developed by United Airlines in 1981 (Dumitras, 2013; Helmreich et al., 1999). The initial program focused on general leadership concepts and involved a heavy focus on psychological testing, which was initially rejected by pilots and the aviation industry (Cioffi, 2009; Dumitras, 2013). The second generation of CRM begun around 1986 and involved the major airlines incorporating CRM into annual training and operations programs. It was at this time that Delta Airlines began referring to CRM as "Crew Resource Management" rather than "Cockpit Resource Management," since the training involved more than just the pilots. During the second generation, the training focused mostly on team building, decision-making, situational awareness, and breaking the chain of errors, and the training was more accepted by pilots around the world (Cioffi, 2009; Dumitras, 2013; Helmreich et al., 1999).

The third generation of CRM further extended outside of the cockpit and began to include dispatch, air traffic controllers, flight attendants, and aviation maintenance personnel (Cioffi, 2009; Dumitras, 2013; Helmreich et al., 1999). Helmreich, Merritt, and Wilhelm (1999) explained that it was this generation of CRM, in the early 1990s, that focused more on the captain's leadership role in aviation and less on the reduction of human error. The fourth generation of the training was when the Federal Aviation Association (FAA) became officially involved by integrating the training into all airline's technical flight training (Cioffi, 2009; Dumitras, 2013; Helmreich et al., 1999). Some airlines also extended the concepts to the checklists that pilots refer to on a regular basis (Helmreich et al., 1999).

The focus of the fifth generation of CRM, still being used in aviation today, is on error countermeasures: avoiding error, trapping error, and mitigating the consequence of error (Cioffi, 2009; Dumitras, 2013; Helmreich et al., 1999). As airlines continue to develop CRM training modules specific to their company, the elements within CRM may vary but are similar in nature. Flin, O'Connor, and Mearns (2002) listed teamwork, leadership, situation awareness, decision-making communication, and personal limitation as core skills included in a CRM course; McKeel (2012) described situational awareness, assertiveness, decision making, communications, leadership, adaptability and flexibility, and mission analysis as seven critical skills that are the centerpiece of CRM training in Navy and Marine programs; and an example of a Taiwanese Army Aviation Unit included communication, problem solving, decision making, leadership, teamwork, situational awareness, and application of procedures in the CRM training (Hsiung, 2015). While the FAA requires CRM training in all airline training events, each company continues to develop their own training module that best fits the company's needs.

This study utilized a selection of elements from the CRM program descriptions above that would most effectively connect aviation training concepts to K-12 education while also addressing the improvement of interpersonal communications, leadership, and decision-making skills. The element of interpersonal communications included pilot attitude and event reporting; leadership included teamwork; and decision-making skills included decision-planning and situational awareness (Flin et al., 2002; Hsiung, 2015; McKeel, 2012). Principles of restorative justice are embedded with CRM within the realm of interpersonal communications, and the basis of the Attribution Theory also parallels CRM within decision-making skills. The theory that was developed from this study sought to learn the participating educators' perspectives of extending

elements of CRM into education to provide support in students' academic, social, and emotional growth.

Context of the Problem

Numerous examples of behavior management models have been used in schools in an effort to give students the skills necessary to build a positive learning environment where students feel safer and more supported at school. Examples of such models include Positive Behavioral Intervention and Supports (PBIS) (2017), Love and Logic (2017), The Leader in Me (Covey, 2017), PeaceBuilder (PeacePartners, 2017), Character Counts (2016), and Sanford Harmony (National University, 2017). Some schools have also implemented use of restorative justice as a discipline model to help students understand how their behavior choices impact other students and the rest of the school community (Payne & Welch, 2015). The school selected for this study used two primary behavior management models, PeaceBuilder and Character Counts, over the past several years to provide schoolwide character education. During the 2016-2017 school year, the school implemented a new character education program, Sanford Harmony, which introduced a focus on restorative practices to include relationship building, communication, and collaboration. Each of these programs aim to build characteristics in students that enable them to show qualities such as empathy, respect, and responsibility.

The school's emphasis on these three programs, PeaceBuilder (PeacePartners, 2017), Character Counts (2016), and Sanford Harmony (National University, 2017), provided students with strategies to use in their social interactions that could build a positive learning environment where students could feel safe and ready to learn. For example, the PeaceBuilder program was used for kindergarten through fifth grade and involved a pledge that students recited daily in an

effort to encourage students to use the characteristics at home, school, and in the community. The pledge stated:

> I am a peacebuilder; I pledge to praise people, to give up put-downs, to seek wise people, to notice and speak up about hurts I have caused, to right wrongs, to help others. I will build peace at home, at school, and in my community each day. (PeacePartners, 2017, para. 7)

The middle school program, Character Counts, taught six specific characteristics referred to as Pillars of Character in an effort to maintain a positive learning environment for students. The six pillars included trustworthiness, respect, responsibility, fairness, caring, and citizenship (Character Counts, 2016). The schoolwide program that was adopted, Sanford Harmony, focused on characteristics including diversity, inclusion, empathy, critical thinking, communication, problem solving, and building relationships among the school community (National University, 2017). The elements of restorative justice that were emphasized in the program included communication, cooperation, collaboration, and community. These elements are also reflective within CRM, which will be discussed later in the chapter.

While CRM is used throughout aviation in an effort to improve flight crew cooperation and the safety of all pilots (Martinez, 2015), this study inquired educators about the idea of using CRM in the classroom to meet the needs of students in the academic, social, and emotional realm of development. The hope was that administrators and teachers would be able to utilize the CRM training process to provide ongoing coaching to students to handle high-pressure situations effectively such as processing challenging content, performing proficiently on assessments, handling conflicts peacefully, or working through traumatic events.

When pilots lacked skills in the areas of interpersonal communications, leadership, and decision-making skills before CRM was implemented, the training showed improvement in the safety of aviation over the years of the program's development (Dumitras, 2013). Pilots and crew members also used self-reflection during each flight and reported any mistakes that were made during the flight. These reports were made without risk of punishment or disciplinary action and were used solely for the growth and development of aviation (Helmreich et al., 1999). Extending CRM to education could give administrators a process to help students manage situations effectively within the academic, social, and emotional realm of education by improving their interpersonal communications, leadership, and decision-making skills. Engaging in self-reflection without risk of disciplinary action could also be used for students' growth and development.

Statement of the Problem

Despite the efforts that teachers and administrators have demonstrated to provide students with quality character education, the characteristics and skills being taught are far too often not transferring over to students' academic development and are taught in isolation to support only social and emotional development (Stiff-Williams, 2010). Punitive punishments such as restricting students from recess, sending students out of the classroom, excluding students from special activities, and suspending students from school, are issued to students in an effort to teach students a lesson, whether in response to an academic, social, or emotional situation. For example, a student who made too many errors writing a paragraph may be forced to stay in from recess to rewrite the piece of work; a student who shouted at the teacher may be sent to the office; and the student who had a meltdown while doing math may not be able to attend the assembly. Consequences that involved exclusionary methods were found to increase the chance

of students repeating the offense, failed to provide the desired safe and positive classroom environment, and reduced students' access to their education, rather than achieve the intended positive outcomes (Benade, 2015; Cameron & Torsborne, 1999; Kline, 2016). Students who were subject to punitive measures failed to learn from their experience and had an increased risk of future delinquency in school and in the community (Abregu, 2012; Payne & Welch, 2015; Suvall, 2009).

Purpose of the Study

The primary purpose of this doctoral study was to develop a theory that emerged from the perspectives of educators that extended the use of Cockpit Resource Management (CRM) from aviation into the classroom to help improve students' interpersonal communications, leadership, and decision-making skills in the realm of their academic, social, and emotional development. Pilots utilize elements of CRM on a daily basis as defenses to maximize their margin of safety and to handle threats as they arise; likewise, students may be able to utilize a similar set of defenses when they are faced with challenges in the realm of their academic, social, and emotional development. In addition to managing threats, CRM has allowed pilots to report mishaps and errors that occurred in flight without fear of retribution or discipline in order to establish learning opportunities for others. The theory generated in this study was intended to entail a similar response to student error, which also may contain elements of restorative justice and the Attribution Theory.

Research Questions

The central research question for this qualitative study was: How do educators perceive applying the principles of Cockpit Resource Management into the classroom in the realm of academic, social, and emotional development to improve interpersonal communications,

leadership, and decision-making skills? Several sub-questions were established to help drive the study and provide answers to the primary research question:

Interpersonal Communications:

R1. How can improving student attitudes impact the academic, social, and emotional development of students?

R2. How can effective reporting skills impact a student's academic, social, and emotional development?

Leadership:

R3. How can stronger leadership skills impact a student's academic, social, and emotional development?

R4. How does stronger teamwork impact a student's academic, social, and emotional development?

Decision-making skills:

R5. Why are decision-planning skills important to a student's academic, social, and emotional development?

R6. How does displaying situational awareness impact a student's academic, social, and emotional development?

Rationale, Relevance, and Significance of the Study

The purpose of CRM for pilots was to improve their interpersonal communications, leadership, and decision-making skills in the cockpit through continual training on recognizing threats and using elements of CRM as defenses against those threats (Flin et al., 2002). Likewise, the purpose of this study was to develop a theory that education administrators may use to help students improve their interpersonal communications, leadership, and decision-

making skills within their academic, social, and emotional development. With these skills, students may be able to recognize threats that could affect their academic, social, or emotional development and could effectively defend those threats using elements of CRM in the classroom. Such threats in the academic realm could include students viewing editing marks on an assignment, and instead of getting discouraged, they could use elements of CRM to view the marks as a learning experience rather than failure. In a social aspect, students may recognize another student's inappropriate comment as a threat and use elements of CRM to handle the situation effectively rather than retaliate against the student. Threats in an emotional situation could involve students coming to school after learning that a family member is in the hospital, and they could use elements of CRM to talk about the situation in a healthier capacity.

Definition of Terms

Cockpit Resource Management

Cockpit Resource Management. Cockpit Resource Management (CRM) is a training program developed in aviation that is used presently in various industries to train people how to work effectively under pressure by utilizing important defenses to minimize error (Backer & Orasanu, 1992; Cioffi, 2009). Helmreich et al. (1999) explained that the primary focus of CRM was to improve communications in the cockpit, which would then lead to improved interpersonal relations. Ultimately, this would have a positive impact on the organizational culture. Helmreich et al. further showed that the culture would be strongest when the training was extended to other crew members, the maintenance team, and customer service representatives. Cioffi (2009) described the training in reference to a sports analogy: CRM skills improve team performance by providing individual guidance on being a team player. The continual training is focused on "shaping attitudes to elicit better performance and accomplishing the goal of safer

flight through reduced error" (Cioffi, 2009, p. 14). Rather than being domineering or unassertive, pilots are trained to maintain a positive attitude and build relationships with the other crew members, which Heimlich et al. showed improves communication.

While the specific elements of CRM vary between companies and industries, the training pertains to strengthening interpersonal skills in order to perform under any potential stressor (Backer & Orasanu, 1992). The topics covered are intended to strengthen knowledge, skills, and abilities as well as improve attitudes and interpersonal relations (Flin et al., 2002). This study utilized selected elements from a variety of CRM training programs that connected aviation with education and aligned with improving interpersonal communications, leadership, and decision-making skills. The elements included pilot attitudes, event reporting, teamwork, decision planning, and situational awareness (Flin et al., 2002; Hsiung, 2015; McKeel, 2012).

Pilot attitude. Pilot attitude refers to the personal viewpoints that pilots display that have an effect on their interpersonal communication (Cioffi, 2009*).* Similarly, students' attitudes also affect their interpersonal communication in keeping an open-mind or a closed-mind, for example, to the content or situation at hand. If a student disagrees with something a teacher is doing or saying, the student could close off the teacher, which could have a negative impact on their learning.

Event reporting. Event reporting involves a non-punitive, risk-free method of communicating any mishaps or error in judgment that may have occurred during flight (Helmreich et al., 1999). In a school setting, rather than students hiding a mistake in fear of punishment, students could learn to recognize and openly discuss their mistake in an effort to avoid a reoccurrence.

Teamwork. Teamwork involves balancing the workload by monitoring each other, soliciting assistance from others, and providing necessary feedback when needed (Martinez, 2015). Likewise, in education, when groups of students are completing a task together, it takes leadership qualities among each team member (Craciun, 2010) to know when to listen and speak, determine who is going to complete each task according to one another's strengths, and work together to present the finished product.

Decision planning. Decision-planning, also referred to as "what if" planning (Panger, 2015), prepares pilots for the unexpected by planning the outcomes of scenarios that could happen in flight. Students could engage in a type of decision-planning activity, including role-playing scenarios, that prepare students to respond appropriately in high-pressure situations such as important assessments, a stressful social situation on the playground, or an emotional incident that happened during class.

Situational awareness. Situational awareness involves recognizing a threat, reacting immediately to the threat, and regaining situational awareness through communication (Panger, 2015). Students could use situational awareness in a number of incidents to recognize a challenging situation, decide their course of action, and regain situational awareness by talking through the event. These areas of CRM involve a continuous loop operation in order to catch and mitigate errors as they may occur by improving a pilot's interpersonal communications, leadership, and decision-making skills (Helmreich et al., 1999).

Academic, social, and emotional factor. As pilots utilize CRM to improve the safety and efficiency within the cockpit, this study showed how CRM could also be utilized by students to improve their interpersonal communications, leadership, and decision-making skills within academic, social, and emotional development. The academic factor involved student

collaboration, decision-making within concept development, and the general motivation to succeed. The social factor was applied to students interacting with one another, supporting one another, and seeking tolerance and understanding within disagreements. The emotional factor included students' self-discipline, self-reflection, and building a healthy level of self-confidence.

Restorative Justice

Restorative justice. Restorative justice is defined as a complex process that identifies harms, needs, and obligations from a wrongdoing and actively involves offenders, victims, and communities in the healing and putting right to the wrong (Zehr, 2004). Restorative justice seeks to provide a balanced concern for all parties: the victim, the offender, and the entire community (Zehr & Gohar, 2003). In its in-depth and convoluted process, it is referred to in literature by various names such as restorative justice, restorative practices, and restorative approaches. Restorative justice began in the criminal justice system as an effort to restore justice from acts of burglaries and crimes, and later has been used for more severe crimes involving drunk driving, assault, and even murder (Kline, 2016; Zehr & Gohar, 2003). Where the restorative approaches were solely being used in the criminal justice system, they are now being practiced in schools, the workplace, and religious institutions to work through and resolve conflict and harm (Zehr, 2004; Zehr & Gohar, 2003). Restorative practices focus on three primary areas: addressing the harm that has occurred, fulfilling the obligations created by the violation, and seeking to heal and put right to the wrongs (Zehr & Gohar, 2003; Zehr & Mika, 2003).

Elements of restorative justice are embedded throughout the concept of CRM training, especially in the area of interpersonal communications. Implementing practices that include restorative justice provides the emotional, social, and behavioral support needed for students to build strong teacher-student and student-student relationships and feel connected to their school

(Ahmed & Braithwaite, 2011). As used in the criminal justice system, restorative practices aim to improve or replace behaviors and have become the primary way to handle offenders (Zehr, 2004). Overall, restorative justice focuses on repairing the damage to relationships (McCluskey et al., 2008) and learning from mistakes (Davidson, 2014). Communication is emphasized in restorative practices as its methods involve both offenders and victims engaging in discussion to address the harm in relationships that has occurred (Ryan & Ruddy, 2015). Another necessary component of the restorative process is managing shame, which occurs when a student's wrongdoing contradicts the student's sense of self or self-worth (Benade, 2015). Part of the learning process is when students recognize the implications of their actions, acknowledge their shame, and are held accountable for their behaviors (Morrison, 2002).

Key elements of restorative justice emphasize the importance of building strong relationships between student-to-student, student-to-teacher, and student-to-school community (Hurley, Guckenburg, Persson, Fronium, & Petrosino, 2015; Portland Public Schools, 2016; Wachtel & McCold, 2004). Relationships are a critical aspect of a student's school life, and relationships between students, as well as relationships between students and staff, are strongest in schools that practice restorative justice (McCluskey et al., 2008; Morrison, 2006). Lockhart (2008) suggested:

> It's the students, staff, parents, and friends who make each day worthwhile. Imagine the smiles, the hugs, the camaraderie to achieve common goals; rising to the challenges, overcoming obstacles and setting new directions. That's the feel good stuff and it's the feel good stuff that forms the very heart of all relationships. (as cited in Ryan & Ruddy, 2015, p. 257)

Ryan and Ruddy (2015) also explained that children build relationships with teachers, students, and other adults with whom they interact, and the quality of the relationship is dependent on the quality of interaction between the adult and child. As teachers enter into the field of education, having the ability to build positive relationships with students, regardless of students' ability level, is an important quality of effective teaching (Evans & Lester, 2012; Pianta, Downer, & Hamre, 2016). In restorative justice, rather than viewing misconduct as breaking a school rule, it is considered a violation against a person and a relationship (Cameron & Thorsborne, 1999). The goals of restorative justice include building relationships, holding the victims and offenders accountable for their behaviors, and focusing on learning from the situation.

Attribution Theory

Another educational practice embedded in CRM training involves the *Attribution Theory*, which Gaier (2015) defined as a field of study that seeks to understand the causes behind behaviors, including personal behaviors and the behaviors of others. Pilots seek to understand the causes of mishaps and judgment errors made in the cockpit that result in mishaps; likewise, teachers and students attempt to understand reasons behind different behaviors. An example that may be observed on a kindergarten playground involves a boy wanting to play on the tricycle, but all the tricycles are being used by other students. He walks over to a girl riding a tricycle, pushes her off of the toy, and gets on the bike to ride. While the girl sits on the ground crying, the boy looks back at the girl, and is puzzled, thinking, "Why are you crying? I got to ride the bike!" The Attribution Theory questions the elements that led the boy to think he should be allowed to ride the bike even though the girl was already riding the bike. The theory addresses this situation in an attempt to understand the reason for the boy's behavior in an effort to change his future decision-making (Gaier, 2015).

A significant problem with the Attribution Theory is that inaccurate attributes are sometimes assigned to a situation either by an observer, such as a teacher, or by the person performing the action (Gaier, 2015). In the example above, a teacher may assume that the boy thinks he is allowed to push the girl off the bike because of the lack of discipline that the boy's parents give him. In addition to a teacher's inaccuracy, the student may also be inaccurate in his explanation when asked why he pushed the girl off the bike, whether intentionally or unintentionally wrong. It has been known since early in the Attribution Theory that assigning causal attributes could play an important role in the interpersonal relationship between the teacher and student (Weiner, 1972). Bottom line, Gaier (2015) cautioned that when inaccurate attributes are assigned, the student does not receive the proper support needed to improve the situation, and it could have a negative impact on the relationship.

Limitations and Delimitations

Three recognized limitations were involved with this study, including a preconceived theory, the setting of the study, and sample size of the study. This study generated a theory that extended CRM from aviation into the realm of education. Corbin and Strauss (2015) advised researchers who are using the grounded theory method of qualitative research to be cautious when a preconceived theory exists before gathering data; their advice was considered throughout the study's planning and preparation process. Although CRM existed in theory and practice in other contexts, the new theory that evolved from this study came strictly from the perspectives of the educators participating in the study.

The research site from which the participants were invited to participate also appeared as a limitation of the study. The researcher was a previous administrator of the school from where the data was gathered and worked with some of the participants who were recruited, which

provided the researcher previous knowledge of the school's past practices that involved students'

academic, social, and emotional development. Corbin and Strauss (2015) suggested that the

researcher would need to set aside previous knowledge and experience in order to form new and

accurate interpretations from the data being gathered with as little influence of subjectivity as

possible.

The sample size of the study was considered a limitation for the study given that only 20

educators from one school were qualified to participate in the study. Some research reviewed

involved larger studies from several schools and were able to gather a wider demographic of

participants (Battistich & Hom, 1997; Glew, Fan, Katon, Rivara, & Kernic, 2005; McCluskey et

al., 2008; Payne, 2009). The researcher chose to focus on one particular school with participants

who had recently, prior to the research experiment, implemented a new character education

program involving restorative practices since principles of restorative justice were evident within

elements of CRM. The researcher recruited educators who worked with the kindergarten

through second-grade population of students during the 2016-2017 school year. If insufficient

eligible participants were available to generate a theory, additional educators were considered as

participants from additional grade levels in the same school.

Chapter 1 Summary

This doctoral study resulted in the development of a theory, Classroom-Community

Resource Management (CCRM), to be used in the classroom to support students' academic,

social, and emotional development when students are faced with threats and challenges. The

new theory was based on Cockpit Resource Management (CRM), a training model used in

aviation that prepares pilots to use effective defenses to mitigate errors under a potential stressful

situation by strengthening their interpersonal communications, leadership, and decision-making

skills. Through ongoing training, CRM has provided a continuous loop of operations that involve pilot attitude, event reporting, teamwork, decision planning, and situational awareness (Flin et al., 2002; Hsiung, 2015; McKeel, 2012). Education practices including restorative justice and Attribution Theory are embedded within CRM's principles and were integrated into the study. The new theory, CCRM, is based on educators' perspectives of extending the elements of CRM into education to improve students' interpersonal communications, leadership, and decision-making skills in order to provide support in students' academic, social, and emotional growth and development. It is hoped that administrators will use the new theory to help students effectively handle high-stress situations, such as assessments, conflict, and personal struggle as they are faced with challenges.

Chapter 2: Literature Review

This study focused on developing a theory in education based on how participating educators perceive the use of CRM in the classroom and how it would impact the human factors of education: students' academic, social, and emotional development. The academic factor that was addressed in this study involved student collaboration, decision-making within concept development, and the general motivation to succeed. The social factor was applied to interacting with one another in various situations, supporting one another inside and outside of the classroom, and seeking tolerance and understanding in the midst of conflict. The emotional factor involved students practicing self-discipline, utilizing self-reflection, and building a healthy level of self-confidence.

Districts and schools have implemented and put great emphasis on various character education programs that support students' social and emotional growth and development (Stiff-Williams, 2010). Three examples of programs that are used in the school involved in this study are PeaceBuilder (PeacePartners, 2017), Character Counts (2016), and Sanford Harmony (National University, 2017). The PeaceBuilder program involves characteristics including praising people, avoiding put-downs, seeking wise people as friends, acknowledging hurts, righting wrong-doings, and helping others (PeacePartners, 2017). Character Counts is used in the middle school portion of the K-8 school and focuses on six Pillars of Character including trustworthiness, respect, responsibility, fairness, caring, and citizenship. Sanford Harmony is used schoolwide and teaches characteristics such as diversity, inclusion, empathy, critical thinking, communication, problem solving, and building relationships (National University, 2017). While these programs are effective in providing social and emotional development, students are lacking the ability to apply these characteristics to their academic development. For

example, students may practice effective teamwork while working in the cafeteria line, but struggle to work with their team to complete a classroom project. Students may seek to understand why they grabbed the pencil out of their partner's hand, but fail to seek understanding of the red corrections on the graded writing assignment. Students can practice problem-solving skills on the playground to solve conflict, but may struggle to persevere through a particular scientific problem that involves multiple solutions or steps. This study developed a theory based on educators' perspectives of extending the aviation concept of Cockpit Resource Management (CRM) into education in order to support students' academic, social, and emotional development.

The purpose of CRM training is to improve interpersonal communications, leadership, and decision-making skills by focusing on elements such as pilot attitude, event reporting, teamwork, decision planning, and situational awareness (Flin et al., 2002; Hsiung, 2015; McKeel, 2012). In aviation, pilots undergo annual CRM training in an effort to train people how to respond better under pressure (Backer & Orasanu, 1992). CRM training applies non-technical skills such as attitudes and behaviors in the cockpit to the highly technical task of operating an aircraft effectively (Crichton, 2017). The beginning of CRM can be traced back to the 1970s aviation era when National Aeronautics and Space Administration (NASA) researched the causes of air traffic incidents and found that the majority of errors in the cockpit were caused by a lack of interpersonal communications, leadership, and decision-making skills (Flin et al., 2002; Helmreich et al., 1999; McKeel, 2012). Cockpit Resource Management (CRM) initially involved leadership concepts and was focused on psychological testing (Cioffi, 2009; Dumitras, 2013). The second generation of CRM moved from a cockpit resource to crew management, since the training involved more personnel than only pilots. The focus shifted to team building,

decision-making, and situational awareness in an effort to mitigate errors in flight (Cioffi, 2009; Dumitras, 2013; Helmreich et al., 1999). The third generation extended into dispatch, air traffic controllers, flight attendants, and airline maintenance personnel and focused more on the captain's leadership role and less on the reduction of error. The FAA became involved during the fourth generation of CRM by integrating the training into all airline's technical flight training. The fifth generation, still in place today, focuses on error countermeasures: avoiding, trapping, and mitigating the consequence of errors (Cioffi, 2009; Dumitras, 2013; Helmreich et al., 1999).

The following literature review is structured based on what research stated about the elements of CRM and how the training has improved the safety and efficiency of aviation through strengthened interpersonal communications, leadership, and decision-making skills. Within interpersonal communications, the literature was reviewed on pilot attitude and conducting event reporting. In connection with education, literature was also reviewed on relationship building, restorative conferencing, and restorative circles, all forms of interpersonal communication. Literature was also reviewed in the area of leadership, another significant area of improvement with CRM, focusing on teamwork within aviation, as well as how collaboration affects student development. Finally, within decision-making skills, literature was reviewed on pilots' decision planning and situational awareness. Connecting these areas with education, the literature on the Attribution Theory and shame management were also reviewed.

Conceptual Framework

The conceptual framework of this dissertation is structured around aviation's development of CRM to build interpersonal communications, leadership, and decision-making skills, which has created a safer environment for pilots and crew members (Cioffi, 2009;

Helmreich et al., 1999; McKeel, 2012). The elements of CRM chosen for this study focus on attitude, event reporting, teamwork, decision-planning, and situational awareness, which are examples of components of various CRM programs (Flin et al., 2002; Hsiung, 2015; McKeel, 2012). Two practices that are also embedded within CRM that are commonly used in education include restorative justice and Attribution Theory.

Interpersonal communication is one area that pilots strengthen when utilizing CRM to defend against threats that they may encounter to minimize error (Backer & Orasanu, 1992: Cioffi, 2009). The elements of CRM included under interpersonal communications are attitude and event reporting. Pilot attitude refers to the viewpoints that pilots display that have an effect on their interpersonal communication (Cioffi, 2009). Cioffi explained that engaging in continual CRM training helps shape pilots' attitudes to obtain better performance and safer flights. Event reporting involves a non-punitive, risk-free method of communicating mistakes that may occur during flight (Helmreich et al., 1999).

Leadership is another area in pilot performance that CRM was designed to strengthen, which also involved teamwork. Martinez (2015) explains teamwork as balancing tasks and workload among a group that involves monitoring one another, asking for assistance from each other, and providing feedback to the team when appropriate. Leadership qualities are also necessary for effective teamwork in the education environment in all areas of development (Craciun, 2010).

Decision-making skills is also included in CRM training to develop skills such as decision-planning and situational awareness. Decision-planning refers to "what if" planning that pilots use to prepare for unexpected events that may occur during flight (Panger, 2015). Students could also engage in a process of decision-planning, including role-playing scenarios, that

prepare students to respond appropriately in high-stress situations. Pilots also use situational

awareness to recognize, react, and regain awareness in an event (Panger, 2015). In education,

students could use situational awareness to recognize a challenging situation, plan a response,

and regain awareness of the situation through communication.

Zehr (2002) defined restorative justice as a process to involve necessary stakeholders in

collectively identifying and addressing harms, needs, and obligations in a particular situation (as

cited in Ryan & Ruddy, 2015). Establishing and maintaining strong relationships builds a sense

of connectivity, community, and belongingness among students (Battistich & Hom, 1997), just

as a pilot may build connectivity, community, and belongingness among the flight crew in order

to maintain effective communications. Exhibiting strong interpersonal relations among the flight

crew is important so that all crew members feel empowered to speak up when they notice

something out of place or report an event that was against standard operating procedure (Sexton,

Thomas, & Helmreich, 2000).

Restorative justice focuses on interpersonal relations to restore harmed relationships in an

effort to resolve conflict in a non-punitive manner (Hurley et al., 2015; McCluskey et al., 2008).

Zehr and Gohar (2003) described restorative justice as all being connected through a web of

relationships that extend to all members of the school community; a piece of the web is damaged

when a wrongdoing has occurred. In restorative justice, repairing damaged relationships within

the web of the community becomes a priority (Kline, 2016; Morrison, 2012). A growing number

of schools and districts have been transitioning to restorative practices at the time of this study

(International Institute for Restorative Practices, 2014) in an effort to "increase the capacity of

the staff, provide a connection with students, and engage the external community" (Pavelka,

2013, p. 16). Practicing restorative justice empowers individuals and communities to hold each

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other accountable for one another's behavior through building and maintaining healthy relationships (Morrison, 2006).

Concepts of Attribution Theory is embedded throughout CRM training in that a pilot continually seeks to understand the threats that occur in the cockpit and how to eliminate those threats (Sexton et al., 2000). When pilots make an unintentional error during flight, principles of the Attribution Theory are used to seek understanding behind the reason for the error in an effort to ensure safety and prevent the incident from reoccurring (Helmreich et al., 1999; McKeel, 2014). Similarly, as a classroom teacher and administrator, this researcher often questioned why some students would appear uninterested in achieving success while others would strive for perfect scores; why it seemed natural for some students to get along with others while other students struggled with their social interactions; or why some students would raise their hand to answer every question and other students were afraid to take the risk in answering a question out loud. Understanding why students exhibit particular behaviors may help identify specific needs, which may also help determine next steps in supporting their growth and development (Gaier, 2015).

The Attribution Theory originated from the idea that people are generally interested in society to understand and explain certain outcomes or events in their lives (Wolters, Fan, & Daugherty, 2013). Whether the event is of an academic, social, or emotional nature, people want to identify specific reasons behind unexpected outcomes or failures (Wolters et al., 2013). Seeking an understanding behind successes and failures can be helpful in repeating positive or avoiding negative actions and behaviors again in the future. Gaier (2015) described the Attribution Theory as making sense of one's environment and understanding the causes behind certain actions and behaviors.

The alternative to seeking an understanding behind a particular behavior is to assign a punitive punishment. Parson (2005) advised that the will to punish is deeply embedded, and this is evident in many school cultures who practice punitive measures (as cited in McCluskey et al., 2008); however, by addressing the issue rather than simply assigning punishment, there are lower rates of repeat offenses (Cameron & Thorsborne, 1999). While at first it may seem that seeking such an understanding would take precious time away from teaching, instead, taking the time to understand a student's behavior has been shown to reduce demands on teachers over time (Abregu, 2012). If the goal in the disciplinary process is for students to learn from their mistakes, the ultimate outcome would be that students learn how to avoid the offense in the future.

CRM has been shown to improve the safety of aviation as well as create a more positive working environment for pilots and crew members through ongoing training and non-punitive reporting to improve interpersonal communications, leadership, and decision-making skills (Helmreich et al., 1999). Elements of CRM in which pilots are trained on an annual basis include pilot attitude, event reporting, teamwork, decision planning, and situational awareness (Flin et al., 2002; Hsiung, 2015; McKeel, 2012). Restorative practices and aspects of the Attribution Theory are embedded within the elements of CRM. Practicing restorative justice in elementary schools has benefited the school community by building supportive relationships, holding proper accountability, and utilizing alternatives to punitive punishments (Hurley et al., 2015). Schools that transition from punitive punishments to restorative practices have exhibited a more positive school culture where students have a clear understanding of student expectations, rights, and responsibilities to both the school community and the external community (Davidson,

2014). Part of this transition involves seeking an understanding behind the behaviors rather than simply assigning a punishment (Gaier, 2015; Wolters et al., 2013).

The Review of Literature

The literature reviewed on CRM consistently showed that the training was created in response to studies that indicated pilots as the primary reason for aviation accidents (American Psychological Association, 2014; Backer & Orasanu, 1992; Brown & Moren, 2003; Cioffi, 2009; Flin et al., 2002; Helmreich et al., 1999; Martinez, 2015). In aviation, human error can cause devastating results in an unforgiving environment. Cioffi (2009) offered a comparison of such devastation to the medical profession because the reason for a loss of life can also be attributed to human error (American Psychological Association, 2014); however, as Cioffi explained, medical errors rarely make headlines the way an airline crash does, given the extensive loss of life and destruction. Regardless, ways to minimize pilot error are continually being investigated (Cioffi, 2009). Whereas human error in education does not lead often to a loss of life, it can lead to a significant loss in growth and development, which can have long term effects (Varghese, 2017). The following section reviews what the literature showed about selected elements of CRM: interpersonal communications, leadership, and decision-making skills, within the realms of aviation and education.

Interpersonal Communications

The literature reviewed in reference to the role that communication plays in aviation began with Helmreich, Chidester, Foushee, Gregorich, and Wilhelm (1989), who explained that the primary focus of CRM was to improve communication in the cockpit, which theoretically could improve interpersonal relations. Many CRM training programs have been designed to change crew members' attitudes and to raise awareness of the importance of communication and

coordination (Backer & Orasanu, 1992). Panger (2015) created a list of errors caused by human factors and referred to the list as the Federal Aviation Administration (FAA) dirty dozen list. The number one reason for human factor errors is a lack of communication (Panger, 2015). This is consistent with Brown and Moren's (2003) analysis that "the failure to initiate the information transfer process" is the most common error in aviation incidents (p. 270). When pilots fail to transmit, receive, or provide adequate information to complete a certain task, opportunities for error increase.

Communication skills are equally as important in the education environment for developing strong communication skills, which is a significant piece of the Common Core State Standards (CCSS) in the area of listening and speaking (California Department of Education (CDE), 2013). The standards describe the necessity of engaging in a variety of rich, structured conversations within partner talk, small group activities, and as a whole class (CDE, 2013). To engage effectively, students learn to contribute accurate information, remain on topic, evaluate and synthesize responses from classmates, and compare and contrast points being made by others (CDE, 2013). There is literature available in the realm of aviation and education that describe the importance of effective interpersonal communication skills among attitudes, event reporting, building relationships, restorative conferencing, and restorative circles.

Attitude. Pilot's attitudes and personalities have been under much study in order to assist in the development of CRM trainings and intervention. For example, Panger (2015) found that a lack of assertiveness is among the most common causes of errors in the cockpit. Sexton, Thomas, and Helmreich (2000) suggested that pilot attitudes, unlike personalities, are relatively impressionable with intervention and training; however, Dumitras (2013) found that pilots whose attitudes reject CRM are unlikely to follow the CRM principles.

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Sexton et al. (2000) indicated that the airline industry has utilized surveys to collect data on pilot attitudes pertaining to safety and interpersonal interaction, and they presented data that compared pilots' attitudes of error, stress, and teamwork to healthcare employees, another high-pressure industry. Four questionnaires, including the cockpit management attitudes questionnaire, were used among 30,000 pilots from 40 airlines throughout 25 countries over a 15-year period. An example of a question from the survey states, "Even when fatigued, I perform effectively during critical times," to which only 26% of pilots agreed versus 60% of medical respondents (Sexton et al., 2000, p. 747). Rather than denying the fatigue, in CRM, pilots should acknowledge their limitation by communicating with the other crew members and asking for assistance. Sexton's study showed that highly effective cockpit crews used at least one-third of their communications to discuss threats, such as fatigue and stress, compared to less effective teams who spent only 5% of their time in communication. Since medical and aviation industries historically have been expected to perform without error, a target for continuous improvement in dealing effectively with error exists (Sexton et al., 2000).

Event reporting. An effective approach that aviation has taken to resolve errors through a non-punitive, proactive method of reporting in order to "avoid error whenever possible, to trap errors when they do occur, and to mitigate the consequences of error before they escalate into undesirable states" (Sexton et al., 2000, p. 749). Helmreich et al. (1999) described a confidential, non-punitive approach to reporting errors, referred to as the Aviation Safety Action Partnership (ASAP) program (Air Safety Week, 1999), as an opportunity for pilots to identify the nature and source of an error in order to prevent the incident from reoccurring. Dumitras (2013) advised, however, that such a non-punitive approach does not accept willful violation of rules or procedures. Through ASAP, corrective measures resolve safety concerns rather than punish or

discipline the pilots (Targeted News Service, 2016). In the first two years of its implementation,

nearly 6,000 reports were received by the FAA since pilots were assured that the reporting

system was confidential and non-jeopardizing (Dumitras, 2013; Helmreich et al., 1999), and the

program continues to be used by pilots and crewmembers nationwide. The safety concerns and

errors reported are suggested topics for pilots' annual training (Air Safety Week, 1999), creating

ongoing CRM learning experiences.

      Relationship building. A form of interpersonal communication in education falls under

the umbrella of restorative justice, which involves building healthy, supportive relationships in

the classroom. Varghese (2017) conducted a systematic review of research that examined the

roles that teacher-child relationships may play in the early years of elementary school.

Varghese's review showed that teachers have a significant influence on important child

outcomes such as academic, behavioral, and social growth. The quality of the teacher-child

relationship can shape the child's perception of school as well as the core of the child's school

experience (Pianta et al., 2016; Varghese, 2017). Findings from Varghese's review included the

overall connection, closeness and conflictual, between teacher-child relationships and literacy

achievement. The results of the study showed that closeness in teacher-child relationships

related significantly and positively to children's literacy achievement (Pianta et al., 2016;

Varghese, 2017). The conflict in teacher-child relationships, however, was not shown to be

significantly related to children's literacy achievement (Varghese, 2017). Despite the findings

related to children's literacy achievement, Varghese found that conflictual teacher-child

relationships can interfere with a child's ability to adjust to the overall demands of school.

Likewise, Baumeister and Leary (1995) cautioned that relationships involving frequent

conflictual interactions are not only less beneficial but can also be harmful to the student's

development. Healthy student development requires thoughtful, respectful, and purposeful relationships throughout the school community (Blank & Villarreal, 2016).

Research shows that students benefit socially and emotionally when children experience daily interactions with the teacher (Pianta et al., 2016). Pianta et al. (2016) reviewed a recent longitudinal study of more than 1,000 children in prekindergarten and kindergarten classrooms, and found that children in more emotionally supportive and effectively managed classrooms displayed stronger social skills and had fewer behavior issues the following school year compared to students in lower-quality classrooms. Unfortunately, according to a state-funded study in 10 states, Pianta et al. (2016) found that children interacted with an adult only 27% of a typical school day, which could strain student-teacher relationships.

In addition to benefiting the individual student, classroom environments can be more positive if the teacher has a caring and supportive relationship with each student and each student is building positive relationships with one another (Pianta et al., 2016). Evans and Lester (2012) indicated that among the most critical of teacher responsibilities is the ability to build positive relationships with students, regardless of the students' ability levels. Building warm and supportive relationships with healthy connections and a sense of belonging helps to create a community feeling where students feel valued, cared about, and respected (Battistich, Solomon, Kim, Watson, & Schaps, 1995; Battistich & Hom, 1997; Blum & Libbey, 2004; Payne, 2009). A central theme in restorative justice is community because community is not a place; it is a feeling (Ryan & Ruddy, 2015). People want to feel connected to their community and feel a sense of belongingness (Baumeister & Leary, 1995; Bazemore & Schiff, 2010). Taking the time to build strong relationships with each student benefits the classroom environment in the long run (McLaughlin, 1990; Payne, 2009) and forming close relationships in life has a strong correlation

to overall happiness in life (Baumeister & Leary, 1995). Students who have warm and

supportive relationships with their teachers were found to be more motivated in school, work

harder, and were more accepting of their teacher's feedback (Battistich et al., 1995; Varghese,

2017). In restorative justice, the importance of building and maintaining positive relationships is

continually emphasized among the school community, and members are encouraged to follow

school rules in order to avoid harming one of these relationships (Payne & Welch, 2015).

Students who feel a sense of school community often exhibit a more positive attitude, higher

motivation, and display more positive behavioral outcomes (Battistich et al., 1995; Catalano,

Haggerty, Oesterie, Fleming, & Hawkins, 2009). Students feeling connected to school are more

engaged in their learning (Klem & Connell, 2004), experience higher academic expectations, feel

supported by the staff, and feel safe at school (Blum & Libbey, 2004). A decrease in rates of

disruptive behavior, substance and tobacco use, and emotional distress are related to positive

school connectedness (Blum & Libbey, 2004).

A lack of belonging can lead to feelings of alienation (Battistich et al., 1995) and can

affect a student's level of happiness and adjustment to school (Baumeister & Leary, 1995). This

could explain why some students are successful in kindergarten from the first day of school and

other students take a longer time to adjust; they may not have an immediate sense of belonging

in the classroom (Varghese, 2017). Glew, Fan, Katon, Rivara, and Kernic (2005) found that

students who lack a sense of belonging were most strongly associated with being a victim to

bullying. A fall in academic performance and an increase in fighting, truancy, and drop-out rates

were connected to students who do not have a feeling of connectedness in school (Blum &

Libbey, 2004). When given the opportunity, students generally will form strong bonds with the

school community, and as a result, perform more proficiently (Battistich & Hom, 1997).

Humans have an instinctive need to bond. Morrison (2002) argued that humans are social animals who are affected as individuals when social bonds are harmed. These bonds can be so strong that even in a bad or destructive relationship, a person is reluctant to walk away (Baumeister & Leary, 1995). In school, Even and Lester (2012) explained that an incident may necessitate that a student be suspended, which can cause harm to a relationship with an involved party; therefore, it is important that the school community continue to hold the student to high expectations and continue to support suspended students through emotional growth as they return to school. Evans and Lester also emphasized that it is more effective to use disciplinary practices that increase a sense of belonging by allowing students to participate in improving their own behaviors.

Damage to a relationship can cause a multitude of problems and issues in a person's life and can cause a distraction to the learning environment (Baumeister & Leary, 1995). They explained that people can feel anxious, depressed, grief stricken, and lonely when they feel they have lost a relationship or lack important relationships. When a relationship is damaged, social exclusion may follow, which causes more anxiety (Baumeister & Leary, 1995). Affirming a positive relationship is critical to a person's social well-being, especially following a high-anxiety incident, such as a bullying experience (Morrison, 2002).

Damaged relationships that are not repaired can affect the school climate or the classroom environment. Zehr (2002) described relationships in terms of a web, intertwined with interactions and relations between different members of the school community; however, when a relationship has been harmed, the web becomes torn (as cited in Kline, 2016). The web illustrates the community and the infinite relationships that exist. Zehr suggested that damaged relationships within the community may be presented as both the cause and effect of

wrongdoing; if damaged relationships are left harmed, additional damage to other relationships may follow as the web continues to tear (as cited in Kline, 2016).

When relationships are damaged, it is important that students are supported by the school community in repairing the harm, rather than simply assigning a punitive punishment (McCluskey et al., 2008; Ryan & Ruddy, 2015). Allowing students an opportunity to repair harm leads the student to learn from the experience by reflecting on their attitude, belief, and behaviors that led to the situation (Blood & Thorsborne, 2005). Repairing harm and restoring positive relationships helps build a sense of community (Smith, 2015). Drewery (2004) indicated that restoring relationships brings together a community of care and collaboration as both the victim and the offender share in resolving the problem. Additionally, Enrenhalt (2016) explained that by restoring relationships, resilience and healing for all involved are promoted throughout the larger school community.

When used effectively, restorative justice creates a positive, nurturing, and connected school climate as well as decreases attention-seeking behaviors that take away from the academic learning experience (Vanndering, 2013). Other positive aspects of the school culture are also evident including strengthened relationships, problem solving skills, conflict resolution skills, shared commitment to a common goal, and a support system for victims and offenders (Bazemore & Umbreit, 2001; Benade, 2015; Davidson, 2014; Hopkins, 2003; Pavelka, 2013). Wachtel and McCold (2004) showed that restorative practices lead to happier, more productive students who are more likely to make positive changes in their behavior through positive and restorative learning experiences.

Among the benefits of restorative justice, some drawbacks can include teachers feeling a loss of power and control (Ryan & Ruddy, 2015), the emotional risk to both the offender and

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victim (Benade, 2015), and the time that may be taken away from teaching. The benefits of

restorative practices, however, outweigh the drawbacks due to the significance that building

strong relationships have on students' well-being and achievement (Blum & Libbey, 2004).

Building supportive relationships, creating a sense of community and belongingness, and

supporting relationships when they are harmed are three areas of restorative justice that most

benefit the classroom environment.

      Restorative conferencing. Restorative conferencing brings together the victims,

offenders, and community members who were affected by an incident for the purpose of holding

the offenders accountable, discussing how the harm may be repaired (Bazemore & Umbreit,

2001; Drewery, 2004; M2 Communications, 2011; Pavelka, 2013; Payne & Welch, 2015), and

refocusing on academic development (Davidson, 2014). Less effective practices, Drewery

(2004) explained, involved third-party discipline, a form of retributive justice, where the

offender is dealt with by a third party with the purpose of meeting perceived fairness and justice.

It is more effective to focus on the emotional and social disruption of the incident, how the

victim was affected, and work on restoring the damaged relationships (Drewery, 2004). An

important element of restorative conferencing is that the offender meets with the victim to hear

first-hand how the offender's behavior has affected the victim. As a result, conferencing has

been found to increase empathy among students, decrease impulsivity, and improve the general

outcome for both the victim and the offender (Cameron & Thorsborne, 1999). Drewery advised

that engaging in restorative conferencing is offering schools a more constructive method of

supporting troubled young people instead of assigning a punitive punishment.

      The goal of restorative conferencing is for the community to offer positive supports to

both offenders and victims to achieve successful reintegration (Morrison, 2006). Cameron and

Thorsborne (1999) stated that offenders felt accepted, safer, cared about, and connected to the other restorative conference participants. They also reported that students had closer relationships with the other participants following the conference. Through restorative conferencing, victims reported that they felt safer and better prepared to handle similar situations, were more compliant with set terms, and had a lower chance of repeating the offense (Benade, 2015; Cameron & Thorsborne, 1999). These practices sought to empower all stakeholders to take responsibility for the situation, for themselves, and for others (Morrison, 2006). By involving victims in the restorative process, both offenders and victims were given an opportunity for a positive learning experience.

The literature explained that an important aspect of the restorative conference is that the offender and victim should be active participants in the discussion that occurs in the restorative conference (Bazemore & Umbreit, 2001). As the offender faces the person they have harmed, each person in the group makes a plan and verbalizes how they will support the victim and the offender (Enrenhalt, 2016). Stinchcomb, Bazemore, and Riestenberg (2006) found that the restorative approaches focusing on repairing harm were in direct contrast to the punishment emphasis of zero tolerance. Engaging victims and the school community in the restorative process, holding the offenders accountable, and preventing a reoccurrence of the behavior is the primary focus for schools who practice restorative conferencing (Stinchcoomb, Bazemore, & Riestenberg, 2006).

With a goal of working toward restoration, the type of questioning in a restorative conference is significantly different than with retributive practices. Davidson (2014) presented the following questions that provide social restoration in a given incident:

    1. Tell me what happened. What was your part in what happened?

2. Who else was affected by this?

3. What do you need to do to make things right and repair the harm that was done?

4. What can we do to support you?

5. What might you do differently when this happens again? (p. 21)

Having a pre-determined list of questions ensures a consistent approach and allows the

stakeholders to remain calm, unbiased, and refrain from jumping to conclusions (M2

Communications, 2011).

Contrary to restorative approaches, retributive approaches involve questions that address

what rules were broken, who broke them, and the punishments that should be assigned (Smith,

2015). With these types of questions, the focus fails to address who has been harmed or the

repair that is needed (M2 Communications, 2011). Ryan and Ruddy (2015) suggested questions

that will identify specifically who has been hurt, what their needs are, and who is obligated to

provide for those needs in order to offer healing and make things right. A drawback from such

conferencing is that both the victim and the offender must be willing to participate (M2

Communications, 2011). Without mutual willingness to participate, effective outcomes have a

lower chance of success.

Literature also was reviewed in regard to the differences between inclusionary and

exclusionary consequences that are discussed at restorative conferences. Using restorative

practices, consequences tend to be more inclusionary than exclusionary in nature, with the aim of

limiting the chance of reoccurrence (Payne & Welch, 2015). An example of exclusionary

discipline is when students are removed from day-to-day school activities (Evans & Lester,

2012), where an inclusionary model emphasizes communication and problem-solving methods

(Bazemore & Schiff, 2010). Positive supports that have shown to prevent reoccurrence include

building positive relationships with students, clarifying expectations, and modeling appropriate behavior (Williams, 2013). Rubio (2014) reported that punitive punishments and exclusionary placements were overused for offenses involving profanity, fighting, and sexual harassment. Kline (2016) described that exclusionary punishments from school were closely related to academic failure, higher drop-out rates, and involvement in the juvenile justice system. When suspensions were excessively issued, students missed out on their academic development and fell behind in learning opportunities, which contributed to a widening achievement gap (Kline, 2016). Rather than assigning a suspension, where students have the ability to go home and engage in preferred activities, such as video games and outside play, Enrenhalt (2016) suggested that students should stay in school and learn how their behavior impacted the school community through such practice as restorative conferencing.

Whereas punishments often resulted in a reoccurrence of behaviors, restorative practices, such as engaging in restorative conferencing, have been found to have longer-lasting effects. Evans and Lester (2012) reported that zero-tolerance laws that required suspension and expulsion have failed to decrease student behaviors and that more effective approaches to address student behaviors such as restorative practices should be used. Rather than a punitive punishment, restorative justice offers accountable consequences that aim to restore a student's place in the classroom and school community (Davidson, 2014). Whereby a punishment may be agreed upon by the participants, Drewery (2004) suggested that it is unlikely it will be the only outcome because restoring the harmed relationships is the emphasis of the restorative conference.

Restorative circles. Similar to a pilot briefing the crew and receiving feedback from crewmembers as a form of interpersonal communication, teachers can involve students in an interpersonal communicative activity in the classroom referred to as restorative circles. In a

scholarly article on restorative justice seminars, Kitchen (2013) described restorative circles as a

practice that is as ancient as human history as it was used by Native North American

communities who engaged in talking circles. Kitchen described the many names that circles

have taken on, which are named according to the purpose of the circle, such as a sentencing

circle, community-building circle, healing circle, support circle or reintegration circle. Zehr

(2004) referred to the gatherings as peacemaking circles. Specific guidelines that are involved in

the process include passing a symbolic talking piece around the circle as people speak and listen

from the heart without interruption (Kitchen, 2013; Zehr, 2004). Teachers hold circles in their

classrooms as a part of building connectedness and maintaining strong bonds with the students

(Kitchen, 2013; Wachtel & McCold, 2004). For example, when students lack a sense of

ownership and belonging in their home life, circles can help create that connectedness at school.

When wrongdoing occurs, circles can allow the students to play an active role in addressing the

wrong and making things right (Kitchen, 2013; Wachtel & McCold, 2004; Zehr, 2004). The

purpose of restorative justice is to re-build relationships in a student's life at the first sign that the

relationship has been harmed (Morrison, 2002; Wachtel & McCold, 2004), and the process of

restorative circles assists in that function (Kitchen, 2013; Wachtel & McCold, 2004). Several of

the educators participating in this study have incorporated restorative circles as part of their

morning routine and have observed benefits such as a stronger classroom community.

Leadership

Leadership and teamwork are referred to as necessary strengths for success in various

industries, including aviation and education. In aviation, the fifth reason for human error that

Panger (2015) listed was a lack of teamwork and a failure to work together to accomplish a

common goal. Whether a lack of training, shortage of information, or an inability to perform the

duties required is the issue, Panger indicated that being unprepared in one's duties may lead to accidents and could prevent pilots from being able to delegate or assign tasks when necessary. Panger listed a lack of knowledge as the third most common reason for human errors in aviation incidents. Crichton (2017) explained that each individual's competent set of knowledge, skills, and attitude determines a team's effectiveness. Teamwork and collaboration is also a significant area of development within leadership in education. Gasparini (2014) found that students who engaged in collaboration within small group activities, rather than working individually or with the entire class, were more likely to seek assistance from one another, as well as the teacher.

Teamwork. A study was conducted in Norway that evaluated relationships and teamwork among commercial pilots (Haavik, Kongsvik, Bye, Royrvik, & Almklov, 2017). The observations completed during the study demonstrated a great amount of teamwork among the crew as the researchers described a pilot's typical day in the aircraft. The morning brief included the flights assigned for that day, possible issues that the pilots may face, such as airport information, weather, and the needs for fuel. While on ground, the pilots went through a checklist that included the aircraft's systems, equipment, log, and a visual inspection of the plane. Other checklists were also completed, including the before-taxi and before take-off checklists. While in the air, the pilots decided when to activate the automation systems, monitor the planned route, and communicate with the air traffic control center. Before beginning descent, the pilots went through a briefing to discuss possible threats, such as weather, which included another checklist. Once back on the ground, the pilots completed an after-landing checklist, and the plane was maneuvered to the assigned gate. In addition to the technical aspects of flying, the researchers noted human factors of flying that included their level of control, social integration, and self-expression. The pilots demonstrated teamwork throughout

the flights, which the researchers attributed to their level of control and their ability to build connectivity with one another (Haavik et al., 2017).

Team training continues to be a significant focus of CRM in aviation given the large number of highly trained professionals that are necessary to operate an airline (Littlepage, Hein, Moffett, Craig, & Georgiou, 2016). Whereas CRM training initially targeted the cockpit, the focus soon shifted to encompass a larger group of the team, including the flight deck, cabin, air traffic center, maintenance facility, and the flight operations center (Littlepage et al., 2016). Littlepage et al. (2016) conducted a study of a multifaceted, cross-functional team training program and found several effective practices within CRM that contributed to higher employee motivation, better developed knowledge skills, and more effective team performance. Although the study was conducted with simulators, the findings have researchers interested in applying such a training model into a larger commercial airline arena.

Collaboration. Whereas research shows the effectiveness of pilots and other airline personnel collaborating and working in teams, researchers have also shown that children learn best when they are engaged in continual discussion and interaction with one another (Chick, 2006; Nath, Ross, & Smith, 1996). In a meta-analysis of children working collaboratively, Chick (2006) found that collaboration is connected to higher academic achievement and motivation among elementary students. Roser and Keehn (2002) also conducted a study evaluating student collaboration and inquiry in student discussion groups focusing on how students worked together, questioned one another, viewed each other's perspectives, and made decisions (as cited in Chick, 2006). The researchers discovered that the collaborative efforts among the students contributed to an increase in knowledge, motivation, and interest, as well as a decrease in misconceptions (Chick, 2006; Nath et al., 1996). Motivation and interest were

specifically connected to the opportunity to converse, problem solve, and interact with one another (Chick, 2006).

Developing leadership qualities in students can lead to a more positive school culture (Sparks, 2013). Explaining how student leadership can affect school climate, Sparks noted that building resilience and connection in students is more effective than focusing on test scores. To build leadership skills in elementary students, a Midwestern elementary school conducted a student-led study on school health improvement that included interviewing, observing, advising, and surveying their peers (Gutuskey, Centeio, Shen, McCaughtry, & Murphy, 2014). The students reflected on the experience and reported that by participating in the study, their leadership skills improved from taking on responsibility, playing a role model, building their speaking skills, and growing their self-confidence. The students also felt that by participating in the study, they improved their own health and fitness behaviors. The student leaders also felt more motivated and encouraged to continue to lead others toward a healthier lifestyle. This leadership-building activity benefited the students' academic, social, and emotional development by increasing their own motivation, supporting their peers in healthy lifestyle changes, and increasing their own confidence level (Gutuskey et al., 2014).

Bowman (2014) described four leadership dispositions that elementary school teachers can embed into daily activities: "the spirit to include, the passion to serve, the courage to question, and the discipline to listen" (p. 119). Bowman also suggested that relationships give meaning and significance to a person's life, which is also emphasized in restorative practices. The four dispositions that Bowman described depend on strong, healthy relationships. The spirit to include others emphasizes the importance for children to encourage one another to participate in different activities rather than to exclude peers. The passion to serve encourages student

leaders to look continually where they can be of service to people. The discipline to listen

challenges student leaders to develop a genuine interest in other people and what they are doing

by first listening to others. Finally, Bowman stated the courage to question refers to continually

questioning oneself in an effort to improve oneself through learning situations.

Decision-Making Skills

In a study comparing two intensive care units within a university hospital that utilizes

CRM training, Halbesleben, Cox, and Hall (2011) listed polite assertiveness, participation, active

listening, and providing feedback as crucial forms of communication necessary for team

improvement. Their study involved observations and interviews of health care professionals, and

concluded that CRM training was more likely to positively influence the communication, culture,

and decision-making of the intensive care unit, thus improving the safety of the health care being

provided. Diehl (1991) suggested that a high percentage of accident-related errors were due to

human factors, such as errors in decision-making (as cited in Halbesleben, Cox, & Hall, 2011).

Decision-planning. Decision-planning, referred to as "what-if" planning in aviation, is

the act of preparing for the unexpected by developing a plan. Judgment errors caused by a lack

of communication, stress, fatigue, complacency, distraction, or a lack of teamwork were among

the most common errors by pilots in the cockpit (Flin et al., 2002). Regardless of the amount of

experience a person has in the simulator or in the cockpit, planning for the unexpected can

positively affect the outcome of a given situation (George, 2013). Similar to practicing what to

do in the event of an engine failure or a fire, planning and rehearsing such incidents will decrease

the amount of pressure when an urgent situation arises (George, 2013). Panger (2015) explained

that some pilots develop complacency and overconfidence from the repetition of performing

certain tasks, which can lead to pilot error. With overconfidence, a pilot may refrain from

engaging in decision planning because they feel they already know what to do in different scenarios, which is what Panger described as the second most common error in his FAA dirty dozen list of pilot errors.

Whereas pilots engage in decision-planning through "what if" planning, students can use a form of decision-planning through role-play. Role-playing is an engaging activity that has been used in education since the late 1940s, mostly in the areas of behavior therapy and teaching social skills (Craciun, 2010; Samalot-Rivera, 2014). Carledge and Milburn (1995) gave a clear description of role-playing, which could apply directly to CRM: "The use of role playing emphasizes the discussion of past events to stimulate students to think about similar situations that might occur in the future" (as cited in Samalot-Rivera, 2014, p. 41). The teaching strategy helps introduce students to real-world situations and gives students multiple ways to handle high-stress situations (Craciun, 2010; Samalot-Rivera, 2014).

Craciun (2010) and Samalot-Rivera (2014) reviewed several advantages to using role-playing activities in the classroom. First, role-playing provides students with ways to handle their attitude and feelings in a safe and positive method (Samalot-Rivera, 2014), which is directly connected to interpersonal relations. A second important benefit to role-playing is that it allows students to practice effective methods of interacting with one another and expressing unpopular opinions and personal matters in a safe environment (Craciun, 2010; Samalot-Rivera, 2014), which is also connected to interpersonal communications. Thirdly, role-playing is found to inspire and motivate students in their learning due to the high-engaging method of the activity (Craciun, 2010; Samalot-Rivera, 2014). These benefits, although strongly linked to social and emotional skills, could also be connected to academic practices in that role-modeling also allows students to engage in classroom activities (Craciun, 2010; Samalot-Rivera, 2014). Role

modeling in this grounded theory study is closely related to Davis' (2016) description of deliberate practice where students isolate a particular area that was challenging and practice it until they reach mastery, whether in the academic, social, or emotional realm of development.

Situational awareness. A primary element of CRM training that pilots engage in is with situational awareness, which involves the ability to recognize, react, and regain awareness of the surroundings (Panger, 2015). Ward (2012) defined situational awareness as the ability to recognize the situation, understand the urgent elements of the event, and attempt to regain awareness through communication and immediate action as the incident develops. Pilots should continually look at the threats around them, such as fatigue and a lack of resources, which were listed as the sixth and seventh most common causes of human factor errors in Panger's (2015) dirty dozen list. Panger explained that physical or mental exhaustion was found to affect work performance negatively in times where there were not enough crew, equipment, documentation, or other necessary resources. Flin et al. (2002) attributed situational awareness, vigilance, and communication to the reason for 41% of reviewed incidents.

In an emergency incident that Lt. Conor O'Neil (2015) described, he contributed situational awareness to the safe recovery of the event. While in flight, a fire developed in his left engine, and he was 30 miles from the airfield. Following the incident, O'Neil reflected that clear, concise communication, along with taking immediate action based on his awareness of the situation, resulted in successful application of CRM. The pilots recognized the alarms, diagnosed the situation, and built additional situational awareness as they continued to operate the plane throughout the emergency (O'Neil, 2015). O'Neil and his crew used effective situational awareness and recovered safely from the incident (O'Neil, 2015).

Crew members are trained to recognize, react, and regain situational awareness in the cockpit in order to avoid, catch, and mitigate errors in flight. There is also literature that describes the presence and use for errors in the classroom, which is directly connected to the concept of situational awareness. Davis (2016) argued that the "detection and elimination of errors" in the learning process benefits students' viewpoint of their own capabilities as a learner (p. 11). Davis emphasized the importance for students to be able to acknowledge, reflect on, and use the outcomes of error as a tool for improvement. Using errors to learn from mistakes leads students in developing a growth mindset in their learning where students believe they can improve their performance through continual hard work and seeking strategies that will strengthen their learning (Davis, 2014; Dweck, 2015).

Attribution Theory. Gaier (2015) defined Attribution Theory as a way to identify why people do what they do and the reason behind their behavior. Whereas pilots seek to understand the reasons behind decisions made in the cockpit in an effort to learn from experiences, educators can utilize principles of the Attribution Theory so students can learn from their mistakes whether the mistake was made in the academic, social, or emotional setting. Weiner (1972) examined the influence of causal beliefs on teachers and students and the effects that attributions may have on achievement. The study used Heider's (1958) explanation of the differences between "can" and "try" (as cited in Weiner, 1972), with "can" referring to intelligence and ability and "try" suggesting effort and intent. Weiner described a study by Lanzetta and Hannah (1969) that gave trainers the power to reward and punish another's performance on a particular task (as cited in Weiner, 1972). The reward involved a monetary payment, and the punishment involved one of two intensities of shock. The trainer was also given false information as to the students' ability level and were informed that the tasks were divided between hard and easy. As expected, greater

punishment was administered for failure at the easier tasks, and higher achieving students were punished more than the less competent students. Weiner and Kukla (1970) extended the study and showed that regardless of potential, students who were perceived to show greater effort were rewarded more and punished less (as cited in Weiner, 1972). The seminal studies of the Attribution Theory showed that rewards and punishments influence performance, but more importantly, introduced the thought that assigning causal attributes might play a significant role in interpersonal relations and conflict between the teacher and students (Weiner, 1972).

McClure et al. (2010) explained that in many cases, people display a pattern of qualities that somewhat show a self-serving bias: they attributed success to internal causes while attributing failure to more external causes. The study involved asking students to reflect on their best and worst scores on an assessment and rate the marks among seven influences, including ability, effort, task difficulty, good/bad luck, family, teacher, and friends. The results showed that students attributed their worst marks to the teacher, which is consistent with the self-serving bias to save face, and was considered a positive predictor since it enhanced the student's self-esteem. Some students blamed their worst marks on family or friends, but the researchers determined this to be a dysfunctional strategy (McClure et al., 2010). The best marks were attributed to effort and ability in both girls and boys (McClure et al., 2010). Accurately assigning attributes to particular influences helps determine the student's mindset as teachers and students plan next steps in the student's growth and development (Gaier, 2015).

Gaier (2015) suggested that the basic premise behind the Attribution Theory is perceived cause and understanding why something was said or done in a particular way. Martin and Dowson (2009) included the Attribution Theory in a review that involved multiple ways in which interpersonal relationships affected motivation and achievement in students. The

researchers found that the causes that students attribute to events has a direct impact with the way they handle future events. An example given in the review referred to reasons students give for failing an exam: bad luck, difficult questions, low ability, or low effort. Martin and Dowson explained that the attributes that a parent or teacher gives a student can also impact the student's response to the event. For example, if a teacher attributes effort to a student's high achievement on an exam, the student's response may be positive, such as a feeling of pride; however, if a teacher attributes a lack of effort or ability to a student's low score, the student may have a negative response, such as a feeling of shame. Educators are cautioned about assigning assumed attributes to a situation at the risk of causing frustration and alienation in the student, which may have an impact on future performance (Gaier, 2015; Martin & Dowson, 2009).

Gaier (2015) presented an overview of the Attribution Theory in an effort to show teachers how to make sense of student behavior and learning, and also how to help students understand the reasons behind their own actions. Gaier explained that attributes are assigned by an observer, such as the teacher, as well as by the student: in any given situation, the identified attribute by either the teacher or the student may initially be incorrect. An example that Gaier gave was how a student attributed low scores on a test with that he was not a morning person, when in reality the low score was a result of not studying for the test. After acknowledging the student's perceived attribute, Gaier suggested that the teacher use genuine care and a developed interest in the student to determine the true attribute in an effort to change future behaviors.

Rather than seeking an understanding behind a student's behavior, punitive punishments are often given in an effort to resolve the situation. Punitive punishments include sending a student out of the classroom, restricting the student from recess, or suspending the student from school (Rubio, 2014). The reviewed literature shows that these types of exclusionary

punishments may form a rather hostile relationship between the teacher and student, which can leave the student feeling isolated and secluded (Evans & Lester, 2012; Suvall, 2009). Students are more likely to understand the consequences of their actions when they learn how their actions affected others, which is indicative of restorative methods (M2 Communications, 2011; McCluskey et al., 2008).

Restorative practices. Through restorative practices, teachers are able to use reflection and understanding to educate children about their behaviors rather than attempting to control their actions and behaviors (Cameron & Thorsborne, 1999). Teachers use restorative inquiry, a form of non-judgmental discussion that allows adults to listen to students' explanations, understand the situations, and then help guide the students to determine who was impacted by their actions so the repair may begin (Davidson, 2014). Morrison (2012) described this form of discipline as social engagement rather than social control. Cameron and Thorsborne (1999) also advised that while punishments allow students to think only of themselves in an incident, restorative practices teaches students to think about the other person who has been affected by their actions in an inclusive manner. It is more effective to reach for understanding and personal accountability rather than simply a punishment (McCluskey et al., 2008).

Shame management. Shame is defined as an ethical matter that is apparent when a person's wrong doing contradicts the person's sense of self (Benade, 2015) and is a part of decision-making in aviation and education. Brown and Moren (2003) conducted a questionnaire study of how emotions affect a person's ability to make decisions. They used Zuckerman's Sensation-Seeking Scale V, the researcher's Compass of Shame Scale, and a section of Rosenberg's Self-Esteem Scale involving 148 aviation students. They also used Nathanson's (1992) four responses to shame emotions, including withdrawal, attack-self, attack-other, and

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avoidance (as cited in Brown & Moren, 2003). The withdrawal response generally refers to withdrawing from eye contact. Without being trained to respond otherwise, Brown and Moren suggested that people tend to naturally droop their head, avert their eyes, blush, be confused, and have an overwhelming urge to disengage and escape. Nathanson's term, attack-self, appears as self-criticism or low self-esteem, which may present itself in the form of an apology and feeling bad for the other person. When a person blames another person for disappointing or embarrassing the person and feels a rush of power, the person is exhibiting the attack-other response. Likewise, the avoidance response appears as shifting focus from the "bad" feelings to something that is going to make the person feel "good" (Brown & Moren, 2003).

Shame is essential for regulating a person's social behavior, and a person is able to be trained to more appropriately handle shame (Brown & Moren, 2003). Brown and Moren explained that fear of looking bad in front of others can make people scared to speak up, which is a significant barrier to communication in the cockpit. Thus, airlines have developed specific language that identifies a dangerous situation that is in need of intervention. Brown and Moren stated if the words, "I'm uncomfortable" are spoken, an immediate response is triggered in the crew to take action; having a plan to use a simple phrase has shown to eliminate the worries that crewmembers may have in being right or wrong.

Shame is also used in the realm of education to manage students' social relations with their peers (Morrison, 2002; Zehr, 2004). McCluskey et al. (2008) defined shame as the feeling people have when they fail to meet the expectations that are set upon them as moral human beings. Benade (2015) explained shame as an ethical matter that occurs when a student's wrongdoing is contradictory with the student's sense of self or self-worth. Shame is essential because it is what maintains an ethical person's emotions when they feel threatened by their own

actions (McCluskey et al., 2008). Shame is closely connected within the union of a particular

group and the isolation that occurs as a result of wrongdoing (Morrison, 2002). Baumeister and

Leary (1995) described this as an anxious or depressing feeling due to the thought of losing or

damaging an important relationship. Through restorative practices, the victim and offender

overcome their shame as they engage with one another to repair harm in the relationship

(Benade, 2015; Zehr, 2004).

A school that establishes a restorative and accountable approach maintains a code of

conduct that ensures a safe and respectful school culture, which holds adults and students

accountable to support students' academic, social, and emotional development (Davidson, 2014).

When relationships and bonds are threatened or damaged, an environment of shame is created

and must be acknowledged to regain the feeling of connectedness (Morrison, 2002). Morrison

(2002) explained that unacknowledged shame has the potential to be expressed as anger and

cautioned that if the wrongdoer is subjected to feelings of rejection from the community, this

negative form of shaming can also bring about negative results.

Restorative justice engages a sense of positive shame management that is applied to a

situation that involves wrongdoing. Morrison (2002) advised against negatively shaming a

student for their wrongdoing, but rather support the offender with care and respect without

condoning the student's actions. Negative forms of shame are referred to as stigmatized

shaming, which is the process of assigning negative labels to the person and the behavior and

belittling the person and the behavior (Morrison, 2002). Stigmatized shaming lacks respect and

dignity, which often will result in the wrongdoer being seen as a "bad" person who does "bad"

things (Morrison, 2006). Reintegrative shaming, on the other hand, is the process of respectfully

supporting a person who has caused harm while not condoning the behavior (Morrison, 2002; Morrison, 2006; Sellers, 2015).

Review of Methodological Issues

Qualitative research is a method of scientific study that allows researchers to gather data on a particular phenomenon or event and become as immersed in the research process as the participants and the data that is being gathered (Corbin & Strauss, 2015; Leech & Onwuegbuzi, 2007). Literature exists that offers thorough explanations of the characteristics of qualitative research such as involving multiple methods of research (Creswell, 2013), rich narrative descriptions (Corbin & Strauss, 2015; Leech & Onwuegbuzi, 2007; McMillan, 2012), being situational (Stake, 2010), and explore the formation and transformation of meanings within the data (Corbin & Strauss, 2015). Similar characteristics of qualitative research include conducting the research in a natural setting, the researcher acting as the key instrument for gathering data, and the findings focusing on the participant's perspective.

Literature shows that qualitative research is primarily conducted in the study's natural setting where the participant is experiencing the issue or the problem (Creswell, 2013; Leech & Onwuegbuzi, 2007; McMillan, 2012; Stake, 2010). McMillan (2012) explained that being out in the field allows certain situations that may be occurring in the environment to be more evident in the findings. Qualitative research allows the researchers the opportunity to have personal interaction with the participants within their natural setting (Creswell, 2013; Leech & Onwuegbuzi, 2007).

In addition to a natural setting, the literature on qualitative research also suggests that the researcher is the key instrument when gathering data for the study by collecting the data directly from the primary source (Creswell, 2013; McMillan, 2012; Stake, 2010). Rather than assigning

an assistant to collect the data, it is important for the researcher to get close to the situation in order to gather the most authentic data (Corbin & Strauss, 2015). To collect the data, researchers often use their own tools in conducting observations, interviews, and reviewing documents (Creswell, 2013; McMillan, 2012). By developing their own tools for the study, the researcher gathers data that is most fitting to the phenomenon.

Where research is similar in the areas of natural setting and seeing the researcher as the key instrument, the literature also agrees that qualitative research focuses on the perspectives of the participants in the study. Researchers suggested that the participants might have diverse views of the topic, but the research focuses on the participants' perspective (Creswell, 2013; McMillan, 2012; Stake, 2010). The participants determine reality and meanings based on their views of the situation (McMillan, 2012). Corbin and Strauss (2015) explained that qualitative researchers seek to connect with their participants in order to view the phenomenon from their perspective. The findings of the study are not reflective of the researcher's views (Creswell, 2013; McMillian, 2012; Stake, 2010).

Grounded Theory Design

A theory was developed through this qualitative dissertation study that was constructed from data gathered during the research process (Charmaz, 2014; Corbin & Strauss, 2015). The theory that was generated through the process was defined as an understanding that the researcher developed during the process of the study (Corbin & Strauss, 2015; Creswell, 2013). A unique quality to the grounded theory method of research is that data collection and analysis are interrelated and continue through an ongoing cycle while the researcher is gathering data and making comparisons (Charmaz, 2014; Corbin & Strauss, 2015). After the initial data is collected, the researcher should continue to return to the data source for more data as the theory

continues to emerge from the data (Corbin & Strauss, 2015). Researchers experienced in

grounded theory explained that interviews and observations are among the most frequently

collected types of data (Charmaz, 2014; Corbin & Strauss, 2015; Creswell, 2013).

Specific Methods

McMillan (2012) described three methods of gathering data that are primarily involved in

the qualitative methodology: performing observations, reviewing documents, and conducting

interviews. Observations represent a major method of collecting data in the natural setting as it

involves observing participants in the activities or situation directly pertaining to the study

(Suzuki, Ahluwalia, Arora, & Mattis, 2007). The researcher may take different roles of the

qualitative observer including a passive participant, moderate participant, active participant, or

complete participant (McMillan, 2012). The spectrum ranges from being a complete observer

with no involvement in the process to becoming a complete participant of the activity. The latter

end of the spectrum removes the researcher's identity as a researcher and is replaced as a

member of the group.

Reviewing documents is a second type of qualitative research, and the purpose is often to

verify information that is collected in the observations and interviews (McMillan, 2012).

Another purpose of reviewing documents, described by Suzuki, Ahluwalia, Arora, and Mattis

(2007), is to show true representation of the group or culture within the study. McMillan (2012)

warned researchers against collecting data in a format that was created as a predetermined

structure in reference to the research; rather, the documents should be a natural outcome of the

situation being researched.

The qualitative interview is among the most commonly used method of collecting data

and helps to gain understanding of the meaning behind the participants' experiences in the

phenomenon (Suzuki et al., 2007). Because interviews involve in-depth information, it is important to conduct them in person (McMillan, 2012; Percy, Kostere, & Kostere, 2015; Suzuki et al., 2007). A researcher is able to gather nonverbal communication data with interviewing face-to-face, which may be used to further guide the interview (Suzuki et al., 2007). This doctoral study was intended to conduct multiple face-to-face interviews with educators within a selected research site, a K-8 public school, to gather the educators' perspectives on the use of CRM in the classroom.

Interviews range from being structured, semi-structured, or unstructured in format, which pertain to whether the questions are predetermined, open-ended, or flow in a certain sequence (Corbin & Strauss, 2015; McMillan, 2012; Percy et al., 2015; Suzuki et al., 2007). Corbin and Strauss (2015) advised that an unstructured interview process is the preferred method for a grounded theory study, because participants are able to discuss the problems and situations that are important to them. Unstructured interviews provided the richest data to generate theory, in Corbin and Strauss' experience; because there are no pre-determined topics or questions, the participants are able to choose what to talk about, the pace, and the depth of discussion. Using broader questions allows the interviewee to talk about a variety of topics that the researcher did not think of asking (Charmaz, 2014; Rubin & Rubin, 2012). Consistent throughout these three types of interviews, a researcher may return to the participants following the initial interview to elaborate further on any topic (Charmaz, 2014; Corbin & Strauss, 2015; Creswell, 2013).

Corbin and Strauss (2015) explained that a semi-structured interview is also an effective way to gather data for a grounded theory study. Different from a structured interview, some topics are chosen prior to conducting the interviews; however, when and how the topics are presented are not pre-determined (Corbin & Strauss, 2015). Similar to the unstructured

interview, the researcher may still return to the participants for follow-up interviews to clarify or elaborate on a particular topic (Charmaz, 2014; Corbin & Strauss, 2015). A difficult aspect of the semi-structured interview process compared to the structured process is that the participants may not share certain information about the topic because the researcher did not ask the correct question or ask the question in the correct way (Corbin & Strauss, 2015). Corbin and Strauss advised researchers using a semi-structured interview process to provide time at the end of the interview to discuss any topics that participants may feel are important that they did not yet discuss. Rubin and Rubin (2012) cautioned against asking questions that direct answers into certain categories. For example, in a follow-up question regarding communication, rather than asking teachers if their students have strong communication skills, it may be more effective to ask teachers to describe examples of different teacher-student interactions and student-student interactions.

In the structured interview format, each interviewee receives the same set of questions structured by a pre-determined interview guide (Corbin & Strauss, 2015). Although the structured interview process provides consistency, Corbin and Strauss (2015) suggested that it is the least effective means of gathering data for a grounded theory research study. With a structured interview guide, the researcher is unable to provide the flexibility necessary to generate theory (Corbin & Strauss, 2015). The structured interview format also requires that the questions are derived solely by the researcher, which could keep the participants from sharing what would have been pertinent information to the development of the theory (Corbin & Strauss, 2015).

The researcher in this study engaged in the semi-structured interview process; however, given that the study involved the extension of current practices being utilized in the CRM

process from aviation to education, the researcher prepared broad, open-ended questions that were directly related to the research question and sub-questions in regard to interpersonal communications, leadership, and decision-making skills. The interviews were conducted in a semi-structured format in that the researcher had pre-determined interview questions (Charmaz, 2014), the researcher practiced openness and flexibility (Charmaz, 2014; Corbin & Strauss, 2015), the educators determined the flow and pace of the interviews as they shared their experiences and perspectives of the study (Corbin & Strauss, 2015), and the researcher returned to the participants for follow-up questions to gather additional data throughout the data gathering and analysis process (Charmaz, 2014; Corbin & Strauss, 2015; Creswell, 2013).

Critique of Previous Research

The literature reviewed in this chapter involved qualitative, quantitative, and mixed method approaches to explore the nature of Cockpit Resource Management and some connections the training has to restorative justice and the Attribution Theory. While studies were conducted over a two- (McCluskey et al., 2008) and three-year period (Morrison, 2006), other studies tackled a large number of participants: 1,434 fifth and six graders from 24 schools in six districts (Battistich & Hom, 1997), 18 schools from primary through high school (McCluskey et al., 2008), 3,530 third through fifth graders from one school district (Glew et al., 2005), and 13,450 students in 253 high schools (Payne, 2009). These large-scale studies required a team of researchers and analysts so that the study could be completed in a reasonable amount of time. The majority of the studies reviewed, however, pertained to small-scale studies that included smaller numbers such as 27 high school students and six staff members (Smith, 2015) and reviewing data from 18 schools (Kline, 2016). These studies were more manageable for a single-researcher to analyze.

The methods used in the majority of the studies reviewed were largely observations, interviews, document analysis, surveys, and questionnaires. Among these tools, researchers used self-perception and self-report questionnaires that were collected from students and teachers (Morrison, 2006); interviews of students, teachers, and families in the school community (Bazemore & Schiff, 2010; Benade, 2015; Smith, 2015); questionnaires and surveys collected only from students (Battistich & Hom, 1997) or students and teachers (Battistich et al., 1995; Payne, 2009); and a collection of observations, interviews, document analysis, surveys, and questionnaires (Glew et al., 2005; Learned, 2016; McCluskey et al., 2008; Rubio, 2014).

While there are strengths and weaknesses involved in these studies, each provided data that the researcher used to understand the essence of the experiences that apply to the research questions. Suzuki et al. (2007) suggested that data collection often occurs through relationships, and the researcher must consider the impact that the relationship has on the information gathered. Although tools such as observations and interviews may involve biases from the researcher (Suzuki et al., 2007), the goal of collecting data is to provide information that produces common themes and patterns across all methods used in the research (McMillian, 2012).

Several reviewed studies involving restorative justice utilized individual interviews and focus groups to gather data (Bazemore & Schiff, 2010; Benade, 2015; Enrenhalt, 2016; McCluskey et al., 2008; Pavelka, 2013; Rubio, 2014; Smith, 2015). Boswell and Cannon (2009) explained that an important element of research involves clearly identifying the target population being used as the study sample; however, in some research reviewed, researchers reported their findings without identifying the specific grade levels of the teachers interviewed (McCluskey et al., 2008; Smith, 2015). While teachers are placed in different grade levels and subjects and experience students' development at varying ages, their interview answers may be influenced by

the grade or subject they were currently teaching while the study was being conducted. It was important to this study to consider the teachers' grade levels while gathering, analyzing, and presenting data. Although the educators included in this study may have described experiences from other grade levels during interviews, only data from primary grade experiences, grades K-2, were included in the study. This clarification of participants' backgrounds painted an even clearer picture of what conclusions the data were drawing from their interviews.

Research was also critiqued on student age, because research on restorative justice was found to be conducted often on middle school and high school students (Morrison, 2006; Payne, 2009; Payne & Welch, 2015; Rubio, 2014; Smith, 2015). Some research has included what is referred to as upper elementary grades, fourth through sixth grade (Battistich et al., 1995; Battistich & Hom, 1997; Glew et al., 2005), and some studies have even involved higher education; however, a gap within the research seems to be the primary grades in elementary school, kindergarten through second grade. The theory in this dissertation study was evolved from research conducted on educators interacting with kindergarten through second grade students.

Another element of research that is important to critique is the timing in which the data is collected (Boswell & Cannon, 2009). Morrison (2006) used student questionnaires that were issued in a longitudinal study, multiple years after an initial survey was completed. The validity of this type of research is questionable given variables such as the maturity level of the students. As students mature and experience different situations, their outlook on practices such as restorative justice could change rather than basing their perspective on their experiences with restorative justice.

Chapter 2 Summary

Through this qualitative doctoral study, a theory was developed by participating

educators' perspectives on extending CRM from aviation into education in the realm of

academic, social, and emotional development. The literature review included an in-depth

examination of CRM factors as they were connected to the improvement of interpersonal

communications, leadership, and decision-making in education, which were the three

overarching areas of CRM training that have improved the safety and efficiency of aviation (Flin

et al., 2002; Helmreich et al., 1999; McKeel, 2012). Within interpersonal communications,

literature was reviewed on attitude and event reporting in aviation, as well as the use of

relationship building, restorative conferencing, and restorative circles in education. Literature on

teamwork in aviation and collaboration in education were also reviewed in regard to leadership.

A review of literature on decision-making included decision-planning skills, situational

awareness, the Attribution Theory, and shame management.

Classroom-Community Resource Management (CCRM), the theory that was generated

through the educators' perspectives of extending CRM from aviation to education, has

implications for administrators in education by providing a process that will help students handle

various situations that arise in their academic, social, and emotional development. Where pilot

attitude can affect a pilot's performance in the cockpit, students' attitudes could also have

positive and negative impacts on students' development. When students' attitudes get in the way

of their learning, there is an increased chance that error will occur within the students'

performance and decision-making (Davis, 2016). The importance of accountability in the

cockpit is emphasized by CRM in reporting mistakes that have been made (Helmreich et al.,

1999). For students, rather than hiding behind mistakes, it is beneficial to discuss their errors,

whether the errors involve academic, social, or emotional situations (Davis, 2016). This type of

event reporting can engage students in the reflective component of restorative justice.

Restorative justice focuses the view of misconduct on the harm of people and

relationships rather than the violation of a school rule (Cameron & Thorsborne, 1999); Morrison,

2002). Instead of focusing on blame, restorative practices shift the focus to healing the

relationships of the offender, victim, and the community (McCluskey et al., 2008; Ryan &

Ruddy, 2015). It is shown that through this process students learn from the incident, are

respected through the discipline process, and come out stronger as a result. Bowman (2014) also

suggested that relationships give meaning and significance to a person's life. While improved

attitudes and effective event reporting improve the cockpit environment, relationship building,

restorative conferencing, and restorative circles are elements of restorative justice that create a

sense of community and belonging within a classroom and school, and together improve

interpersonal communications.

The area of CRM leadership that was reviewed in the literature involved teamwork

within the cockpit, as well as in education. Brown and Moren (2003) advised that effective

teamwork in the cockpit requires efficient communication and teamwork among the

crewmembers both inside and outside of the airplane. Likewise, student collaboration is

beneficial to student learning when given the opportunity to work collaboratively with their peers

(Nath et al., 1996). Principals could use a concept such as CRM to strengthen students' ability to

work with their peers through stronger interpersonal communications, leadership, and decision-

making skills.

Decision-making is directly connected to communication; when communication breaks

down, decision-making skills decline (Brown & Moren, 2003). CRM training involves an aspect

of decision-making, specifically when in a high-stress environment (Brown & Moren, 2003). Students can be found in high-stress environments, as well, and could benefit from ongoing training in decision-making skills. Given the pressure that is placed on students during district and state assessments, principals could use CRM's principles to help students handle these high-pressure situations more effectively. The literature reviewed on decision-planning and role-playing demonstrated a strategy that students could use to prepare for these high-pressure incidents (Craciun, 2010; Samalot-Rivera, 2014). Literature on situational awareness was also reviewed, which emphasized the ability to recognize, react, and regain awareness of a situation (Panger, 2015), whether it is occurring in the cockpit or in the classroom. Attribution Theory was also reviewed and connections were drawn in how pilots seek to understand decisions that are made in the cockpit (Helmreich et al., 1999); likewise, students and teachers seek to understand students' decisions in academic, social, and emotional situations (Gaier, 2015). Shame management was reviewed as an emotional response to decision-making that occurs with pilots (Brown & Moren, 2003), as well as students (McCluskey et al., 2008; Morrison, 2002; Zehr, 2004).

Together, the elements of CRM integrated with elements of education show how the non-technical skills in aviation relate to students' academic, social, and emotional development. Although CRM has had a significant impact on the improvement of the safety and efficiency of aviation, Dumitras (2013) advised that CRM cannot be looked at as a mechanism to eliminate error since error is an inevitable result of human performance. The theory generated by this study could provide administrators with a process that could help students face errors in a more productive method by avoiding, catching, and mitigating threats in the academic, social, and emotional realm of development. Expanding CRM from aviation to education could provide the

framework for this theory by focusing improvement on students' interpersonal communications, leadership, and decision-making skills. The literature reviewed in this chapter has provided strong support for pursuing a research project to answer the following multi-part central research question: How do educators perceive applying the principles of Cockpit Resource Management in the classroom in the realm of academic, social, and emotional development to improve students' interpersonal communications, leadership, and decision-making skills?

Chapter 3: Methodology

This study focused on how teachers and educators perceived the use of the aviation concept, Cockpit Resource Management (CRM), in the classroom to support students' academic, social, and emotional development. CRM is a significant part of ongoing aviation training that seeks to continually improve the safety and effectiveness of pilots in the cockpit by focusing on improving interpersonal communications, leadership, and decision-making skills (Flin et al., 2002; Helmreich et al., 1999; McKeel, 2012). A theory was generated through this study as educators' perspectives and ideas were collected in regard to how CRM could be applied to the classroom and how such practices could affect the academic, social, and emotional development of students.

Creswell (2013) described a grounded theory research design as a qualitative study that moves beyond description into the discovery of a theory. Two unique aspects of a grounded theory study that are different from other qualitative research studies were considered for this study. First, the concepts that eventually develop into theory are gathered from the data and are not determined before the beginning of the research (Corbin & Strauss, 2015). While this study began with descriptions of the CRM elements, the researcher interpreted the participants' educational experiences and ideas through multiple interviews and generated a theory that is grounded in data. Additionally, data analysis began at the onset of gathering data, and the two processes continued in an ongoing cycle throughout the data collection process (Corbin & Strauss, 2015). Following the procedures of a grounded theory qualitative research design, the evolving theory was shaped by the views and perceptions of selected educators.

Research Questions

Through this study, answers were provided for the following central research question: How do educators perceive applying the principles of Cockpit Resource Management (CRM) in the classroom in the realm of academic, social, and emotional development to improve students' interpersonal communications, leadership, and decision-making skills? Several sub-questions were drawn from the primary research question that helped drive the study:

Interpersonal Communications:

R1. How can improving student attitudes impact the academic, social, and emotional development of students?

R2. How can effective reporting skills impact a student's academic, social, and emotional development?

Leadership:

R3. How can stronger leadership skills impact a student's academic, social, and emotional development?

R4. How does stronger teamwork impact a student's academic, social, and emotional development?

Decision-making skills:

R5. Why are decision-planning skills important to a student's academic, social, and emotional development?

R6. How does displaying situational awareness impact a student's academic, social, and emotional development?

Purpose and Design of the Study

At the beginning of each school year, teachers spend many hours with their students establishing routines and expectations in an effort to create a positive, nurturing, learning environment. Regardless of their efforts, it is inevitable that teachers will be responsible for responding to students' inappropriate behaviors (Hopkins, 2003). To support these difficult situations, school districts and individual schools have implemented various character education programs and discipline models in an effort to teach students a variety of characteristics including, but not limited to, respect, responsibility, empathy, and trustworthiness to improve their academic, social, and emotional development. Despite the attention placed on character education and consequences given to students when they fail to perform or behave appropriately, teachers continually encounter students who lack motivation, display negative behavior issues, and who come to school with struggles and challenges (Davidson, 2014; Learned, 2016). Pilots and crew members also have challenges they encounter, and they use CRM to help navigate through those challenges.

Commercial and military aviation have been using CRM training since the early 1970s, and several studies have shown the training to be successful in creating safer working environments by improving a wide range of performance skills including interpersonal communications, leadership, and decision-making (Flin et al., 2002; Helmreich et al., 1999; McKeel, 2012). Pilots use these skills on a daily basis to eliminate threats and problems as they may arise in flight. Through continual training and practice, pilots are then prepared adequately to use their defenses, which have increased the effectiveness of their performance. Similarly, administrators and teachers could train students how to recognize academic, social, and emotional threats, and students could use a similar defense system against those threats. In the

academic realm of development, such threats could include confusion, distractions, and time-pressures; social threats could include unfamiliarity with another student, hurt feelings, or a misunderstanding with a student or adult; and emotional threats could involve a change in schedule, lack of assertiveness, or a feeling of disconnect. The purpose of this study was to build theory based on educators' perspectives of how students could use the principles of CRM in their academic, social, and emotional development to effectively handle these types of threats.

The qualitative research design selected for this study involved developing a theory that extended CRM from aviation into education. Corbin and Strauss (2015) explained that within the grounded theory methodology, a researcher should use caution when applying data to an existing framework or theory. Creswell (2013) also advised that the researcher should set aside any theoretical ideas so that the theory may emerge systematically and analytically based solely on data gathered from the participants. In this study, the researcher used the established elements of CRM in aviation and considered the perceived effectiveness that this concept could have in education, based on the data gathered through interviews with experienced educators.

Other methodologies of qualitative study that were considered for this study were narrative inquiry design and a phenomenological study. Creswell (2013) described narrative inquiry as a focus on stories told by a particular individual. Caine, Estefan, and Clandinin (2013) explained that a narrative inquiry design allows the researcher to understand a participant's experiences as they were lived and established over time; it is gaining a true understanding of human experience through lived stories. While this study used elements from stories told from the participants, the focus was on pulling elements from various educators' stories and developing patterns and themes that were used to generate a theory, instead (Creswell, 2013). While a grounded theory methodology considers a specific phenomenon experienced by several

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individuals (Strauss & Corbin, 1998), a phenomenological study emphasizes a single concept or idea while describing the phenomenon (Creswell, 2013). The researcher in this study selected grounded theory methodology, which moved beyond description (Creswell, 2013) and used insights from experienced educators to develop and generate a new theory that could impact education.

Research Population and Sampling Method

Although many of the research studies reviewed in Chapter 2 involved students in the third grade and higher, this study gathered data from educators who work with primary grades: kindergarten through second grade (K-2). Creswell (2013) explained that participants in a grounded theory study should all have experienced the same process so that the theory evolving from the data may provide further practice or study. The participants who were invited to participate in this study were involved in an implementation of a new character education program during the previous school year. The significance of their involvement in the program's implementation allowed for less-experienced educators to be qualified participants in this study given their recent experience with the new program. Teaching in the same grade-level span and being involved in the character education program implementation qualified them as valuable participants in this grounded theory study.

The public elementary school chosen for this study was an ethnically diverse suburban town on the West Coast of the United States that served students from kindergarten through eighth grade. The student population was representative of the neighboring community as well as the surrounding areas. In the 2016-2017 school year, the school enrolled an average of 977 students, 62% of whom received free or reduced lunch. Of the 40 fully credentialed teachers

employed at the school, 13 were kindergarten through second grade teachers. These K-2 teachers were recruited for this study.

The school adopted and trained teachers in a researched character education program, Sanford Harmony (National University, 2017), in preparation for a full implementation in the 2016-2017 school year. Data for this dissertation study was gathered following the completion of a full-year implementation of the program by conducting interviews with participants who taught kindergarten through second grade. By interviewing teachers in grades K-2, a theory evolved from grade levels that are under-represented in literature. Administrators of the school were also invited to participate in the study to learn their perceptions of CRM and the impact it could have on students' academic, social, and emotional development. The criteria used to qualify educators as participants in this study included the following: taught at the school involved in this study during the 2015-2016 school year, held a valid teaching credential, and interacted with the kindergarten through second-grade student population.

Data Collection and Instrumentation

Several researchers in the literature reviewed gathered data through the use of questionnaires, surveys, and interviews. The questionnaires and surveys in the studies were issued mostly to children ranging from third grade through high school (Battistich & Hom, 1997; Battistich et al., 1995; Glew et al., 2005; Learned, 2016; McCluskey et al., 2008; Morrison, 2006; Payne, 2009; Rubio, 2014). Some studies included a smaller number of participants involving 27 students (Smith, 2015), and in other cases a larger number of participants including 253 schools (Payne, 2009). Studies ranged from using multiple schools in a single school district (Glew et al., 2005; McCluskey et al., 2008) to using multiple schools from different school districts (Battistich & Hom, 1997). These large studies were often completed over a period of

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time ranging from two to five years. This study involved interviewing selected educators from one school who met a qualifying set of criteria.

The literature reviewed also involved the use of vignettes (Ahmed & Braithwaite, 2011; Boseovski, Lapan, & Bosacki, 2013), which included hypothetical situations being presented to students so that the researchers could determine how the child would respond in a given situation. In these studies, the children were asked to imagine that they were the wrongdoer in the scenarios. These studies were conducted using yes-and-no questions, open-ended questions, as well as answering questions on a three- to four-point rating scale. Because this study built theory based on educators' perspectives, hypothetical scenarios were used during the interviews. As an interview guide, specific questions were created for the semi-structured interview sessions; however, hypothetical situations also arose within the interviews.

Interviewing is the primary form of data collection in a grounded theory study (Charmaz, 2014; Corbin & Strauss, 2015; Creswell, 2013). Corbin and Strauss (2015) described three types of interviews: structured, semi-structured, and unstructured interviews. The structured interviews utilize a detailed interview guide and each participant is given the same questions (Corbin & Strauss, 2015). In a grounded theory study, Corbin and Strauss explained that a structured interview is the least effective method to gather data because it does not allow the participant to speak freely about a topic that may significantly influence the study; participants may not bring up a topic relevant to the study if the question was not asked.

Corbin and Strauss (2015) described the unstructured interviews as the most effective means for gathering data in grounded theory studies since researchers are not restricted to a formatted list of questions; participants determine the topics, the pace, and the depth of the information. An example of a question asked within an unstructured interview would involve

the researcher asking participants to share their experiences with the phenomenon being studied. With this flexibility, participants may speak freely about various topics, which benefits the emergence of theory.

The semi-structured interview format, also suggested by Corbin and Strauss (2015) for grounded theory research, allows the researcher to choose certain topics prior to the beginning of the study; however, the design of the interview format is more flexible than the structured interview strategy in that the participant is free to speak about the topics brought up by the researcher, or move onto another topic that the participant feels is relevant to the study (Corbin & Strauss, 2015). In this study, the researcher engaged her participants in a semi-structured interview format. The researcher asked each participant the same questions; however, the interviews took different paths based on the direction that participants took in their responses.

Rather than simply interviewing each participant one time, the grounded theory researcher should return to the participants repeatedly to gather additional data as the theory slowly emerges (Charmaz, 2014; Corbin & Strauss, 2015; Creswell, 2013). The researcher must compare the data, categorize the data, and continually gather more data until the theory is eventually grounded in the data from the participants (Charmaz, 2014; Corbin & Strauss, 2015; Creswell, 2013). Multiple in-person interviews were conducted with each of the educators who agreed to participate in the study.

The interview questions (Appendix A) designed for the semi-structured interviews related directly to the research question and sub-questions. Each educator was interviewed multiple times in order to allow for the evolution of the theory to be grounded in data. The first interview involved broader questions with more specific follow-up questions that pertained to the elements of CRM. Through questioning, the researcher sought for educators to describe various situations

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from their past classroom experiences and possibly speak about how the new character education program had impacted their classrooms.

As indicated by researchers proficient with grounded theory studies, subsequent interviews are necessary to generate theory that is saturated in data (Charmaz, 2014; Corbin & Strauss, 2015; Creswell, 2013). Any interviews following the first interview included a review of preceding interviews to ensure the researcher had interpreted the educator accurately. The researcher continued to return to the participants for further questioning as she analyzed, compared, and categorized the data. In addition to the continual in-person and phone interviews, educators were also encouraged to contact the researcher during the period of study if they thought of additional information that would be relevant to the study (Corbin & Strauss, 2015).

Identification of Attributes

Several identifiable attributes were defined in this study, including interpersonal skills, connectivity, collaboration, confidence, and communication. *Interpersonal skills* in this study referred to the relationships that are necessary between students as well as between student and teacher in order for students to feel connected at school (Smith, 2015; Wachtel & McCold, 2004). *Connectivity* referred to the feeling of belongingness that students obtain when they are valued and respected by other students and adults within the school community (Payne, 2009; Smith, 2015). When students are connected to their school, students are more likely to establish the confidence level needed for growth and development. *Confidence* referred to the ability to use self-reflection and self-discipline in various aspects of school including communication (Brown & Moren, 2003). *Communication* referred to the ability to communicate needs and messages as situations arise (Davidson, 2014). This study drew from attributes such as interpersonal skills, connectivity, collaboration, confidence, and communication to develop a

theory that applied elements of CRM to the academic, social, and emotional development of students.

Data Analysis Procedures

Corbin and Strauss (2015) described the grounded theory methodology as systematically gathering and analyzing data in order to develop a theory that is grounded in data; however, they also indicated that every researcher should develop his or her method of analysis through flexibility and responsiveness to the data, goal, and devoted analysis time. The researcher in this study began analyzing the data as she collected the data from interviews in a process of open, axial, and selective coding (Corbin & Strauss, 2015; Creswell, 2013). Strauss and Corbin (1998) referred to the course of gathering and analyzing data as alternating sequences; the first interview sets off analysis, which leads into the next interview, followed by more analysis and more interviews: "Just as painters need both techniques and vision to bring their novel images to life on canvas, analysts need techniques to help them see beyond the ordinary and to arrive at new understandings of social life" (Strauss & Corbin, 1998, p. 8). Creswell (2013) explained that this understanding comes from developing open categories and recognizing the interrelationship of the categories as theory evolves from the data.

A key concept that Corbin and Strauss (2015) referred to in their description of grounded theory data analysis is the flexibility of design. As the researcher began gathering data, Corbin and Strauss suggested to first read through the section of manuscript that will be analyzed. Using an open coding technique, the researcher looked for what were considered lower-level concepts; however, even a lower-level concept often became a category later in the analysis. It was suggested that researchers have the ability to make changes throughout the data analysis; what seemed insignificant one day became a major point in some cases (Corbin & Strauss, 2015;

Charmaz, 2014). Making changes was a reason why keeping memos was an important practice throughout the analysis process (Corbin & Strauss, 2015).

Charmaz (2014) described memo-writing as an important step between data collection and writing papers. Memo-writing is especially critical for researchers using grounded theory because it engages researchers in data analysis and coding early in the research process: "Memo-writing creates an interactive space for conversing with yourself about your data, codes, ideas, and hunches" (Charmaz, 2014, p. 162). Charmaz indicated by taking the time to actively write memos on the data being collected, researchers are able to dig deeper into the meaning of the data, the links created by the data, and comparisons within the data.

There are several forms of analytic strategies that may be utilized during the data analysis process. Two analytic strategies critical in grounded theory research is making comparisons and asking questions (Corbin & Strauss, 2015). Although these two strategies are important in other methods of research as well, grounded theory is also referred to as "constant comparative method" (Corbin & Strauss, 2015, p. 89), which significantly involves comparisons and questions. Other strategies include considering multiple word meanings, interpreting emotions that are expressed, finding meaning in life experiences, and thinking metaphorically (Corbin & Strauss, 2015).

Asking questions throughout the analysis process was essential to the evolving theory. Corbin and Strauss (2015) explained that asking questions about a participant's responses may not lead to immediate findings, but are important in order for the researcher to get in touch with what the participant is actually saying or what future interviews may reveal about a topic. While asking questions on the gathered data is important, Corbin and Strauss cautioned about spending too much time analyzing any one piece of data; instead, researchers should use common sense as

to which data to question and for how long to engage in the questioning process. Analysis is not right or wrong, nor are there specific procedures to follow; it is about researchers engaging fully with the data and trusting that they will make the right decisions during the analysis process (Corbin & Strauss, 2015).

Making comparisons is another necessary strategy for ground theory research (Charmaz, 2014; Corbin & Strauss, 2015), and Corbin and Strauss (2015) explained two different types of comparisons: constant comparisons and theoretical comparisons. Throughout the data collection and data analysis process, researchers engage in constant comparisons when they examine the data being collected from one participant against data being collected from another participant (Corbin & Strauss, 2015). Comparing the data helps researchers find similarities and differences between the data, which leads to labeling, coding, and categorizing (Corbin & Strauss, 2015). As researchers conduct follow-up interviews, the data from that interview is compared with the data from previous interviews to strengthen and possibly change labels and codes that are being developed. The data in this study underwent such comparisons as the researcher interviewed multiple educators and continually compared the data that was being gathered from each educator's perspectives of the specific topics.

Theoretical comparisons also may take place during data analysis when researchers are struggling with the meaning of the data, the properties of the data, or if the researchers want to consider the data in a different way than what was initially thought (Corbin & Strauss, 2015). Comparing data theoretically allows the researchers to think more abstractly about the data rather than becoming too focused on the details (Corbin & Strauss, 2015). The researcher in this study engaged in theoretical comparisons in order to stand back and see the data from different perspectives and identify different meanings and properties of the data.

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Throughout the literature reviewed, data analysis was conducted based on the research questions that guided the studies. Some studies involved student and teacher surveys and questionnaires (Ahmed & Braithwaite, 2011; Battistich et al., 1995; Battistich & Hom, 1997; Glew et al., 2005; Learned, 2016; McCluskey et al., 2008; Morrison, 2006; Payne, 2009; Rubio, 2014). Other in-depth studies included hypothetical scenarios being presented to the participants, and the participants were asked to imagine that they were the person committing the wrongdoing in the scenario (Ahmed & Braithwaite, 2011; Boseovski et al., 2013). The coding present in the literatures involved separating data into themes that were identified in the responses. Some studies used identifiable characteristics, such as respect and pride, and recognizable roles, such as bully and victim (Ahmed & Braithwaite, 2011; Morrison, 2006). Another study coded responses based on the steps that students took in navigating through a particular situation where aspects of shame management were involved (Morrison, 2006).

The data gathered in the interviews conducted with the participating educators presented a natural coding to the themes provided in the research questions. Participants were asked to draw from their educational experiences as well as their philosophy of education to answer the questions. Because the data was collected from the same school and from educators working with similar demographics of students, the data was somewhat consistent from participant to participant; however, the level of experience among the educators who were invited to participate in the study ranged from teaching one year to 30 years, which provided variances in the explanation of different experiences.

The researcher began analyzing the responses from the open-ended interview questions into labels that identified the human factors of education within the academic, social, and emotional aspects of development. Coding from this point depended on common themes that

emerged from the interviews including targeted concepts from CRM within interpersonal communications, leadership, and decision-making skills. Other themes involved relationships, respect, motivation, and expectations, as well as the attributes that defined this study: interpersonal skills, connectivity, collaboration, confidence, and communication. Categories were created based on the interrelationships within the open, axial, and selective coding process (Corbin & Strauss, 2015).

Limitations of the Research Design

Corbin and Strauss (2015) advised researchers against beginning a grounded theory study with a preconceived theory in mind, with the exception of elaborating or extending an existing theory. Creswell (2013) also advised that the researcher should set aside any theoretical ideas so that the theory may emerge systematically and analytically. While a part of this study involved the idea of extending CRM from aviation into the realm of education, the study's focus was on educators' perspectives of how CRM could positively affect students' academic, social, and emotional development. The researcher ensured that the theory being developed in this study was influenced and generated systematically and analytically through the data being gathered from the participants in the study.

An additional area of limitation in this study was in the setting of the participants who were invited to participate. The researcher conducting this study was a previous administrator at the school and had knowledge of the school's past practices in students' academic, social, and emotional development. It was essential that the researcher set aside her knowledge and experience of the school and form new and accurate interpretations of the gathered data (Corbin & Strauss, 2015). Although there may be traces of subjectivity in the study, it was the

researcher's goal to recognize and acknowledge that subjectivity and ensure that it did not influence the data analysis or theory evolution (Strauss & Corbin, 1998).

A final limitation of the selected research design was that data would be gathered from one school where most of the literature reviewed involved data being collected from several different schools. The reason why one school was chosen for this study was because a new theory to academic, social, and emotional development would emerge from the gathered data, and the researcher was seeking a focused target of participants from a school who recently implemented a character education program involving restorative practices. Creswell (2013) suggested using discriminant sampling to ensure the established categories are saturated in sufficient detail and data. The researcher invited administration and credentialed support staff to participate in the study for this purpose. The information gathered through interviewing these participants were used to determine if the theory also applies to the additional members of the school community (Creswell, 2013). As anticipated, there are areas that need further research after gathering, analyzing, and developing a grounded theory, which include collecting data from more than one school and collecting students' perspective of the new theory.

Validation: Credibility and Dependability

In order to ensure credibility and dependability of the data, special precautions were taken while interviewing the participating educators. First, written consent from each of the participants was obtained to participate in this study and to have their interviews recorded (Appendix B). It was important that the educators were fully aware of the premise of the study, what was being asked of them in their participation, and the procedures of the study.

After receiving consent from the participants, the researcher worked with the participants to schedule the first round of interview sessions. The researcher was cognizant of the time

period between interviews in order to limit any burden the educators may have felt in respect to their time and allowing for processing between interviews. The participants were encouraged to hold the interviews in their classroom so they felt they were in a comfortable space while answering the questions. Being in their classrooms could also have triggered certain experiences that they could draw from to answer the questions.

During the interviews, which were each approximately 30-minutes in length, the researcher initially arranged to record both audio and video of the interviews; however, some interviews were conducted by telephone and only an audio recording was obtained. Having the interviews recorded allowed the researcher to create a continuous flow during the interview and to return to the interview for repeated analysis. The researcher anticipated being able to observe non-verbal communication cues from the in-person interviews, such as facial expressions and hand gestures, that could have also added to the data; however, data was only gathered from the verbal portion of the interviews.

The interviews required much interpretation from the researcher in order to seek an understanding of the participants' perspectives (Corbin & Strauss, 2015). Corbin and Strauss (2015) cautioned that interpretations must include only the perspectives and ideas of the participants, and not those of the researcher. Since the researcher was conducting analysis on the data as it was being gathered after each interview, it was important to review the researcher's interpretations with the participants during subsequent interviews. Ensuring that the researcher's interpretations were accurate and represented the position and voice of the participants added to the credibility and validity of the data.

Expected Findings

The school involved in this study implemented a character education program during the 2016-2017 school year, which involved a focus on restorative practices. Because many elements of restorative practices are present in the CRM theory, the researcher anticipated that the participants may include components of restorative justice in their interviews. In the end, the theory that evolved was anticipated to include elements of CRM, such as attitude, event reporting, teamwork, decision planning, and situational awareness; components of restorative justice including relationship-building, community, connectivity, and a sense of belonging; and elements of Attribution Theory. Due to the nature of CRM training, the researcher anticipated that the theory that evolved would provide valuable support for students receiving special education services including, but not limited to, students with learning disabilities and emotional disabilities. The researcher's goal was to generate a theory that not only supports students in their social and emotional development, as with many current behavior support models, but also in their academic achievement by improving their interpersonal communications, leadership, and decision-making skills.

Ethical Issues

It was essential to define clearly any ethical considerations before the research was conducted so that potential risks to the participants were minimized. It was important to note that the researcher would be conducting the interviews as a guest in the school used in this study. As previously mentioned, the researcher was an administrator at this school during the 2014-2015 school year and the 2015-2016 school year. Because of the personal connection shared with some of the participants in the study, it could have appeared that a power differential existed in the data being gathered. It was important to re-emphasize to the participants that the

questions being asked would in no way be used in an evaluative method and that their answers would be kept strictly confidential. Regardless of the efforts made in this area, there could have been a chance that some participants may still have felt apprehensive about being involved in the interview process; however, the researcher hoped that by describing clearly the purpose of the study and how it may benefit the school community, the participants would want to join the study.

Confidentiality was another ethical concern to communicate to participants at the beginning of the study, including in the discussion of students during the interviews. The researcher asked participants questions in regard to their past experience, which were answered often in the form of a past story. When any students' names were used during the interviews, the students' names were omitted from the transcripts and were not included in the study.

Corbin and Strauss' (2015) caution on the researcher's accuracy of her interpretations during the interviews was also discussed with the participants prior to the interviews. In a grounded theory study, the perspectives and ideas gathered from the participants must be unaffected and uninfluenced by the researcher. Strauss and Corbin (1994) advised researchers to accept the responsibility of their interpretive role so that the data is not presented as a simple voice or viewpoint of the participants; rather, the data is systematically and analytically grounded into an emerging theory.

Chapter 3 Summary

In this study, the researcher used the grounded theory research design to develop theory on the use of the aviation concept of Cockpit Resource Management (CRM) in education from an educator's perspective. CRM is an ongoing training model used in aviation that has improved the safety and working conditions of pilots and crew members around the world by strengthening

interpersonal communications, leadership, and decision-making skills (Flin et al., 2002;

Helmreich et al., 1999; McKeel, 2012). Elements involved in CRM include attitude, event

reporting, teamwork, decision planning, and situational awareness (Flin et al., 2002; Hsiung,

2015; McKeel, 2012). The purpose of this study was to generate a theory based on CRM that

was grounded in data that educators perceived would impact the academic, social, and emotional

development of students by improving students' interpersonal communications, leadership, and

decision-making skills.

The central research question and sub-questions posed in this study inquired about the

perceived effects that CRM could have on the academic, social, and emotional development of

students when elements of CRM are integrated into the classroom. The central research question

and sub-questions aligned directly to the conceptual framework, which involved the elements of

CRM and how they are used effectively in the cockpit. Within the realm of interpersonal

communications, pilot attitude refers to the viewpoint that a pilot may hold and the way the pilot

communicates with the other crewmembers during a situation or event (Cioffi, 2009). Students'

attitudes also affect achievement when students develop a "never give up" attitude (Davidson,

2014, p. 23). Event reporting refers to the non-punitive, risk-free method of reporting mishaps

that occur during flight in order to present future learning opportunities (Helmreich et al., 1999).

In education, students could also engage in non-punitive reporting to discuss events that occur in

their academic, social, or emotional realm of development. The concept of teamwork affects the

level of leadership in the cockpit and refers to how the crewmembers divide tasks and prioritize

essential tasks during high-pressure incidents (Panger, 2015). Students could sharpen teamwork

skills to effectively collaborate in different activities (Gasparini, 2014). Continually engaging in

decision planning prepares pilots for unexpected events and builds more effective decision-

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making skills (Panger, 2015). Likewise, students could engage in role-playing activities to prepare for high-pressure situations. Using situational awareness pertains to knowing the surroundings and prepares pilots to be able to recognize, react, and regain control of the situation (Panger, 2015). Students could develop situational awareness to recognize a challenging situation, decide their course of action, and regain situational awareness through communication. It was the researcher's hope that administrators could use a concept such as CRM to help students effectively work through challenges within the academic, social, and emotional realm of development.

This chapter described the qualitative research design selected for this study and the benefits of developing a theory grounded in data. Using a multiple-step interview process, the researcher gathered in-depth data on the participants' experiences in the classroom and their philosophy of education. As the researcher gathered data, she began analyzing the data looking for labels and themes that would lead to conceptual categories within the data. Categorizing and questioning were also actively engaged as the researcher returned to the participants repeatedly for further data collection. The categories eventually emerged into a theory that expressed the perceptions and ideas of the participants (Corbin & Strauss, 2015; Creswell, 2013).

The attributes that defined this study include interpersonal skills, connectivity, collaboration, confidence, and communication, and are involved in all areas of the conceptual framework: interpersonal communications, leadership, and decision-making skills. The attributes in this study also include the elements of CRM: attitude, event reporting, teamwork, decision planning, and situational awareness (Flin et al., 2002; Hsiung, 2015; McKeel, 2012). The researcher anticipated that some of these attributes would also appear in the open, axial, and selective coding process (Corbin & Strauss, 2015) that was involved in the data analysis of the

study. Although the themes were predictable, the researcher was careful to gather and interpret data based on the educators' perspectives rather than on the researcher's prior knowledge and experiences. All areas of limitation and ethical considerations were fully communicated to the participants before the interviews began.

Chapter 4: Data Analysis and Results

The purpose of this qualitative research study was to provide administrators and other educators with a process that students may use to help navigate their way through their education as they handle various threats and challenges that may occur at home, at school, or in the community. Aviation uses Cockpit Resource Management (CRM), an ongoing training model, to strengthen pilots' interpersonal communication, leadership, and decision-making skills in order to recognize threats and mitigate errors that the threats may cause during flight (Cioffi, 2009; Martinez, 2015). The principles of CRM apply to education because students also need to be able to recognize challenges they are faced with inside and outside of the education setting. A similar model could provide students with a specific process necessary in their academic, social, and emotional development despite the threats that are presented to them.

This study focused on educators' perspectives of developing a theory in education related to CRM that could support students effectively who face various threats daily. Some of the threats that the educators in this study discussed included failure to meet a student's basic needs, challenges in a student's home life, relationships with peers or teachers, low self-esteem, and a lack of confidence. The following central research question was presented in this study: How do educators perceive applying the principles of CRM in the classroom in the realm of academic, social, and emotional development to improve students' interpersonal communications, leadership, and decision-making skills?

The qualitative research design in this study focused on developing a theory grounded in data that would extend CRM from aviation into education. This chapter describes in detail the role that the researcher played in gathering and analyzing the data, a description of the participants interviewed in the field research experience, and the application of the research

methodology for this study. The procedures that the researcher followed in her data collection and organization will also be described, in addition to the analytical process as a theory evolved. A summary of the findings will be presented, along with results of the study, with a discussion of meaning and connections to practice.

The researcher in this study was formerly an administrator in the research site public school district which served kindergarten through eighth grade students. A significant role in the various schools where she worked was handling discipline issues that involved behavioral situations occurring in the classroom and on the playground. Whether a student was failing to engage in a lesson, not following safety rules on the playground, or treating other students inappropriately, students were frequently sent to the office in an effort to change their behavior; however, students who had been sent to the office were often repeat offenders who failed to learn from their mistakes. Using punitive punishments as consequences for students' actions often results in repeat offenses, because they have not learned from their mistakes (Benade, 2015; Cameron & Thorsborne, 1999; Kline, 2016).

Connecting this problem to aviation, the majority of aviation incidents were found to be pilot error due to a lack of interpersonal communications, leadership, and decision-making skills (Flin et al., 2002; Helmreich et al., 1999; McKeel, 2012). In response to these findings, CRM training was developed in 1979 and later required by all airlines, and is still in use today. CRM involves elements such as teamwork, leadership, situational awareness, and decision-making (Flin et al., 2002). By strengthening the crew's skills in interpersonal communication, leadership, and decision-making, the number of incidents caused by human factors decreased significantly (Dumitras, 2013). This background information about CRM assisted the researcher with gaining educators' perspectives on implementing a type of CRM training in education to

improve students' interpersonal communications, leadership, and decision-making skills, and designed a qualitative research study using the grounded theory method of research.

Corbin and Strauss (2015) described the grounded theory methodology as systematically gathering and analyzing data in a process that a theory emerges which is grounded in data. The data in this study was collected from participants in interviews and was simultaneously analyzed in a process of open, axial, and selective coding (Corbin & Strauss, 2015; Creswell, 2013). Strauss and Corbin (1998) described the process as an alternating sequence; the first interview sets off the analysis process, followed by more interviewing and more analysis until sufficient data can be gathered and developed into a theory.

The researcher conducted 31 semi-structured interviews from 13 participants that were scheduled at the participants' convenience outside of contract-hours. The length of interviews ranged from seven minutes to 29 minutes depending on the depth that the participant expressed on the various topics. Seven interviews were conducted at the educators' school site, three were conducted at an establishment in the community requested by the participants, and 21 were conducted by telephone. All interviews were recorded with the participants' permission using a tablet, cellphone, or an application that records telephone calls. While the researcher anticipated gathering the participants' body language and non-verbal communication cues as pieces of data, she found little difference between the in-person interview and the telephone interview techniques; the participants seemed to open-up more during the telephone interviews. Using the semi-structured interviews suggested by Corbin and Strauss (2015), the researcher was able to use an initial list of interview questions as a guide, while allowing the participants to determine the path that each of the interviews took.

Based on the data gathered from interviews, a theory was developed that included the three foundational components of CRM: interpersonal communications, leadership, and decision-making skills. Each of these areas were found to have an important impact on students' academic, social, and emotional development. The categories that the educators expressed within the first component of CRM, interpersonal communications, included classroom community, feedback given to the students, and event reporting or self-evaluations made by the student. Elements within these areas included building relationships, restorative action involving Sanford Harmony (National University, 2017), communication, attitude, empathy, growth mindset, reflection, learning outcomes, and the environment. The second component, leadership, was described by participating educators to include categories of presented opportunities of leadership and teamwork. Within these two categories were risk-taking, collaboration, and problem-solving. The third component, decision-making, involved decision-planning and situational awareness. Categories included in the third component involved goal-setting, role-playing, recognizing a situation, restorative responses, regaining awareness, and reflection. The overarching themes consistent throughout the data gathered from the participants continually pointed to empathy, reflection, and confidence within a classroom community. Thus, the theory generated in this theory is referred to as Classroom-Community Resource Management (CCRM), which is an extension of CRM from aviation into the classroom-community.

Description of the Sample

Creswell (2013) suggested that participants in a grounded theory study should all have similar experiences of the focused process so that the theory that evolves in the study may provide further practice or study. The educators who agreed to participate in the study were all involved in the recent implementation of a character education program during the previous

school year in the west coast, ethnically-diverse, suburban school. The character education program, Sanford Harmony (National University, 2017), had principles that were consistent with elements in this research study that involved restorative practices. Because each of the participants received training on the implemented curriculum, each educator was able to provide valuable information regardless of their length of tenure in education. Age, ethnicity, gender, or years of experience were not determining factors for eligibility. The participants were required to have possessed a valid teaching credential and interacted with kindergarten through second-grade students on an academic level at the research school site the previous year.

Thirteen out of the 21 educators who were qualified to participate in the study agreed to participate and scheduled initial interviews with the researcher after signing their consent forms. Nine of the participants were teachers at the school site and taught kindergarten through second grade the previous school year; two of the educators were support teachers who worked as a resource specialist and an intervention teacher; and two of the educators were administrators at the school the previous year. Among the participating educators, their years of experience ranged from three years to thirty years in education. Including a diverse range of education roles and experience allowed a more in-depth study to answer the central research question.

Research Methodology and Analysis

This qualitative grounded theory study focused on generating a theory in education through the perspective of participating educators in regard to the use of the aviation concept of CRM in education and how it could impact students' academic, social, and emotional development. Following the method of qualitative research, the researcher collected data from qualified participants who agreed to engage in multiple interviews involving interpersonal communications, leadership, and decision-making skills and how these elements exist in

education. Throughout the six weeks of interviewing, the researcher became completely immersed in the research process as interviews were conducted, transcribed, and analyzed in a continual cycle (Corbin & Strauss, 2015; Leech & Onwuegbuzi, 2007). Following the advice offered by qualitative researchers, the research was conducted in the study's natural setting, the interviews were conducted from the primary source solely by the researcher, and the study focused on gathering the perspective of the educators who qualified for the study (Creswell, 2013; Leech & Onwuegbuzi, 2007; McMillan, 2012; Stake, 2010).

Grounded Theory

The grounded theory methodology proved to offer a thorough process in gathering and analyzing data in an alternating cycle (Charmaz, 2014; Corbin & Strauss, 2015; Creswell, 2013). The research gathered during the first round of interviews, over a 17-day period, focused on the educators' perspectives of interpersonal communications involving CRM elements of attitude and event reporting. The second round of interviews, lasting 13 days, began with the participants sharing a list of threats that they have observed students struggle with on a continual basis followed by questions regarding leadership. This interview involved questions on CRM elements of teamwork and collaboration. The third round of interviews, over a 19-day period, involved the educators' perspectives of decision-making skills and included CRM elements of decision-planning and situational awareness. The researcher asked each participant follow-up questions that emerged throughout the analysis process in order to continue the development of the emerging theory (Charmaz, 2014; Corbin & Strauss, 2015; Creswell, 2013).

As the researcher was immersed in gathering data from the interviews, she was reminded of Corbin and Strauss' (2015) statement: "A researcher cannot continue to collect data forever. Sooner or later, *something* has to be done with that data to give it significance. That something is

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termed *analysis*" (p. 57). As the researcher gathered the 10 hours and 25 minutes of interview

data, she had also been coding and categorizing the data into a spreadsheet with headings similar

to what was presented in the research sub-questions regarding the CRM elements of attitude,

event reporting, leadership, teamwork, decision-planning, and situational awareness. After

conducting extensive memos, comparisons, questions, and interpretations, the researcher

returned to the interview recordings and transcripts for an additional review of the data.

Significant concepts were pulled as categories and sub-categories and additional interpretations

and comparisons were completed. Whereas a researcher cannot collect data forever, Corbin and

Strauss also reminded researchers that analysis is never quite finished as data is continually

interpreted and reinterpreted, new concepts are added, and new relationships are found between

concepts, which described the process of this study's analysis and presentation of the findings.

Although interpreting data gathered from the participants' interviews is not an exact

science (Corbin & Strauss, 2015), the concepts and themes that emerged from the participants'

experiences and philosophies of education brought forward new meanings and considerations

that added to the researcher's initial structure of CRM in education. Some familiar terms

consistent with the research design appeared, including attitude, event reporting, and leadership.

Continuing with the three main themes of interpersonal communication, leadership, and

decision-making skills, new sub-categories emerged from the data gathered from the

participants' perspectives of the CRM elements discussed in the interviews, such as establishing

a classroom community, building relationships, and showing empathy (Appendix C). Through

the continual data collection and analysis cycle, the researcher eventually determined the theory

to be grounded in data when the sub-categories adequately represented the necessary areas for

students' academic, social, and emotional development. The theory grounded in data that

emerged from the educators' perspectives led to the evolution of Classroom-Community Resource Management (CCRM).

Summary of the Findings

Interpersonal communication in CCRM refers to exchanging information, including feelings and emotions, both verbally and non-verbally (Konoplianyk, 2014). The CCRM concepts that evolved from the field experience in this study included classroom community, feedback, and event reporting, which is also referred to as self-evaluation. Classroom community involves building relationships, restorative practices, and communication. Feedback refers to a student's attitude or personality, showing empathy, and exhibiting a growth mindset. Event reporting, or self-evaluation, denotes reflection, determining the learning outcome, and the significance of the student's environment.

The second section of CCRM, leadership, involved the various roles of student leadership with a direct focus on primary grades. The ideas developed from the participants' perspectives include presented leadership opportunities and teamwork. Presented leadership opportunities refer to situations where students are engaged in leadership activities whether they are forced opportunities or volunteer opportunities. Risk-taking, including confidence and self-esteem, were common themes in the area of leadership opportunities. Teamwork involves the concepts of collaboration and problem-solving.

Decision-making skills made up the third section of CCRM and involved decision-planning and situational awareness. Throughout the interviews, the participating educators referred to the practice of engaging students in setting academic and behavioral goals. The educators also expressed the benefits that role-playing has had on student learning. The ideas of how goal-setting and role-playing affect students' levels of decision-making are within decision-

planning element of CCRM. Situational awareness discussed recognizing a situation, reacting to the situation restoratively, and regaining and reflecting on the learning experience, which can also affect a student's decision-making skills.

From the three overarching concepts of interpersonal communications, leadership, and decision-making, a theory grounded in data has developed through intertwining relationships of the subcategories and elements. Each individual element has its significant place within the category to provide structure and depth. Hage (1972) explained theory as "a set of well-developed categories (themes, concepts) that are systematically developed in terms of their properties and dimensions and interrelated through statements of relationship to form a theoretical framework that explains something about a phenomenon" (as cited in Corbin & Strauss, 2015, p. 61). In this study, the core concepts that overlap each category are empathy, reflection, and confidence. The participants emphasized that empathy is needed in understanding students' actions toward others, that reflection plays significance in what students acknowledge in themselves, and how confidence is necessary to be able to have an empathetic and reflective attitude. While pilots use CRM to practice empathy, reflection, and confidence in the cockpit, these overlapping concepts are the core of the Classroom Community Resource Management (CCRM) theory that has developed from this study and are evident throughout the data findings and results.

Presentation of the Data and Results

The Classroom-Community Resource Management (CCRM) theory was developed in this study by what Corbin and Strauss (2015) referred to as the "constant comparative method" (p. 90). The researcher engaged in continual questioning and comparisons throughout the data collection and analysis process. Asking questions allowed the researcher to develop further

inquiry, consider additional meanings of the data, and become more acquainted with the data (Corbin & Strauss, 2015). As the researcher thought about one piece of datum, questions were being asked about the relationship and connection with another piece of datum, which then brought up more questions and comparisons about further data. This process continued throughout the question and comparative analysis.

This qualitative grounded theory research study strived to answer a central research question: How do educators perceive applying the principles of Cockpit Resource Management (CRM) in the classroom in the realm of academic, social, and emotional development to improve students' interpersonal communications, leadership, and decision-making skills? Sub-questions were created from the primary research question to help drive the study. The answers to these sub-questions will be addressed in this section based on data gathered from the educators who were interviewed in the field experience.

Interpersonal Communications

Two sub-questions were presented involving interpersonal communications: How can improving student attitudes impact the academic, social, and emotional development of students? How can effective reporting skills impact a student's academic, social, and emotional development? Whereas the elements of attitude and event reporting were the only two elements initially included with interpersonal communications, the educators in the study revealed a much deeper impact of interpersonal communication on student development. Interpersonal communications involves a growth mindset, being restorative, being open, talking to people, and communicating a viewpoint. Interpersonal communication gives the person the ability to stop, think about what the other person is saying, actively listen to the person, and ultimately decide what to think about the message. The three elements of interpersonal communications that were

revealed in this study include classroom community, feedback given to students, and event

reporting, or self-evaluating, made by students. Themes that emerged from the two sub-

questions can be found in Table 1.

Table 1

Themes Emerged from Questions Involving Interpersonal Communications

Research Questions	Emergent Themes
R1. How can improving student attitudes impact the academic, social, and emotional development of students? R2. How can effective reporting skills impact a student's academic, social, and emotional development?	• Building relationships, practicing restorative interactions, and communicating effectively are necessary for building a positive classroom community. • Positive student attitudes, exhibiting empathy, and exercising a growth mindset will positively affect the way a student receives feedback from adults and peers. • Engaging in reflection, evaluating learning outcomes, and assessing student environment will positively impact the way students report events and self-evaluate

Classroom community. The educators who were interviewed described the importance

of building a classroom community. One of the educators described building a classroom

community was like a machine; everybody has their part that they play in creating the classroom

community. Students contribute in their own way: bringing positive influences on others and

offering assistance when necessary to help the classroom community feel like a family. The

family needs to feel connected, well-rounded, and positive. The participating educators

emphasized that bonds between the teacher and students, as well as between students, are built

within a classroom community where students feel heard, valued, and feel that what they

contribute matters.

Academically, the participants explained in the interviews that when students are interacting with each other, there is a positive impact on their learning. In their experience, the participating educators observed students being empowered to stand up and share when necessary, and students are able to work with any partner when the class has built a solid connection. Socially, when students are accepted by the team and feel part of the team, they are more likely to work better in the team because they have a stronger sense of belonging. The interviewees expressed that when they saw students feeling valued by their peers, it affected their whole development because they were able to communicate more effectively, they were more authentic, and they came to school ready to learn. Finally, emotionally, the participants saw students' self-esteem increase when they were able to contribute to the classroom community because they felt like they were a piece of the puzzle and a part of the team.

One of the participants described an example that amplified the importance of establishing a classroom community where students felt connected and valued. She had a new student, Student A, start in her classroom mid-way through the school year, and he did not know anyone in the class. He was feeling alone and would not participate in any of the classroom activities. After two weeks, and after several attempts at connecting Student A with other students in the classroom, he began interacting and making friends with his classmates. He felt more connected to the classroom community, and this connection was also reflected in his improved academic performance.

Building relationships. A central theme among the participants, while discussing interpersonal communication and community, was the importance of building relationships. An essential part of establishing a classroom community was building positive relationships between the teacher and students, as well as between the students. Academically, students tended to

receive feedback more positively when they had a stronger relationship with their teacher and peers. The participants expressed that students needed to feel comfortable talking with anyone in the class regardless of with whom they were partners. Without a strong relationship, students would not want to communicate with their teacher or share their learning with their peers. Socially and emotionally, positive relationships could improve students' attitudes toward learning, toward their peers, and toward themselves. One educator expressed in an interview that building relationships also builds trust; "Whether you're riding a horse, flying a plane, or running a classroom," it is essential that trust and respect were evident in relationships. The way that students perceived how their teacher felt about them or interacted with the class affected how the student felt about the classroom community.

Restorative practices. Throughout the interviews, the educators reflected on the use of the recently implemented character education program, Sanford Harmony (National University, 2017), and the elements of restorative practices involved in the program's principles. Conferencing with students rather than assigning punitive punishments was a common theme among the participants. Whether the conferences involved one student, multiple students, or the entire class, the focus was finding how the student detracted from the community, how the student could give back to the community, and how the student could right the wrong. The participating educators agreed that having conversations with students about a particular behavior was an effective way to change the behavior and helped build a stronger relationship between the teacher and student.

Conferencing with the student involved talking about what happened, what the student did, what the other student did, and discussed preferred ways to handle the situation. The participants agreed that conferencing with students was much more effective than having the

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student "change their card," a popular classroom-management technique among primary teachers. Some participants also held class meetings to play out a particular situation, which gave students a feeling of ownership about what was happening in the classroom. Students also felt empowered because they were helping their peers with their problems and gave ideas on how to work through situations.

The participating educators agreed that the activities and principles included in the Sanford Harmony (National University, 2017) program assisted in building a classroom community. The program involved stories that students and teachers use to model different situations. Students practiced using their words, explaining to adults what happened, and telling their peers to stop. Another skill involved in the program was practicing how to effectively listen to one another so that the person speaking felt like they were being heard. Students practiced eye-contact and being quiet while another person was talking. In addition to effective listening, students practiced giving appropriate responses to the person speaking by validating what the other student said or responding with another idea based on what the other student said.

The participants also described using the character education program in their morning meetings as students greeted one another, role-played the activity cards, read the stories, and discussed various questions that were posed (National University, 2017). Holding morning meetings established an interpersonal space where students continued to build relationships and a stronger classroom community. The program allowed students to share their feelings and thoughts, connect with others that may have similar feelings, and build their confidence knowing that they were being heard and that they were not the only ones going through a particular situation. Through this process, the participants agreed that students felt more connected, they

were able to perform better academically, their behavior was more positive, and there was less discipline involved.

In addition to Sanford Harmony (National University, 2017), Class Dojo (Class Twist, n.d.) was another character education program that some teachers used at the research school involved in the study and was described by one educator as a method to build a classroom community. The program focused on growth mindset, perseverance, empathy, and mindfulness. A student was identified as "in a maze" if they were frustrated, angry, not understanding how they were feeling, or not thinking about how others were feeling. Students were observed asking their peers, "Are you in a maze?" Knowing it is not where students want to be, other students tried to offer support to help their peers out of their maze. When students were struggling academically, they were referred to as being "in a dip." Students were encouraged and taught to see this as a positive element of learning because their brain was growing as they tried to climb out of the dip. They used different tools to climb out of the dip, whether it be a friend, a teacher, or their own perseverance. While the described programs assisted students and educators in building a classroom community through practicing restorative justice, communication is also an essential piece of establishing a classroom community in the CCRM process.

Communication. The educators who participated in the study agreed that communication was a necessary element in getting to know students, especially in the younger grades, in order to build a classroom community. Students needed to be able to effectively communicate so that they could accurately articulate their feelings. Since some students did not fully understand how to communicate, some of their needs were not being met because they did not know how to articulate their needs. For example, an English-Language Learner (ELL) may not know how to communicate their needs; therefore, communication may come out in a

negative behavior. One educator described her ELL population as a "silent voice that needs a volume." She explained that focus needed to be placed on supporting students on how to effectively "turn up their volume." Student-to-student interaction often could be non-verbal, including eye-rolling, smiling, or other gestures, which shows that communication could significantly affect a student's attitude. The participants explained that teachers often reminded students to "use your words" and teach students at a young age that they were allowed to express their feelings and be in touch with their feelings.

Since young students did not always understand or were able to identify the specific emotion they were feeling, as the participants expressed, interaction with younger students was necessary. Articulating needs, wants, and appreciation was difficult for younger students; they did not know if they are hurt, mad, or frustrated because they lacked experience and background knowledge in expressing themselves. One student, in an example described by an educator, spent an entire school year telling his teacher that he was angry. When the student finally opened up to the teacher toward the end of the school year and began talking about his emotions, the teacher and student were able to correctly determine that the child had been sad all along. Once the correct emotion was identified, the child was able to receive the proper support. The learning point for the educator in this example was that a child's demeanor may not always reflect how the child is feeling.

Academically, the participating educators explained that students were not always able to articulate their areas of struggle and would need specific training in working effectively in a discussion group. The participants felt that engaging students in constant conversation around any topic was a more valuable learning experience than drilling knowledge. They also acknowledged that this type of communication required working through some of the social and

emotional challenges so that students were better able to retain what was being discussed in the conversations. For example, an educator working with an autistic student noticed that attending weekly training on social and emotional skills had increased the student's ability to express himself and listen to others because his social and emotional needs were being met.

Socially and emotionally, interviewees expressed that negative interpersonal communication skills could lead to jumping to conclusions or keep some students from speaking up for themselves. In an example described in an interview, the teacher often engaged in verbal communication with students to work through a mishap or misunderstanding. Two students misunderstood what each other were saying and got mad at one another. After sitting down with the teacher, and each student having the opportunity to explain their perspective of the incident, the students understood and acknowledged their own mistakes and made amends. The educator explained that by talking about how each person perceived the other person, the students were more likely to interpret the other person's actions more accurately. By talking to the other person about the situation, the students were able to realize how the other person was feeling. Overall, the participants agreed that using conversation and communication could have a positive impact on student learning.

Feedback. Whether in the classroom, on the playground, or individually, the participating educators explained that students continually received feedback from adults and peers. Feedback given in a positive way most likely yielded a more positive attitude. According to the educators' perspectives in this study, students did not accept negative feedback and interaction as well as positive messages, which involved the importance of mindset. Students needed to possess a certain amount of confidence to be able to receive feedback and criticism from others and learn from it rather than rejecting the feedback. When students had a positive

attitude, they were more likely to own their learning and question the next step because they know that their learning did not stop with feedback; however, a negative attitude toward feedback led to the student being angry as they complied with the suggested feedback. For example, in a specific second-grade classroom engaged in writer's workshop, the teacher sat with a student while helping the student edit writing. Two other students were also invited to sit at the teacher-table while they engaged in their own editing practice. The teacher noticed that the two students edited their own writing while they would also give comments and feedback on their classmate's writing. She found that the student would most frequently accept the peer-feedback positively and it seemed to be more welcomed than the feedback only being given by the teacher. The participants also explained, though, that a student's home life also had a significant impact on how students received feedback and criticism from the teacher or their peers.

Attitude/personality. Attitude and personality were addressed by the participating educators to have significant impact on how students received feedback, and the educators expressed a different stance as to the connection between attitude and personality. Some participants believed that a personality was something a person was born with and developed over time; however, a person's attitude was moldable and could change based on a particular experience. Interviewees explained that attitude changed a person's personality, since personality was not set in stone and attitude was stronger and more dominant than personality. Where personality and attitude were connected, they did not define each other. Attitude changed with personality and attitude reflected emotions in the moment, but personality was established over time. Attitude did not dictate personality, nor did personality dictate attitude. They were linked, but one was not necessarily responsible for the other.

Other educators in the study believed that a person's personality was molded by his or her own attitude. For example, approaching a challenging situation positively gave the person the potential of wanting to succeed. To these educators, personalities and attitude went hand-in-hand; a person's personality reflected the person's attitude – they were one in the same, and they were both difficult to change. For example, one educator had some of the same students in her classroom recently who she taught two years ago. She explained that the positive students were still very positive in their learning, and students who were negative before were still negative.

The participants explained that attitude affected student learning regardless of whether the students were impacted by the teacher's attitude or their own attitude. Attitude from the teacher could have an effect on a child's development and performance, how the child felt about themselves, and how the child portrayed the teacher's treatment of the child. Attitude was described by one educator as seeking a position of power: who a person wanted to be perceived as versus how they were going to be perceived. For example, if students were confident and powerful, their attitude would be strong and confident; however, when students were not confident, their attitude could be strong, but it was creating a negative interpersonal space. The student was trying to overpower the people around them, trying to convince them that the student was more powerful than they actually were in reality.

Peer attitude toward other peers was also discussed by the participants as attitude affected students academically, socially, and emotionally. Attitude could be evident toward different areas: other students, themselves, parents, teachers, and the community. If students were not feeling valued in their opinion, not listening to other students' input, or criticizing other students' answers as insufficient could affect those other students. For example, a particular student's attitude was so poor that it stopped him from conforming or participating. Once the student's

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attitude changed, he was a different student. Participants explained that one way to improve

student attitude was by getting to know the student individually, becoming familiar with the

student's likes and interests, and conversing with the student about those areas of interest.

The participating educators expressed that students tended to have a more positive

attitude in their learning when they were enjoying what they were learning and what the teacher

was teaching. One educator stated, "Attitude is everything. It is my job to get students to love

school and not just learn the standards associated with kindergarten." Attitudes were taught, and

some of the participating educators believed that it was the teacher's job to help mold the

student's attitude and change it to be more positive. If students had a poor attitude based on

something that happened on the playground or at home, it was difficult to get passed those

emotions and focus on their learning. An interviewee expressed, "Attitude is what drives you. If

you have a negative attitude, then it is going to drive you to see just the negative. Positive may

be a challenge, but there is a drive to press on." The participants agreed that if students did not

have a positive attitude toward school, the teacher, and peers, students would shut down.

Empathy. While keeping a positive attitude was important in receiving feedback, the

educators in this study also felt that students need empathy. For example, if Student B wants to

communicate something, Student C may not understand why the message is important because it

is not important to them; but Student C should practice empathy and value Student B's message.

When peers were not valuing a student or not valuing the student's opinion, their attitude toward

that student was apparent and the student suffered.

One skill that was important to the participants in showing empathy was active listening.

When students practiced active listening, they were attempting to interpret what the other person

was saying rather than focusing on their own message and thinking about what they were going

to say next. In order for students to practice empathy, it was essential that they were able to exit the egocentric stage of development so that they were capable of thinking about the other person, how to solve an existing problem, how to walk away from a situation, and how to tell another student to stop bothering them.

To be empathetic, participants explained that students practiced noticing others' feelings on the inside and outside. An example described by one of the educators involved an autistic student who had attended social and emotional training since he was six-months old. The student learned to listen to people before giving his opinion. When he gave his opinion, he did so by referencing something that the other person had already said. His message was not only about his ideas; he listened, acknowledged what the other person said, and explained his point of view. The student had also mastered the ability to read facial expressions to determine feelings and was aware of other peoples' feelings. The participants explained that at a young age, it was natural for students to only think about something from their own perspective. As in the previous example, students could be taught how to show empathy in their thinking. Teaching through role-playing was one strategy mentioned by the interviewees, which involved presenting students with a scenario, allowing them to put themselves in someone else's shoes, and consider how it may have felt from the other person's perspective.

Growth mindset. As students received feedback, the educators in this study showed that having a growth mindset played a significant role in addition to attitude and empathy. Rather than getting upset about marks on their paper, students who were able to shift their attitudes and say, "Oh! This is what I can do next time," demonstrated that they believed they could persevere through the challenging situation. One class who used Class Dojo (Class Twist, n.d.) used the phrase "in a dip" when they were struggling with a particular concept. The students saw their

struggle as positive learning, as their brain growing, and as they were trying to climb out of the dip. They were taught how to use tools to help them climb out, such as their teacher, a friend, or their own persistence. For example, during writer's workshop, the teacher often observed students helping each other and encouraging each other to keep trying to get out of the dip.

The participating educators also saw attitude and method of communication affect student mindset. If a student heard, "You did this wrong," they did not respond as openly as when they were told, "Have you thought about doing this?" Students who continually heard encouraging messages would also grow a more positive mindset. For example, an interviewee described a student who continually said, "I can't! I can't! I can't!" change her mindset when her teacher continually responded with, "I bet you can!" The student started with small steps and eventually made improvements with a positive attitude approach. The teacher saw evidence as the student rewired her thinking and developed an "I can do it" attitude.

Event reporting / self-evaluating. Event reporting to the participating educators was defined as students coming forward to communicate a particular situation and taking ownership of their actions without fear of being reprimanded or being assigned a punitive punishment. The interviewees explained that students do not often communicate that they are not learning something in class because they may be perceived as dumb, may perceive themselves as slow, or they do not want to disappoint the teacher or their parents. Students would also refrain from being open and honest if they felt there was going to be some kind of punitive action taken against them. On the contrary, students may feel less anxious to talk about something that happened or something they did if what they were reporting was viewed as a learning opportunity. The participating educators believed that it was good for students to have a form of

non-punitive reporting where there were not consequences tied to the event, but that the report was focused on safety and learning.

Academically, the interviewees expressed that event reporting could allow teachers to more clearly understand how a student was progressing in their learning. It could also help students be more receptive to figuring out how to grow more in what they were learning. Socially and emotionally, event reporting could communicate how a student felt in a certain situation. Participants agreed that event reporting should already fit into education, but also understood that it would require a culture shift away from assigning punitive measures when a student made a poor choice.

The interviewed educators also had some concerns in regard to event reporting, such as how to handle incidents involving zero tolerance policies. Another concern in regard to event reporting was that young students may not always realize where they went wrong, that something did go wrong, or what it was; an adult would need to bring the action to the student's attention. There would also need to be a certain amount of maturity in the child to identify that something went wrong and potentially what went wrong in order to talk through the necessary repair. The interviewees brought up thoughtful questions: How do we start giving students opportunities to catch their own mistakes and own them? Do we allow them to self-assess enough? Do we give them the tools to score their own work and not attach such high stakes? One educator stated, "The only high stake is to learn. It's not pass and fail; it's to learn." The overall consensus was that students have the ability to see where they went wrong and could be coached on how to report the event whether it involved an academic, social, or emotional situation.

The participants expressed that in order for event reporting to work in the realm of education, it would have to involve value being placed on the learning process versus the outcome. Focus would need to be placed on the process and improving the process, and students would need to care about the process; however, policies such as issuing grades defeats the idea of valuing the process. An example described by multiple participants involved students engaged in correcting their own work with a marker to show where the student needed to improve. Students often wanted to change their answers with their pencil rather than mark it with the marker because they did not want the teacher to know they got it wrong. The participating educators felt that students were ashamed or embarrassed when making a mistake rather than realizing and accepting the mistake as an area in which they needed further practice.

One method that the participants expressed would be a helpful way to report events was to write down the details of the report and share the details with the necessary people because it adds an accountability component. Other methods of reporting could be through conversation, triads, one-on-one discussions, email, or even by recording themselves. If the report was academic, the students could use their reports as a type of video portfolio. Revisiting their portfolio later in the year or at the end of the year would be an eye-opener to see what they were struggling with and what they learned from persevering through the challenge. Although it would take laying groundwork and a foundation of open and honest reflection, the participants felt that even primary students could engage in such reporting: "It may be harder when they're younger, but as they grow, if they're honest with themselves and honest to others, and feel free to express themselves, it will spill over into all aspects of their life."

Reflection. The educators in the study communicated the benefits of students engaging in self-reflection as a method of event reporting. The interviewees explained that student

reflection was powerful in dealing with academic, social, and emotional situations. Academically, students reflected on how they felt when they were doing their work, how they were feeling when they got frustrated, and how it felt to navigate through different threats they were faced with at home and school.

Since it may be difficult for some students to write down their reflections, the participating educators described steps that the teacher could take to guide students through self-reflection by asking them a series of questions: What did you like about this? What do you think you did well on this? What do you think you could do next time? How do you think you could improve your writing or your illustration? Although some interviewees expressed concern about the time it would take during the school day to encourage and allow students to self-reflect, they agreed that reflecting on academic work, behavior, and emotions could lead students into making better choices in all areas of development while looking at the action, why the student chose that action, and what action he or she would choose next time. Students could look at their work and figure out where they could improve, where they could learn from their mistake, and determine what concept they need additional study.

Learning outcome. The potential learning outcomes that came from event reporting were expressed from the participating educators in various examples involving academic, social, and emotional development. Academically, student-led conferences between teacher and child allowed the child to be able to talk about where they were in their learning process. Most often, it was mostly the teacher reporting on the student's progress versus the student evaluating their own progress; however, the participants explained that it would be more beneficial if the student was able to determine their own growth. In self-critiquing, the student would ask themselves,

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"Where am I in the process?" In teacher-critiquing, the student would ask the teacher, "Where do you think I am and how did I do?"

The participating educators described that socially and emotionally, by engaging in event reporting, students could get a sense that they are being heard and that their needs are being met. Being able to share certain things with their teacher releases some anxiety that they may carry at the beginning of the day. For example, one educator described a student who would come into the classroom each day with a list of topics she needed to share with her teacher before she felt she could start her day. The student learned that this sense of release cleared her mind so she was able to focus on her learning.

Environment. The educators in the study expressed that the students' environment, such as the teacher's positivity, could have an impact on the students' openness when it came to event reporting and self-evaluation. When students felt positive about their environment, it allowed them to feel successful, positive, secure, and safe. For example, a calm classroom environment lead to more effective communication and interaction between students. One educator expressed her experience in observing students feeling "smarter" in their environment when the classroom was a positive learning environment for students. For example, when teachers taught the interpersonal skills to be in a collaborative group, students learned how to be active listeners and students were more willing to speak up. Feeling secure in their environment, students were more likely to transfer skills learned in the social and emotional realm into their academic performance. For example, the autistic student previously mentioned used the skills that he learned for social and emotional incidents in his academic performance. The teacher had observed the student working; and suddenly the student would get up, walk around the classroom four times, sit back down at his desk, and continued to work. Something inside the student told

him that he does not want to work right now, so he used the tools provided in his environment to meet his needs.

Leadership

Two sub-questions were presented in reference to leadership: How can stronger leadership skills impact a student's academic, social, and emotional development? How does stronger teamwork impact a student's academic, social, and emotional development? Throughout the data gathering process, forced opportunity continued to present as a topic of discussion under leadership, which eventually turned into opportunities for leadership, whether the opportunities were forced or volunteered. Teamwork remained as a sub-category for leadership because teamwork in education required strong leadership; "The leader affects the group, and the group affects the strength of the leader." Themes discussed in regard to leadership skills are described in Table 2.

Table 2

Themes Emerged from Questions Involving Leadership

Research Questions	Emergent Themes
R3. How can stronger leadership skills impact a student's academic, social, and emotional development? R4. How does stronger teamwork impact a student's academic, social, and emotional development?	• Providing students with leadership opportunities will allow students to engage in risk-taking, which builds confidence. • Building collaboration and problem-solving skills in a team environment will positively enhance student ability to engage in teamwork.

Presented opportunity. The participating educators expressed several characteristics and skills that student leaders exhibited, including strong interpersonal skills, so that students could communicate effectively with their peers. Children who were more verbal tended to take on leadership roles on campus, because they were able to articulate ideas and quickly connect

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their words to their thinking. The interviewees explained that student leaders also possessed

strong listening skills in that they had the ability to gather information by listening and then were

able to exhibit self-starting skills; "Some see it as charisma; but it is because they can

communicate clearly and they have a pulse on the audience. They know how to connect with

whom they are talking to. It's connected to empathy." The participating educators also

expressed that questioning skills were strong in leaders because they were not afraid to ask

questions if they did not understand something or if they wanted to clarify their learning: Why is

this done this way? Why did this start this way? How did we get here? Thinking in different

ways and gathering information could be clarification, but it was also for curiosity purposes.

The participants experienced the importance of giving students multiple opportunities to

be involved in leadership positions because the experience could build their confidence level. It

came natural for some students to stand up and lead the class in an activity, but all students

should be given the opportunity. For example, a shy student may not raise their hand to lead the

class in the Pledge of Allegiance, but if the activity was assigned to the student, the student may

grow in that area and find that they too can be a leader. While encouraging students to work

outside of their comfort zone, the interviewees expressed the importance to ensure that the

natural leaders allow the assigned leader room to lead so that the natural leader does not take

over the activity, which connects back to teaching empathy.

While some participating educators believed that the more opportunities for leadership

that are provided for students, the stronger leader they may become, other participants cautioned

to watch for students who may not have the confidence level to communicate to the teacher that

they did not want to be in a leadership role. Some students were placed in leadership roles

because they were responsible and the teacher thought they could handle increased

responsibility; but the student did not want to be in the assigned leadership role, and the teacher needed to be aware of the student's feelings. Although some students were uncomfortable at first and eventually began appreciating the leadership position, other students felt just as strongly about not wanting to be in leadership positions, and the participants felt those students' feelings should also be respected.

Risk-taking and confidence. One area that the participating educators included in presented opportunities of leadership was the concept of risk-taking, which required confidence and self-esteem. Students needed to possess a certain level of self-confidence, positive attitude, and a growth mindset to be able to take risks at home, school, and in the community. Students with a higher self-esteem and who felt confident about what they were doing tended to be leaders and exhibited more of a driver personality. The interviewees described these students as having a take-charge attitude and having comfort in others that take charge. One educator described an example observed in kindergarten students who came to school with confidence:

> Whether they are on the playground or in the classroom, they come to school ready to be at school. Their parents leave, they wave good-bye, and they begin their day; they are not crying or hiding in the corner. They are confident that they are going to be all right.

The participants agreed that other students noticed higher levels of confidence in their peers and naturally responded to those students as a leader.

The participating educators experienced that teachers play a role in building confidence in students, in part by allowing students to engage in certain situations. They felt it is important to empower students and for students to feel empowered. Academically, students with a high self-esteem were able to discuss a problem they did incorrectly or take risks in solving a problem in front of the class. Confidence and self-esteem also affected student mindset. If students have

confidence, they were more likely to take risks and try new things. Students with low confidence tended to get distracted. An example given by one of the interviewees involved a boy who struggled with his sounds and got distracted because he was not able to complete the activity involving sounds, which then led to distracting others. Students often were discouraged when they continually struggled; they needed a positive outlook and positive self-esteem or they tended to shut down. The participants agreed that confidence affected students' attitudes, and attitudes affected their confidence. When students have accomplished something, they felt brave enough to try something else and took a risk in another task.

Socially, the participating educators felt that a positive self-esteem was more likely to yield a positive attitude and an open personality: outgoing and receptive. A low self-esteem would make the student more guarded and less open or welcoming to others. For example, a student new to the classroom refused to interact with anyone in the class and would not look at anyone. After two weeks of encouragement from the teacher and peers, the student started participating, shook hands with others, and performed better academically. By feeling connected, the student felt better about himself, and it made it possible for him to take the risk to interact with others.

Teamwork. The participating educators spoke about the concept of teamwork as a method of academic, social, and emotional accomplishment. The social and emotional component of teamwork superseded the importance of academics because teamwork allowed students to do things in a way that they were looking out for one another's feelings, checking in on one another's progress, making sure they were feeling all right, leaning on each other for support, and enjoying each other's company as they pulled together. The participating educators discussed collaboration and problem-solving skills in relation to teamwork.

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Collaboration. Throughout the interviews, the educators had a variety of opinions in regard to the connection between teamwork and collaboration. Overall, the educators agreed that teamwork and collaboration involved working together toward a common goal: "Teamwork and collaboration are intertwined; when teamwork is working well, it involves collaboration among the team." As the team collaborated, they were working as a team because collaboration was needed to be successful at teamwork. The success of the team depended on the effectiveness of the quality of collaboration and communication. The primary difference that the participants observed in student work and interaction was that teamwork was present when students were working together to accomplish the same goal, and collaboration was the act of giving input and ideas that contributed to the team's goal. Collaboration involved individuals bringing their experiences to the group in order to enhance and add to the discussion.

The participants also agreed that educators needed to spend more time teaching collaboration rather than just telling students to "turn and talk to your partner," because collaboration involved listening to each other and talking with one other. One participating teacher gave an example of using spider web discussions where students facilitated a discussion and learned how to get everyone to contribute their ideas to the discussion topic. Interviewees also described modeling collaborative discussions so that students could see how to effectively talk with their partners. Overall, the interviewed educators believed that in order to have effective collaboration, students needed to have clear expectations, clear criteria of what they were attempting to accomplish, and clear leadership to guide the team.

Problem-solving. The participating educators explained that students may use teamwork and collaboration to solve problems efficiently. They expressed that teamwork worked well with a culture of kindness where students were working together, everyone was participating, there

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was a feeling of mutual interaction, and students were listening and compromising with one another. Solving problems with teamwork and collaboration involved "contributing toward something that is bigger than themselves – actions toward a greater good," as described by one interviewee. Another participant posed the question of whether these opportunities were provided to students often enough. When working as a team to solve a problem or accomplish a task, the participants agreed that everyone in the team should feel that there is mutual interaction where not just one person is dominating the conversation or making the decisions; the team is listening to each other's arguments, sharing ideas, and making sure everyone is a part of the process.

Decision-Making

There were two sub-questions that were asked in terms of decision-making skills: Why are decision-planning skills important to a student's academic, social, and emotional development? How does displaying situational awareness impact a student's academic, social, and emotional development? Overall, the interviewees expressed the importance for students to be able to see the bigger picture when making decisions and to set small goals to meet along the way to a larger goal. Also discussed in regard to effective decision-making was decision-planning as well as situational awareness. Themes emerged in decision-making skills are described in Table 3.

Table 3

Themes Emerged from Questions Involving Decision-Making Skills

Research Questions	Emergent Themes
R5. Why are decision-planning skills important to a student's academic, social, and emotional development? R6. How does displaying situational awareness impact a student's academic, social, and emotional development?	• Decision-planning skills are essential to student development through goal-setting and role-playing. • Recognizing a problem, reacting restoratively, and regaining and reflecting on the restored situation positively impacts the ability for students to achieve situational awareness.

The participating educators in this study described several important characteristics necessary to exhibit effective decision-making skills, including self-confidence, empathy, and flexibility. Students needed confidence to make decisions that could be difficult to make. Often times, students already knew the right choice to make, but they needed the confidence to make that choice while faced with various threats and challenges. The interviewees discussed the need for empathy in order to make those tough decisions so that students were able to see how their decisions may affect other people. By showing flexibility in their deep-thought process, students were more willing to try different approaches and considered different variables before making a decision.

Decision-planning. When asked how promoting decision-planning, or what aviation calls "what-if planning," into education, the participating educators saw decision-planning as a form of a map that routed students to an end result and presented the question, "If this happens, what will I do?" To interviewees defined decision-planning as a means to broaden the student's knowledge base and build awareness based on the student's background knowledge and experiences. The participants felt that by practicing various situations, over time, students could

be able to recognize a problem, respond appropriately, and regain awareness using a variety of strategies and tools. The interviewed educators agreed that students needed to be taught and coached through decision-planning, so that the child would eventually be able to "put that last piece of the puzzle together for themselves – put it all together in the end," as one interviewee explained. For example, students are taught several different methods to multiple two-digit numbers by two-digit numbers, but in the end, students need to be able to determine for themselves the best strategy that works for them. Overall, the participants saw the concept of decision-planning connected to goal-setting and role-playing as preparation for future situations.

Goal-setting. The participating educators expressed that setting goals, planning out a path, and reaching for a bigger picture could benefit students in making quality decisions. Empowering students to make decisions that promote their own learning could improve their motivation to succeed and their belief in themselves that they can succeed. An example that one interviewee described involved a student who after four years of receiving resource assistance decided that she wanted to improve her own reading. She began practicing every day and even gave herself homework. The student crafted her goal off of what level her peers were expected to be reading, even though she realized that it may take her a longer time to achieve that level. The student saw the bigger picture and realized it was not going to happen in one day – it's a process; however, she finally achieved the motivation to stick with her goal and displayed the perseverance necessary to achieve the goal.

The participants expressed different motivators that they have seen drive students in their goal-setting and achievement. Some participating educators felt that students were motivated by proving themselves to their parents, peers, and self. Students wanted to please their teacher, but it involved both extrinsic and intrinsic motivation; they wanted the gold star, but it also felt good

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inside to achieve their goals. One interviewee described a specific student quietly seated at his

place on the carpet who was greatly motivated by receiving a gold star, an extrinsic motivator:

> He equates it to, "If I do this, then she's noticing me working hard and making good
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> decisions, and I'll get a gold star." Another student may be tempted to join in on
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> disruptive behavior going on around him, but he decides to follow directions because he
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> wants to please, he wants to earn a gold star, he wants to get a character education award.

The educator went on to explain that with maturity, she has seen the extrinsic motivation begin

to be intrinsic where students start making good decisions and are motivated to reach their goals

for their own satisfaction. The participants agreed that it takes great effort to make good

decisions consistently, making a conscious choice of wanting to do the right thing.

Some educators in this study have experienced that it may be harder for younger students

to set goals, but feel that students do have a sense of areas where they can improve and can build

a positive attitude. Realizing they may not achieve success the first time, students believe they

can eventually succeed with perseverance and support. Supporting students in determining the

desired final outcome can help students map the appropriate path in reaching their goals.

Questions that the interviewees posed that are used to guide students through goal setting

included the following: What do you feel strong about? What do you think is going well? What

is it that you want to achieve? Where do you want to be in six weeks? The participants felt that

it is more powerful when students come up with the answers to these questions.

Role-playing. The educators in the study agreed that role-playing was important for

behavioral and interpersonal growth. They expressed that teachers presented a lot of instruction

verbally, but there was not a lot of opportunity to show and practice what the concepts may look

like in action. For example, reviewing with students how to handle different situations can offer

tremendous help in handling threats that may arise at home, at school, or in the community. Communicating and acting out different scenarios was one way these educators have helped students plan how they would act in different situations.

Some educators in this study were not convinced that role-playing is effective with all students because practicing in a hypothetical situation is different than responding appropriately in a heightened-emotional situation; the practiced effort does not always connect when the student is "in the moment." Students often needed prompts, in the interviewees examples, as reminders of how to respond in a stressful situation. When the student is out on the playground, for example, the teacher was not able to provide the necessary prompt. It was also expressed by the participants that students who were in the egocentric stage of development or did not show empathy may not learn from role-playing. It may be difficult to role-play if students were not able to look beyond themselves. One educator spoke from a student's perspective: "Why are you making me act like something else when that happened when that is not the way I felt?" Role-played scenarios did not always connect accurately with how all students felt in a particular situation, but, overall, the participating educators agreed role-playing has been beneficial when used in social and emotional development.

Situational awareness. Most educators in this study agreed that situational awareness could benefit students by being able to recognize a situation or problem, figure out where they fit into the problem, regain control over the problem, and then reflect on why they did not want to have that problem occur again. Participants also felt that situational awareness would need to be taught and practiced, which would mean that teachers would have to place the highest priority on the student even if it meant to release the idea of making it completely through a textbook. One educator explained that school counselors just finished a training in her classroom that involved

defining *situation* and learning how to read a situation. She explained that her students applied

that knowledge outside of the classroom and would periodically share with her how they handled

different "situations."

There was hesitation expressed by some participating educators as to how students could

use situational awareness since students often times wanted to be told what to do in a situation

rather than figuring it out themselves. An interviewee explained, "They don't necessarily look at

the question or problem. They're not aware or present in today's world because it is so fast-

paced. They don't take the time to become aware of their surroundings and what is going on."

Students also may lack the necessary knowledge base in order to see and recognize what is

happening in situational awareness. Additionally, students may lack the self-esteem to be able to

determine how they are going to react, how they chose to react, or whether they have the skills to

react appropriately. Skills that the participants felt were necessary included self-awareness to

recognize a problem, resiliency to bounce back, empathy to see that someone else may be

struggling, and confidence to be able to stay on course to regain situational awareness.

Recognize. The participating educators described recognizing a situation within

situational awareness as students reading social cues and body language to notice signs of what

is happening in their environment. Some participants felt that noticing signs of what is

happening socially should be an ongoing discussion with students: discussing how to react if

someone has a sad face or what students can do to help. Participants agreed that students were

good at reading body language and being intuitive.

Participating educators also felt that it was important to be able to recognize feelings

within themselves. One educator stated:

It's more powerful if the student can recognize feelings within themselves rather than only the teacher recognizing them and intervening. If students can start recognizing for themselves, feeling the heat in their face or heart beating quickly, they don't have to wait for an adult to intervene. They can self-regulate.

Part of this recognition is acknowledging their own mistakes or the role they may have played in a situation. The participants felt that when students were able to acknowledge a poor choice or how their actions impacted other students around them, they were better able to come up with a more appropriate solution as they regained situational awareness.

React/restorative response. After recognizing a situation or problem, the participating educators felt that students needed to be trained to take it upon themselves to react responsibly or delegate to get back on track. One interviewee described a hypothetical example of a student on the playground who observed a problem or a student in the classroom who was sitting among disruptive students. The student tried to figure out what they should do, whether they should ignore the situation, join in, or walk away to report it. The participant explained that with restorative justice training, students were reacting to situations more appropriately. Rather than kicking, hitting, or yelling, students were talking things out with their peers. Overall, the participants agreed that restorative practices supported social and emotional awareness and decision-making.

Regain/reflect. The educators in the study expressed that once students have recognized a problem and reacted to it, it took confidence to be able to regain situational awareness and reflect on the outcome. One participant described regaining situational awareness as "making a decision and readjusting their thinking to make it smooth sailing and flying correctly in the classroom." Sometimes this took thinking outside the box, considering multiple ways around a

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situation, and not getting stuck on just one answer or one solution. For example, an interviewee explained a symbol that was used by the teacher and students to remind students to stop talking or to regain focus. There were some students who used this symbol obnoxiously, repeating the gesture over and over even though the student was not changing their behavior, rather than trying a different solution to gain the desired outcome. Academically, students exhibited decision-making skills to regain situational awareness when working as a team or in a group; students learned how to disagree with someone else's ideas without getting into an argument.

The participants felt that when it came to reflecting on a situation, it was the adult who often prompted the reflection, but it would be best if students could prompt their own reflection. Rather than the adult asking, "What are you going to do next time," students could ask themselves that question: "What am I going to do next time?" One interviewee expressed that it is one thing to say, "That went bad;" It's another thing to say, "That went bad. What are we going to do next time?" This restorative reflection, in the educator's perspective, could lead students to feel they could still reach their goals even if they make a poor choice or fail at an attempt. The ability to use self-reflection after making a decision could give students the confidence to attempt the situation again in the future, which goes back to the concept of growth mindset that the participating educators emphasized in interpersonal communications.

Chapter 4 Summary

The analysis of the data gathered in this grounded theory research project developed theory to answer the central research question: How do educators perceive applying the principles of Cockpit Resource Management (CRM) in the classroom in the realm of academic, social, and emotional development to improve students' interpersonal communications, leadership, and decision-making skills? The findings from the data analysis were categorized

into three main sections: interpersonal communications, leadership, and decision-making skills. The participants discussed the impact of interpersonal communication on classroom community, receiving feedback, and expressing self-evaluation through event reporting. Leadership was examined, and findings revealed leadership opportunities presented to students and teamwork within student leadership. The educators in the study also spoke to decision-making skills through decision-planning and situational awareness.

Findings helped to develop the theory that revealed the importance of building classroom community, coaching students in receiving feedback, and being able to self-evaluate through event reporting within interpersonal communications. Establishing a classroom community where students feel connected, the participants expressed building relationships between teachers and students, as well as among students. Practicing restorative means of discipline is one method to help build a strong classroom community. The participants emphasized the importance of effective communication, including active listening, in creating a classroom community where students are connected and feel like a family. Additional findings were discussed in regard to students receiving feedback from adults and peers, and how their attitude, level of empathy, and presence of a growth mindset can affect the value of the feedback they receive. Engaging in self-evaluation, in the term of event reporting, was also discussed including the effectiveness of student reflection, considering learning outcomes as a piece of self-evaluation, and the impact that the student's environment can have on self-evaluation.

This chapter also discussed findings associated with leadership, presented leadership opportunities, and teamwork. Participating educators expressed a necessary sense of risk-taking, confidence, and self-esteem for students to successfully engage in presented leadership opportunities. Teamwork was discussed under leadership because the participants agreed that it

takes strong leadership to have a strong team. Students need effective collaboration and problem-solving skills in order to create a strong team and accomplish the goals that are set for the team.

The findings that participating educators expressed in the realm of decision-making skills was also discussed to include decision-planning and situational awareness. It was established among the participants that students typically already know the right choice to make, but they need the confidence to make the right decision. Findings revealed that decision-planning could help students in their decision-making by engaging in goal-setting and role-playing. Additionally, participants saw the importance of students being able to engage in situational awareness by recognizing a problem or situation, reacting appropriately and restoratively, and regaining and reflecting on the restored situation.

The research findings revealed through data analysis have established a theory in education that is connected to the aviation concept of Cockpit Resource Management (CRM). Having the strong connection to community, the theory of Classroom-Community Resource Management (CCRM) is explained in Chapter 5: Discussion and Conclusion. The results of the research project are discussed in relation to the literature as well as implications that the results have for practice, policy, and theory in education.

Chapter 5: Discussion and Conclusion

This study has offered administrators and other educators a process that students may use to address various threats and challenges that students may face by focusing on strengthening their interpersonal communications, leadership, and decision-making skills. The study involved gathering educators' perspectives on extending Cockpit Resource Management (CRM), an aviation training model, into education to support students' academic, social, and emotional development. Thirteen credentialed educators who interacted regularly with kindergarten through second-grade students participated in the study to answer the central research question of integrating CRM into education. The researcher collected and analyzed the data from semi-structured interviews with the educators until a theory grounded in data was developed called Classroom-Community Resource Management (CCRM).

The purpose of this chapter is to review the main sections of the research study, discuss the meanings of the results, and make connections between what the results mean to the education community and how the results are informed by the literature. The CRM elements initially presented to the participating educators were interpreted and extended to develop the theory, CCRM, and this chapter will bring CCRM to life in the realm of students' academic, social, and emotional development. The CCRM theory involves interpersonal communication in building a classroom community, accepting feedback, and self-evaluating or event reporting. The element of leadership includes providing students with opportunities to lead and engaging in teamwork. Furthermore, decision-making skills involve decision-planning and situational awareness. Each element has been expressed by participating educators to support students handling threats and challenges as they navigate through their growth and development.

Summary of the Results

The results of this study relate directly to the central research question: How do educators perceive applying the principles of CRM to the classroom in the realm of academic, social, and emotional development to improve students' interpersonal communications, leadership, and decision-making skills? Collecting educators' perspectives and analyzing the data-generated theory indicates that CCRM could have a significant impact on student development by providing students with a process to avoid, trap, and mitigate errors that are caused by threats and challenges presented to them on a daily basis. Helmreich et al. (1989) explained that the primary focus of CRM was to improve communication in the cockpit, which then would positively impact interpersonal communications. Likewise, the interpersonal connection and engagement in education has been found to greatly affect student development (Baumeister & Leary, 1995; Chick, 2006; Nath et al., 1996). A lack of leadership skills was attributed to incidents in flight (Flin et al., 2002; Helmreich et al., 1999; McKeel, 2012), and effective teamwork requires efficient collaboration and teamwork among the crewmembers (Brown & Moren, 2003). Literature in the field of education also shows that children learn best by interacting with one another in continual discussion (Chick, 2006; Nath et al., 1996), and interacting with peers is shown to build leadership skills in students (Gutuskey et al., 2014). Errors in decision-making in the aviation industry were found to be caused primarily by human factors (Diehl, 1991; Flin et al., 2002). Similarly, Davis (2014) emphasized the importance for students to be able to acknowledge and reflect on errors in any given situation as a decision-making tool for growth and development.

Recent literature reviewed on implementing CRM training in non-pilot roles showed different results than the literature initially reviewed where CRM had improved safety and

performance among various industries. Havinga, Jan de Boer, Rae, and Dekker (2017), in a study of non-pilot industries such as maritime, nuclear power, oil and gas, and air traffic control, were unable to find a clear link between CRM and a reduction of accidents due to a variety of methodological issues including the validity in measuring results and outcomes. The researchers identified safety as an avoidance of negative events and translated efficiency as an improvement in general performance. Of the literature that Havinga et. al reviewed, in terms of an improvement in safety, 100% of the literature reviewed reported change at the individual level, where there were less reported effects at the team level: Maritime 17%, nuclear power 0%, oil and gas 20%, and air traffic control 17%. Havinga et al. also found that 72% of maritime literature, 50% of nuclear power, 60% of oil and gas, and 50% of air traffic control literature mentioned that CRM improved errors caused by human factors, which was consistent with previous literature reviewed. The elements of CRM involved in the CRM models that were reviewed included decision-making, situational awareness, leadership and management, cooperation, and personal resources, several of which were included in this researcher's study that extended CRM into education. The bottom line that Havinga et al. found was that CRM models have diverse complexity depending on the type of industry where CRM is being utilized. The grounded theory study that resulted in the development of the CCRM theory contains similar areas of focus as the industries reviewed by Havinga et al., such as avoiding negative events and improving student development, but less on the sole focus of behavior and attitude as suggested in their review. In CCRM, students may progress in their academic, social, and emotional development by continually referencing the elements in the CCRM process to help avoid, trap and mitigate errors that are caused by threats and challenges stemming from home, school, and in the community.

Charmaz (2014) suggested that grounded theory guides researchers, yet allows for focus and flexibility. The researcher in this study practiced focus and flexibility throughout the research process, which allowed for the evolution of the theory grounded in data to emerge. In this qualitative study, the researcher took a grounded theory approach by interviewing educators from a specific school who recently had implemented a character education program that reflected restorative practices. The data from the interviews were analyzed in a process of open, axial, and selective coding while simultaneously conducting follow-up interviews with the participants (Corbin & Strauss, 2015; Creswell, 2013). The alternating sequence of interacting with the data through interviewing and analyzing (Charmaz, 2014) eventually led to the developed theory, CCRM.

The major findings of this study involve the initial three elements of CRM that were provided as a focus in aviation: interpersonal communications, leadership, and decision-making skills. The components of each category that emerged from the participant interviews provided depth into how the three elements affect students' academic, social, and emotional development. Within interpersonal communications, common themes included building classroom community, effectively receiving feedback, and the importance of event reporting and self-evaluation. Building relationships, practicing restorative interactions, and communicating effectively are necessary for building a positive classroom community. Positive student attitudes, exhibiting empathy, and exercising a growth mindset will positively affect the way a student receives feedback from adults and peers. Engaging in reflection, evaluating learning outcomes, and assessing student environments will positively impact the way students report events and self-evaluate (Table 4).

Table 4

Interpersonal Communications

CCRM Theme	Practicing Component
Classroom Community	• Building relationships • Restorative/Sanford Harmony • Communication
Feedback	• Attitude/personality • Empathy • Growth mindset
Event Reporting (self-evaluate)	• Reflection • Learning outcome • Environment

Within leadership, participating educators expressed common themes such as leadership

opportunities presented to students and engaging in teamwork. Providing students with

leadership opportunities will allow students to engage in risk-taking, which then builds

confidence. Additionally, building collaboration and problem-solving skills in a team

environment will positively enhance students' ability to engage in teamwork (Table 5).

Table 5

Leadership

CCRM Theme	Practicing Component
Presented Leadership Opportunity	• Risk-taking • Confidence
Teamwork	• Collaboration • Problem-solving

The final element, decision-making, involved common themes such as decision-planning

and situational awareness. Decision-planning skills are essential to student development through

goal-setting and role-playing. Recognizing a problem, reacting restoratively, and regaining and

reflecting on the restored situation positively impacts the ability for students to achieve

situational awareness (Table 6).

Table 6

Decision-Making

CCRM Theme	Practicing Component
Decision-Planning	• Goal-setting • Role-playing
Situational Awareness	• Recognize • React/restorative response • Regain/reflect

Discussion of the Results

The primary focus of CRM, as presented by various aviation researchers, was to improve

the performance and safety of flights through reduced pilot error by improving pilots'

interpersonal communications, leadership, and decision-making skills (Cioffi, 2009; Martinez,

2015). Aviation companies around the world developed training models that fulfilled the

mission and visions of the company. Examples of CRM elements included communication,

situational awareness, problem-solving, decision-making, and teamwork (Flight, 2017). The

researcher in this study designed a study, based off elements used in CRM, and gathered

educators' perspectives on whether CRM could be applied to education effectively.

The CRM elements that were the initial focus of this research study included attitude and

event reporting as a part of interpersonal relationships, teamwork within the leadership category,

and decision-planning and situational awareness under decision-making. Because principles of

restorative practices and the attitude theory were embedded in CRM, the researcher also included

these practices and theories in the initial study proposal. Restorative practices focus on the interpersonal relations within the members of the school community and using these relationships to restore harm and conflict in a non-punitive manner (Hurley et al., 2015; McCluskey et al., 2008). Practicing restorative justice is found to strengthen teacher-student and student-student relationships and build a sense of community (Zehr & Gohar, 2003). Attribution Theory focuses on seeking an understanding or explanation on certain outcomes or events in a person's life and is suggested in restorative practices rather than simply assigning a punitive punishment (Gaier, 2015; Wolters et al., 2013). The theory that emerged from this study involved deeper concepts that were gathered from the participating educators' perspectives and experiences on each of the three main categories: interpersonal communications, leadership, and decision-making skills.

The educators in this study told stories, provided examples, and described their perspectives on the concepts of CRM that the researcher posed to the participants as they applied to experiences they have had with a diverse range of students. Perspectives from the participating educators were explained while including students in the average range of development, students designated as English-learners, students with identified learning or emotional disabilities, students who struggle with their behavior or learning, and students who exhibited above-average and gifted qualities of their development. The result of the study was the developed theory, CCRM, which provides administrators with a process that all students can use to help navigate through challenges and threats that they may encounter at home, at school, or in the community while successfully progressing through their academic, social, and emotional development.

The initial concept of interpersonal communications included two CRM elements used in aviation: attitude and event reporting. The researcher posed two sub-questions: How can improving student attitudes impact the academic, social, and emotional development of students? How can effective reporting skills impact a student's academic, social, and emotional development? Pilot attitude refers to the personal viewpoints that pilots display that may affect their interpersonal communication (Cioffi, 2009). Students' attitudes also affect their interpersonal communication such as keeping an open mindset in their learning and in their daily interactions. Initially, the element of attitude was placed as a main category under interpersonal communications because of how much attitude can affect a person's relations; however, through analyzing the participating educators' perspectives, attitude is a piece of interpersonal communications, and was found to affect the way students received feedback.

Event reporting in aviation involves a non-punitive, risk-free method of communicating any mishaps or errors in judgment that may occur during flight (Helmreich et al., 1999). When the researcher connected aviation's use of event reporting to education, she initially had it as a main category under interpersonal communications. The findings from the research maintained event reporting as a main heading, and it also took on the meaning of self-evaluation; this allowed the participating educators to view event reporting in the academic area of development as well as in the social and emotional realms.

Rather than only presenting attitude and event reporting under interpersonal communications, the emerged theory involves strengthening interpersonal communications by building classroom community, receiving feedback openly, and engaging in event reporting or self-evaluation. To effectively establish a positive classroom community, the participants expressed the necessity of building teacher-student and student-student relationships, practicing

restorative interactions, and communicating clearly. The participating educators agreed that by

creating a family atmosphere where students feel connected and valued, students will feel more

open to share their learning, take risks in expressing a lack of understanding, and be able to

handle peer misunderstandings and interactions more successfully. One educator expressed,

"When you're building a classroom community, we talk about it like a machine and everybody

has their part that they play in creating this classroom community." The overall consensus from

the participating educators is that building and fostering relationships is an essential piece to a

classroom community. Just as restorative practices are embedded throughout CRM, they are

also foundational to CCRM.

The researcher found the concept of feedback continually resurfacing within the

interviews as the participants spoke of attitude, empathy, and growth mindset. An educator in

the study posed an interesting question regarding receiving feedback: "How do we create a

relationship with kids where they understand that it's not punitive, and that it's learning?" The

participating educators strongly believe that attitude is a driver to student motivation and

performance, so working with students to keep a positive attitude is essential. Students also need

empathy, as one educator explained, in order to connect collaboration and communication so that

when they are hearing something they do not understand, they will attempt to understand where

the speaker is coming from rather than shutting down. This is where growth mindset comes into

play, where students understand that making mistakes and errors in judgment can lead to a

positive learning experience; the participating educators emphasized the importance of students

having an "I can do it" outlook.

Findings from the participating educators' perspectives showed that by engaging in

continual reflection, evaluating their own learning outcomes, and assessing their environment,

students will be able to positively engage in event reporting and self-evaluations. The researcher included this concept in the study with the idea that students could use a form of event reporting to recognize and openly discuss a situation whether it involves their academic, social, or emotional development. The participants extended the idea of event reporting into engaging students in a self-reflective activity. While the participating educators believed that student reflection is "powerful and important," they also saw it occurring mostly in social and emotional situations; however, one educator stated, "It's setting them up for really trying to understand how they're feeling when they're doing their work and how they're feeling when they get frustrated." Being able to discuss and identify goals and learning outcomes also fell under this category because it entails the idea of engaging students in self-reflection. One educator explained the difference between self-critique and teacher-critique: Self-critiquing involves, "Where am I in the process?" Teacher-critiquing is the student asking, "Where do you think I am, and how did I do?" The interviewed educators expressed that the school and classroom environment greatly affects these learning outcomes. One educator put it this way: "We can't do a ton about what is happening at home, but this can be a safe place. That should be the goal, to make sure they feel secure and safe enough to learn here."

The concept of leadership in this study originally involved teamwork, which also included collaboration. There were two sub-questions posed in this section: How can stronger leadership skills impact a student's academic, social, and emotional development? How does stronger teamwork impact a student's academic, social, and emotional development? In the researcher's initial proposal, teamwork was defined as balancing the workload by monitoring each other, soliciting assistance from others, and providing necessary feedback when needed. Findings of this study showed teamwork as a significant piece of leadership; but the educators

also emphasized the importance of presenting leadership opportunities to students to build leadership qualities.

A common theme among the participating educators was that providing students with leadership opportunities will allow students to engage in risk-taking, which also builds self-confidence and students' self-esteem. The concept of forced leadership was discussed in several interviews; both educators and students give students forced leadership opportunities. Participants explained that teachers often give students extra jobs who present themselves as a leader: responsible, organized, and have a "go getter" type of attitude. One educator, however, cautioned against providing forced opportunities in this manner because even though the student may present as a leader, the student may not want to be placed in that situation. Overall, the participating educators felt that the more opportunities for leadership that are provided, the student will develop stronger leadership skills, which could increase the student's confidence and self-esteem. One teacher explained, "If someone is shy, they won't necessarily raise their hand to be a leader of that group; but if they're assigned it, maybe giving them that opportunity to be the leader will help them to grow." The participants agreed that confidence affects students' attitude; they are more willing to take risks and be outside their comfort zone.

Teamwork remained as a significant piece of leadership, and the participating educators agreed that it takes leadership qualities among each team member to engage in effective collaboration and exhibit strong problem-solving skills. The researcher had collaboration and teamwork closely connected in the initial project proposal, and the educators' perspective agreed that collaboration and teamwork go hand-in-hand as students work toward a common goal. Teamwork involves collaboration in that students need to collaborate and share ideas as a part of effective teamwork. Along the same lines, one participant spoke about problem-solving through

teamwork as students assisted one another and helped each other "out of the dip," a strategy used in Class Dojo (Class Twist, n.d.); when a student is struggling either emotionally or academically, other students will help the student by encouraging them to get out of the dip or through the maze.

Decision-making, in the original research design, included decision-planning and situational awareness. The two sub-questions posed in this section were as follows: Why are decision-planning skills important to a student's academic, social, and emotional development? How does displaying situational awareness impact a student's academic, social, and emotional development? In CRM, decision-planning was initially defined as "what if" planning, which prepares pilots for the unexpected by planning the outcomes of scenarios that could happen in flight (Panger, 2015). In this study, the researcher included decision-planning as an essential element because she wanted educators' perspectives on engaging students in role-playing type activities to prepare for high-pressure situations.

Situational awareness was initially defined as the ability to recognize a threat, react immediately to the threat, and regain situational awareness through communication (Panger, 2015). Since students also face different threats throughout the day, such as hunger, fatigue, or stressful peer interactions, the researcher wanted to get educators' perspective on its use in education. Decision-planning and situational awareness remained as significant headings under decision-making as the participating educators continually emphasized the importance of engaging in these activities to promote strong decision-making skills.

Within decision-planning skills, the participants emphasized the importance of preparing students for the unknown in all areas of development: academic, social, and emotional. One educator expressed this summarization of students considering "what-if" scenarios:

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"What if I failed this? Do I just stop and I'm done and it was a failure? Or was this an opportunity and I learned something so I could make a better choice or decision next time?" I don't know if we do enough with kids to prepare them for those unknowns. And for them, I think the hardest unknown is not getting something right or failing at something the first time. For some kids, I think it takes all of the wind out of their sails, and they're not interested in moving forward anymore because, "Hey, I just failed!" I can see we have light-weight ones like, "What if it doesn't work when you tell the person to stop?" Ok, then you move away. "What if moving away doesn't solve the problem?" Ok, then we can try this. And giving those kids a lot of background knowledge and options.

Background knowledge and information is a common theme among the participants to support decision-planning skills. One educator put it this way: "I think maybe for some kids, having a plan for non-expected emergencies, so to speak, that may be taught to us as a lesson…children need to be taught how to respond." Another educator expressed, "I think we can teach the skills that we need for decision-planning, but to a certain extent, I think that child needs to put the last piece of the puzzle together for themselves." Goal-setting can have a significant influence on how students plan their learning, and some participating educators spoke on extrinsic versus intrinsic motivation. Although students may inherently respond with extrinsic motivators, some participants expressed that providing those extrinsic motivators could eventually lead students to respond with intrinsic motivation because they learn how it feels inside. Role-playing was described by some participating educators as a method to practice playing out decision-planning skills ahead of time so that students are able to make better decisions.

Situational awareness also remained as a significant category within decision-making due to the importance of recognizing, reacting, and regaining awareness of a situation. Participants also emphasized the importance of reflecting on the decisions made during the situational awareness process. Interviewed educators revealed what it may look like when students are able to engage in situational awareness. One educator described the following:

> This is probably a kid who is cognitively aware of the situation; some learning skills, some observational skills, a kid who is probably self-aware. They know themselves well enough to know how to make a good decision or have had experience in making good decisions. So, maybe a kid who is a little more independent, or doesn't depend on people telling them what to do all the time.

The participating educators felt that by teaching situational awareness skills, students would better be able to recognize what is happening around them and take the necessary steps to regain control of the situation using proper communication and reflection skills.

Although the emerged theory takes on a similar skeleton of the study objectives, the evolved theory extends deeper and is well-rounded. As Anderson (n.d.) explained, "Complex educational situations demand complex understanding; thus, the scope of educational research can be extended by the use of qualitative methods" (para. 3). The CCRM theory that was developed based on the educators' perspectives and experiences took on a more complex design than originally proposed by the researcher. By involving various levels of educators in the study, the necessary depth was provided to fully meet the study's objectives.

Discussion of the Results in Relation to the Literature

The theory generated from the educators' perspectives in this study, CCRM, is directly aligned with the literature that was reviewed in Chapter 2 of this dissertation as it applies to

students' academic, social, and emotional development. The academic element addressed in this study involved student collaboration, decision-making within concept development, and the general motivation to succeed. The social factor was applied to student interaction in various situations, supporting one another inside and outside of the classroom, and seeking tolerance and understanding in the midst of conflict. The emotional factor included students practicing self-discipline, utilizing self-reflection, and building a healthy level of self-confidence. The following discusses connections between reviewed literature and the main points that emerged in CCRM as it pertains to student development.

Interpersonal Communications

The educators in this study emphasized the need to establish a positive classroom community where students develop a family-type atmosphere. Baumeister and Leary (1995) and Bazemore and Schiff (2010) advised that people want to feel connected to their community and feel a sense of belongingness. In this type of classroom environment, the participating educators have observed that students are connected, well-rounded, and display positivity. The literature agrees that students who feel a sense of school community often exhibit a more positive attitude, higher motivation, and display more positive behavioral outcomes (Battistich et al., 1995; Catalano et al., 2009). The findings in this study revealed that establishing a positive classroom community requires an emphasis on building relationships, practicing restorative interactions, and communicating effectively.

The educators in this study agreed that building relationships between students, between adults, and within the school community is central to establishing a classroom community where interpersonal communications exists, as is also evident in literature as a key element of restorative justice (Hurley et al., 2015; Portland Public Schools, 2016; Wachtel & McCold,

2004). This idea is consistent with the literature reviewed in that building warm and supportive

relationships with healthy connections and belongingness creates a sense of community where

students feel valued, cared about, and respected (Battistich et al., 1995; Battistich & Hom, 1997;

Blum & Libbey, 2004; Payne, 2009). The literature also showed that relationships are a critical

aspect of a student's school life, and relationships between students, as well as relationships

between students and staff, are strongest in schools that practice restorative justice (McCluskey

et al., 2008; Morrison, 2006).

Throughout the study, the educators reflected on outcomes they observed from the use of

the recently implemented character education program, Sanford Harmony (National University,

2017), involving elements of restorative practices. As found in literature, practicing restorative

justice empowers individuals and communities to hold each other accountable for one another's

behavior through building and maintaining healthy relationships (Morrison, 2006). Repairing

damaged relationships within a web of community is a priority in a classroom community

practicing restorative justice (Kline, 2016; Morrison, 2012) because restoring positive

relationships helps build a sense of community (Smith, 2015).

One method of repairing harmed relationships that was described by the educators in this

study is by holding restorative conferences, which require a focus on developing strong

communication skills. The literature agreed that restorative conferencing brings together the

victims, offenders, and community members who were affected by an incident for the purpose of

holding the offenders accountable, discussing how the harm may be repaired (Bazemore &

Umbreit, 2001; Drewery, 2004; M2 Communications, 2011; Pavelka, 2013; Payne & Welch,

2015), and refocusing on academic development (Davidson, 2014). Cameron and Thorsborne

(1999) stated that, as a result of the conferencing, offenders felt accepted, safer, cared about, and

connected to the other conference participants; they even reported that students had closer relationships with the other participants following the conference. Engaging offenders, victims, and the school community in the restorative process, holding the offenders accountable, and preventing a reoccurrence of the behavior is the primary focus of schools that practice restorative conferencing (Bazemore & Umbreit, 2001; Stinchcoomb et al., 2006).

Results from the study indicated that positive student attitudes, exhibiting empathy, and exercising a growth mindset positively affect the way students receive feedback from adults and peers. The literature reviewed supports the idea that students who have warm and supportive relationships with their teachers are found to be more motivated in school, work harder, and are more accepting of the teacher's feedback (Battistich et al., 1995; Varghese, 2017). Research also showed that teachers can influence students' attitudes, perceptions, and behaviors, which can further impact the classroom culture (Ahn, Rodkin, & Gest, 2013). Backer and Orasanu (1992) indicated that many of the CRM programs that have been used were designed to change attitudes and increase the awareness of the need for communication and coordination. This is consistent with what the educators in this study expressed: students who display a positive attitude are more likely to own their learning and question their next steps after receiving feedback from adults or their peers.

In addition to keeping a positive attitude, educators in this study also emphasized the importance of showing empathy. Connecting empathy with restorative conferencing, the literature showed that conferencing has been found to increase empathy among students, decrease impulsivity, and improve the general outcome for both the victim and the offender (Cameron & Thorsborne, 1999). The participants expressed the importance for students to engage in active listening by attempting to interpret another student's message or how another

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student is feeling in a particular situation. This aligns with Ryan and Ruddy's (2015) restorative idea of asking questions that identify who has been hurt in an incident, what their needs are, and who is obligated to provide for those needs in order to make things right. Rather than only seeing things from their own perspective, the educators in this study emphasize the importance of students practicing empathy by seeking various ways of viewing a situation.

As students receive feedback and seek understanding of various situations, participants agreed that having a growth mindset plays a significant role along with attitude and empathy. The literature reviewed showed that using errors to learn from mistakes leads students to develop a growth mindset in their learning by determining where they can improve their performance and strengthen their learning (Davis, 2014; Dweck, 2015). The educators in the study also observed that attitude and the method of communication affect student mindset. This aligns with Gaier's (2015) study of Attribution Theory in that accurately assigning attributes to particular situations could affect a student's mindset as teachers and students plan next steps in the student's growth and development.

Where educators' perspectives were consistent with the literature on the impact of students effectively receiving feedback, engaging students in event reporting and self-evaluation were also aligned with the literature reviewed. Findings revealed that engaging in reflection, evaluating learning outcomes, and assessing students' environments will positively impact the way students report events and self-evaluate. Engaging in reflection as a form of event reporting was expressed by the educators in this study as a beneficial method of dealing with academic, social, or emotional situations. Since it may be difficult for some students to write down their reflections, the participating educators described examples of questions that could be asked to guide students through a self-reflection process. Davidson (2014) described a similar

questioning process including the student explaining what happened, who was affected, and what the student needs to do to make things right and keep from repeating the behavior. Attribution Theory also applies to student reflection as Gaier (2015) explained the impact that making sense of one's environment and understanding the cause behind certain actions and behaviors could have on student development.

The learning outcomes that come from event reporting and self-reflection and evaluation are consistent between the educators in this study and the reviewed literature. The participants explained that having the opportunity to discuss event reports with students and talk about where students are in their learning process is valuable to the student being able to determine their own progress. Likewise, the literature showed that the causes that students attribute to events has a direct impact with the way they handle future events (Martin & Dowson, 2009). Allowing students an opportunity to repair harm leads the student to learn from the experience by reflecting on their attitude, belief, and behaviors that led to the situation (Blood & Thorsborne, 2005).

The educators in this study expressed that the students' environment, such as the teacher's positivity, could have an impact on the students' openness when it came to event reporting and self-evaluation, and literature also showed that taking the time to build strong relationships with each student benefits the classroom environment in the long run (McLaughlin, 1990; Payne, 2009). Pianta et al. (2016) explained that classroom environments are more positive if the teacher has a caring and supportive relationship with each student and students are building positive relationships among one another. Rather than a punitive punishment, restorative justice offers accountable consequences that aim to restore a student's place in the classroom and the school community (Davidson, 2014).

Leadership

Educators in this study found that presenting leadership opportunities to students who would not otherwise initiate leadership prospects on their own benefited in building confidence as they engaged in risk-taking opportunities. According to the educators in the study, students who are more verbal tend to take on leadership roles because they are able to articulate their feelings, wants, and goals more efficiently. This theory aligns with Wachtl and McCold's (2004) principles that showed that restorative practices lead to happier, more productive students who are more likely to make positive changes in their behavior and restorative learning experiences. The participating educators also expressed that building collaboration and problem-solving skills in a team environment will positively enhance student ability to engage in teamwork due to an increase in their confidence. Gutuskey et al. (2014) described a leadership-building activity where students were charged with interviewing other students on a health reform initiative. It was found that the youth-led activity further cemented the reform efforts versus only involving adult-led activities. The participating educators agreed that building students' leadership skills have benefited students' academic, social, and emotional development by increasing their own motivation, supporting their peers in healthy lifestyle changes, and increasing their own confidence level.

Teamwork was expressed by the educators in this study as a social and emotional component of development that supersedes academic development because teamwork allows students to do things in a way that they are looking out for one another's feelings, checking in on one another's progress, leaning on each other for support, and enjoying each other's company as they pull together as a team. Reviewing literature showed that motivation and interest were specifically connected to the opportunities to converse, problem solve, and interact with one

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another (Chick, 2006). Findings in the study also show that building collaboration and problem-solving skills in a team environment will positively enhance student ability to engage in teamwork.

The educators in this study expressed a strong connection between the concepts of teamwork and collaboration, and they agreed that teamwork and collaboration involve students working together toward a common goal; as the team collaborates, students work as a team by collaborating with one another. The literature reviewed agreed with the participating educators' viewpoints and found that students engaging in collaboration within small group activities, rather than working individually or with the entire class, were more likely to seek assistance from one another as well as the teacher (Gasparini, 2014) and is connected to higher academic achievement and motivation (Chick, 2006). Research showed the effectiveness of pilots and other airline personnel collaborating and working in teams, and education researchers have also shown that children learn best when they are engaged in continual discussion and interaction with one another (Chick, 2006; Nath et al., 1996).

Students also use teamwork and collaboration to solve problems efficiently, as explained by the participating educators. A culture of kindness can result in effectively engaging students in teamwork where students are working together, everyone is participating, there are feelings of mutual interaction, and students are listening and compromising with one another; together, these qualities create a more positive school culture. Problem-solving skills is among several positive aspects of school culture that are affected by engaging students in restorative practices including strengthened relationships, conflict resolution skills, shared commitment to a common goal, and a support system for victims and offenders (Bazemore & Umbreit, 2001; Benade, 2015; Davidson, 2014; Hopkins, 2003; Pavelka, 2013).

Decision-Making Skills

The educators in this study expressed the importance of students being able to see the bigger picture when making decisions whether it be in their academic, social, or emotional development. Results of this study show that decision-planning skills are essential to student development through goal-setting and role-playing, as well as having situational awareness in various situations. By setting goals, planning out a path, and reaching for the bigger picture, participants expressed that students would benefit in making quality decisions. Likewise, researchers agree that engaging in restorative practices, including goal-setting, supports students in making stronger decisions (Pavelka, 2013).

The participating educators agreed that role-playing is important for behavioral and interpersonal growth. Literature reviewed in this study also showed that role-playing is found to inspire and motivate students in their learning due the increased engagement of the activity (Craciun, 2010; Smalot-Rivera, 2014) and can provide a positive and safe method for students to learn to handle various attitudes and feelings (Samalot-Rivera, 2014). The participants explained that students often need prompts to remind them how to respond in stressful situations, which aligns with the reviewed literature that described role-playing as a teaching strategy that helps introduce students to real-world situations to give students multiple ways to handle high-pressure situations (Craciun, 2010; Samalot-Rivera, 2014). Role-playing also allows students to practice effective methods of interacting with one another and expressing unpopular opinions and personal matters in a safe environment (Cracium, 2010; Samalot-Rivera, 2014).

During this study, the educators expressed that situational awareness could benefit students by being able to recognize a situation or problem, figure out where they fit into the problem, regain control over the problem, and then reflect on why they do not want to have the

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problem occur in the future. The literature reviewed argued that recognizing and eliminating errors in the learning process positively affects students' viewpoints of their own learning capabilities (Davis, 2016). Results of the study indicated that recognizing a problem, reacting restoratively, and regaining and reflecting on the restored situation positively impacts the ability for students to achieve situational awareness. The literature also showed that students are more likely to understand the consequences of their actions when they learn how their actions affected others, which is connected to showing empathy in a restorative manner (M2 Communications, 2011; McCluskey et al., 2008). Part of the learning process is when students recognize the implications of their actions, acknowledge their shame, and are held accountable for their behaviors (Morrison, 2002). The educators in this study expressed that once students have recognized a problem and reacted to it, their confidence level determines how they will be able to regain situational awareness and reflect on the outcome. Davis (2016) emphasized the importance for students to be able to acknowledge, reflect upon, and use the outcomes of error as a tool for improvement.

Classroom-Community Resource Management (CCRM)

The theory emerged from this study, CCRM, directly relates to the underlining problem presented in this study and the community of practice that could be used as a result of CCRM. Rubio (2014) revealed that discipline concerns have consistently ranked in the top 10 of the most serious problems in public schools, and schools often address discipline issues using punitive measures in an effort to change student behavior (Payne & Welch, 2015). Educators in this study identified several types of threats and challenges that students face on a daily basis that may lead to discipline issues. Among the threats mentioned include hunger, neglect, fear, rejection, shame, lack of confidence, and low self-esteem. Where these challenges may provide

explanation for student behavior, compliant students also face these types of threats. Whether compliant or non-compliant, students are expected to handle threats placed on them from home, school, or in the community without disruption to their academic, social, or emotional development. Schools have implemented various character education programs that teach attributes to help overcome these challenges, yet students continue to struggle with their social and emotional development, which negatively affects their academic progress (Kline, 2016).

The researcher in this study paralleled this problem with issues that pilots have in the cockpit, where pilots and human factors have been identified to have been the reason for the majority of aviation mishaps (Cioffi, 2009; Martinez, 2015). Aviation researchers identified the problem and determined pilots were in need of improving interpersonal communications, leadership, and decision-making skills in an effort to avoid, trap, and mitigate errors that are caused by threats and challenges on a daily basis. Cockpit Resource Management (CRM) has proven to decrease the amount of aviation incidents caused by human factor (Dumitras, 2013), and this study has described educators' perspectives on the positive impact CCRM could have on providing similar results for students in the classroom.

Limitations

Three limitations were recognized in the proposal of this study, including working with the concept of a preconceived theory, the setting of the study, and the sample size of the study. First, while this study intended to generate a theory that extended CRM from aviation into education, it was unavoidable to come into the study without a preconceived theory. Corbin and Strauss (2015) advised researchers using a grounded theory method of study to be cautious when a preconceived theory existed prior to gathering data. The researcher took this into great consideration throughout the data collection and analysis process and focused solely on what the

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educators were sharing in form of their experiences and perspectives of the study's objectives. While there are elements of CCRM that are similar to CRM, the participating educators produced data that allowed CCRM to take on its own path of improving students' interpersonal communications, leadership, and decision-making skills.

Second, the researcher acknowledged that the school site and participants involved in this study posed as a limitation in the proposal due to the researcher's previous connection via employment to the school site. Again, the researcher took this into consideration throughout the study and consciously set aside any previous knowledge of the school's population, procedures, or progress as suggested by Corbin and Strauss (2015). The researcher was able to interview, interpret, and return for additional questioning of all participants with as little influence of subjectivity as possible.

Third, the sample size of the study was posed as a possible limitation in the study's proposal given that only 20 educators were expected to participate. The researcher acknowledged that some research reviewed involved larger studies from several schools that included a wider demographic of students (Battistich & Hom, 1997; Glew et al., 2005; McCluskey et al., 2008; Payne, 2009). Due to the time constraint of the study, the research chose one school as the study focus, which turned out to be more than sufficient for this study. Including a larger amount of schools, a wider grade span, or a greater number of educators could expand the results of this study, if replicated.

An additional limitation that was revealed in the research experience was deciding when to stop collecting data and at what point analysis of data was sufficient. Corbin and Strauss (2015) advised that researchers cannot collect data forever and need to determine when the cycle of interviewing and analyzing data has yielded a theory saturated in data; however, Charmaz

(2014) acknowledged that researchers may have an idea late in the process that may force a return to the data. Additionally, Anderson (n.d.) cautioned that the amount of data collected could make the analysis process time consuming. The researcher experienced these various elements in the research process while collecting, analyzing, and interpreting the interview data. While the quality and quantity of the data seemed sufficient and overwhelming at times, the researcher continued to question pieces of data, returning to the participants for more clarification and information. It was eventually determined, however, when theory had emerged and the researcher could depend on the gathered data for further questioning and analysis. Without the time constraint, replication or extension of this study could possibly reveal additional elements of CCRM that students could utilize in their development.

Implication of the Results for Practice, Policy, and Theory

The goal of this study was to provide administrators with a process that students could use to help navigate through various threats that they may face on any given day whether it involves a challenge stemming from home, school, or the community. A theory was developed through a qualitative grounded theory research design that sought to answer the following research question: How do educators perceive applying the principles of CRM in the classroom in the realm of academic, social, and emotional development to improve students' interpersonal communications, leadership, and decision-making skills? The process that was developed in this study, Classroom-Community Resource Management (CCRM), could assist students in strengthening their interpersonal communications, leadership, and decision-making skills as students utilize CCRM to avoid, catch, and mitigate errors that are made from various threats in their academic, social, and emotional development.

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By strengthening interpersonal communications, students will be able to build stronger relationships, practice restorative justice, and communicate effectively in order to establish a healthy classroom community. Literature reviewed expressed that healthy student development requires thoughtful, respectful, and purposeful relationships throughout the school community (Blank & Villarreal, 2016). With a healthy classroom community, students will strive to keep a positive attitude, practice empathy, and establish a growth mindset while accepting feedback from their teachers and peers. Students will also engage in self-reflection, seek learning outcomes, and evaluate their environment while reporting events and engaging in self-evaluation. Davis (2016) emphasized the importance of seeing errors as a way to make improvements and are essential for learning. Receiving feedback from teachers and peers is a way for students to see where they can make improvements and learn.

Academically, when faced with threats such as feeling ashamed for making mistakes on their work and wanting to change their answers, a threat described by the participating educators, students can utilize CCRM by keeping a positive attitude and practicing a growth mindset. An example in the social realm of development involves not having basic needs met, a threat that several participating educators in this study expressed that many students face. When students feel connected to school with solid relationships with their teachers and peers, practiced by CCRM, they will more likely be able to communicate to their teacher and peers about their struggle and receive support from the school community. Another threat described by the participants that involves an emotional level may involve feeling inferior when receiving feedback from peers. In such case, students could utilize CCRM by showing empathy to their peers by seeking to understand their perspective.

In the realm of leadership, the implications of this study include students accepting presented opportunities of leadership as a positive experience, allowing students to engage in risk-taking, and building their self-confidence and self-esteem. Davis (2016) advised that taking risks and learning from mistakes is a positive attitude to have when trying new things, such as engaging in an uncomfortable activity. The participating educators in this study agreed with this position and expressed that when students are given forced opportunities of leadership, students often find that the opportunities become easier as their confidence level grows. Additionally, through strengthened leadership skills, students will practice collaboration and problem-solving skills in order to effectively engage in teamwork. Chick (2006) explained that student collaboration and inquiry in student discussion groups involved students working together, questioning one another, viewing each other's perspectives, and making decisions. Collaborative efforts among students contributed to an increase in knowledge, motivation, and interest, as well as a decrease in misconceptions (Chick, 2006; Nath et al., 1996). These ideas are aligned with the educators in this study as they connect the use of teamwork and collaboration to solving problems more efficiently.

An example in students' academic development that the participating educators described involves the threat of intimidation that students may feel when presented with leadership opportunities. The thought of presenting in front of peers or leading a group activity can be overwhelming for students. Using elements of CCRM could support students in taking risks that could positively impact their confidence level and self-esteem. A social threat that was described by the participating educators was students feeling neglected, whether it be by their parents, teacher, or peers. Using CCRM could encourage students to practice assertiveness in that environment by reaching out to their teacher or peers to help problem-solve through the

situation, tapping into the overlapping elements of CCRM from establishing a healthy and supportive classroom community. Emotionally, students may express a lack of self-esteem, as explained by the participating educators, which could also threaten a students' development. Utilizing CCRM could give students the support necessary to act out of their comfort zone by engaging in leadership opportunities and teamwork that could strengthen their confidence level.

The implications of strengthening decision-making skills will provide students with the opportunity to plan their decisions through decision-planning and situational awareness. Decision-planning was described by the participating educators as involving goal-setting and role-playing. The participants expressed that by setting goals and making a plan to reach the goal, students are able to make more quality decisions. Role-playing allows students to discuss past situations and practice various methods of responding to similar events that may occur in the future (Craciun, 2010; Samalot-Rivera, 2014). Displaying situational awareness will allow students to recognize a situation, react restoratively, and regain their situational awareness while reflecting on how the situation was addressed.

In the academic realm of development, students may be threatened by anxiety, as explained by the participating educators, when they are presented with a high-pressure assessment, for example. Utilizing CCRM could prepare the student with role-playing situations that students may use such as practicing calming techniques or remembering specific goals they set. Socially, the participating educators explained that students may be faced with the threat of being bullied. Students could use CCRM to recognize the bullying situation, react calmly, and regain situational awareness by communicating their feelings and actions restoratively to the offender or their teacher. An emotional threat that the participating educators expressed that students may feel is fear, whether it is fear of their safety on campus, fear of answering a

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question incorrectly, or fear of their peers' responses to a given situation. Using elements of CCRM, such as role-playing, could support students through their fear by practicing how to respond in various situations.

Attributes defined in this study included interpersonal skills, connectivity, collaboration, confidence, and communication. Interpersonal skills referred to the relationships that are established between students and between students and adults in order for students to feel connected at school (Smith, 2015; Wachtel & McCold, 2004). Participating educators expressed the importance of establishing a strong classroom community and the benefits that are associated with building healthy relationships. Connectivity referred to the feeling of belonging that students obtain when they are valued and respected by other students and adults within the school community (Payne, 2009; Smith, 2015). The educators in this study agreed that when students feel connected to school, they are more likely to gain the confidence level necessary for growth and development. Confidence referred to the ability to use self-reflection and self-discipline in various aspects of the school setting including communication (Brown & Moren, 2003). Confidence was a common theme expressed by the educators in this study as a necessity to be able to receive feedback and criticism from adults and peers. Communication referred to the ability to communicate needs and messages as situations arise (Davidson, 2014). The educators in this study continually referenced the need for effective communication in all aspects of student development. This study drew from attributes such as interpersonal skills, connectivity, collaboration, confidence, and communication to develop the theory of CCRM that applied elements of CRM to students' academic, social, and emotional development.

Recommendations for Further Research

This qualitative grounded theory research study has been designed to be replicated in order to extend CCRM further into education. This study gathered educators' perspectives on applying CRM into the classroom including teachers, administrators, and credentialed support teachers. The researcher has also considered the potential of gaining perspectives from other members of the school community such as students, parents, and the community. Adding additional perspectives to CCRM could expand the elements involved in the theory.

Educators from a particular school who interacted with the kindergarten through second-grade student population were targeted for this study. Further research could deepen this study by gathering perspectives from a wider range of educators from schools in other regions, demographics, and grade levels. In addition to a wider span of educators, increasing the sample size of the participants in the study may provide additional elements of CCRM that could benefit student development.

Further study could also be considered to extend CCRM training for educators and administrators, just as CRM was expanded from use in the cockpit to use throughout all crewmembers on and off the plane who are involved with flight operations. The researcher in this study chose to extend CRM to education as a process to be used for student development; however, improving interpersonal communications, leadership, and decision-making skills in educators could enhance teacher and administrator effectiveness and satisfaction.

The implementation of CCRM into the classroom, school, school community, and larger community is an additional area for further study. Taking the CCRM process and creating a tangible and usable tool is a next step in CCRM's development. Whereas pilots refer to a chart for reminders of the important elements of CRM, students could also have a chart to reference

elements of CCRM when addressing threats and challenges throughout their school day. While

the tool would be developed for students and educators to utilize at school, parents and other

members of the school community could also be offered training in order to have a collaborative

effort around CCRM where students could also address threats and challenges at home and in the

community.

Conclusions

The purpose of this study was to develop a theory grounded in data that emerged from

educators' perspectives that would extend the use of Cockpit Resource Management (CRM)

from aviation into the classroom to build students' interpersonal communications, leadership,

and decision-making skills to strengthen their academic, social, and emotional development

regardless of the threats and challenges students face daily. The central research question for this

qualitative study was: How do educators perceive applying the principles of CRM into the

classroom in the realm of academic, social, and emotional development to improve interpersonal

communications, leadership, and decision-making skills? Several sub-questions were

established to help drive the study and were answered in the previous section.

The Classroom-Community Resource Management (CCRM) theory generated from data

gathered from the participating educators in this study involves several elements that the

educators explained could build students' interpersonal communications, leadership, and

decision-making skills to strengthen their academic, social, and emotional development. The

educators in this study conveyed that displaying a positive attitude has a direct connection to the

way a student receives feedback from adults and peers. Where student attitude initially was

presented as a primary element of CRM, the participating educators perceived attitude as a

method of receiving feedback, which applied to interpersonal communication. The educators in

this study also agreed that event reporting belongs in education because of the positive impact that reflection, assessing learning outcomes, and evaluating environments has on a student's academic, social, and emotional development. Additional themes emerged in the theory, which emphasized the need for a strong classroom community that involved building healthy relationships, practicing restorative justice, and communicating effectively.

Additionally, the educators in this study expressed that stronger leadership skills positively impacts students' academic, social, and emotional development because they allow students to actively engage in risk-taking activities, which builds confidence. The participating educators also agreed that strong teamwork impacts a student's development by building collaboration and problem-solving skills in a team environment. Collaboration is a significant piece of building and maintaining a classroom community whether students are collaborating on an academic project, a task involving social skills, or working through an emotional endeavor. Being able to problem-solve and talk through various solutions as a team positively benefits a student's academic, social, and emotional development.

Finally, the educators' perspectives in the realm of decision-making skills also agree that they could positively impact students' academic, social, and emotional development. The participating educators expressed that decision-planning is essential to student development and is exercised through goal-setting and role-playing. The educators in this study also described situational awareness as having a positive impact on a student's development by being able to recognize a problem, react restoratively, and regain and reflect on the restored situation.

Pilots use Cockpit Resource Management (CRM) to defend against threats such as fatigue and distractions, giving them the confidence to step up in a leadership role, the willingness to say, "I'm uncomfortable," and the courage to communicate their situation. The

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researcher in this study is hoping that students can step up and be confident in the threats they face whether it is struggling through a math concept, breathing through an important presentation, or working through fears of classmates' responses. The theory that emerged as a result of this qualitative grounded theory study has been referred to as Classroom-Community Resource Management (CCRM) and provides administrators with a process that will support students in avoiding, catching, and mitigating potential errors due to threats and challenges that they face on a daily basis. The CCRM theory focuses on strengthening students' interpersonal communications, leadership, and decision-making skills so that they may have the ability to progress in their academic, social, and emotional development regardless of the threats and challenges that may surface.

The CCRM theory developed in this study parallels the CRM training model by similar concepts being present in both models. Pilots learn to master the technical piece of flying as they learn to solo and work collaboratively with crew members, and they are still responsible for addressing various challenges such as weather, fatigue, and outside distractions. When managing threats, pilots use CRM to keep their attitude in check, communicate with their crew members, maintain situational awareness, and practice efficient decision-making skills. Likewise, students are expected to attend school each day and engage in the learning process, regardless of the threats and challenges they may be facing, such as persevering through a challenging project, addressing an argument with a peer, or working through a family situation. The educators who participated in this study perceived that a process such as CRM can positively impact a student's growth and development, and the CCRM theory that evolved from the participating educators will support students as they navigate through their education and learn to solo in their learning and in life.

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Appendix A

Interview: CRM in the Classroom

The purpose of this study is to develop a theory in education based on the aviation concept of CRM that could positively affect students' academic, social, and emotional development by improving students' interpersonal communications, leadership, and decision-making skills. The academic factor that will be addressed in this study involves student collaboration, decision-making within concept development, and the general motivation to succeed. The social factor applies to interacting with one another in various situations, supporting one another inside and outside of the classroom, and seeking tolerance and understanding in the midst of conflict. The emotional factor involves students practicing self-discipline, utilizing self-reflection, and building a healthy level of self-confidence.

I1. Interpersonal communications refer to exchanging information both verbally and non-verbally. Tell me about an experience when you observed strong interpersonal communications within a student or an experience where a student showed weak interpersonal communications.

> F1. How do you engage your students in building interpersonal communication skills?
>
> F2. The pilot attitude in this study refers to the viewpoint the pilot has on a particular situation and the actions the pilot takes based on his or her viewpoint. How would you define attitude in education?
>
> F3. How can improving student attitudes impact a student's academic, social, and emotional development?
>
> F4. Event reporting in this study refers to non-punitive, jeopardy-free reporting that pilots may submit that describe unintentional mishaps, mistakes, or safety concerns that occur

during flight in an effort to provide future learning opportunities. How do you define event reporting in education?

F5. How can effective reporting skills impact a student's academic, social, and emotional development?

I2. Tell me about an experience when a student exhibited strong leadership qualities or an experience where a lack of leadership qualities hindered a student's development.

F1. What do you think are the most important ways to build leadership qualities in students?

F2. In this study, teamwork refers to the pilot's ability to work together with other crewmembers to achieve the same goal. How do you define teamwork in education?

F3. How can strong teamwork impact a student's academic, social, and emotional development?

I3. Tell me about an experience when you noticed consistent, responsible decision-making skills in a student or an experience where a student showed consistent, irresponsible decision-making skills.

F1. How can students improve their decision-making skills?

F2. In this study, decision-planning skills refer to pilots planning for the unexpected by having a plan in the event of different types of emergencies. How do you define decision-planning in education?

F3. How can effective decision-planning skills impact a student's academic, social, and emotional development?

F4. In this study, situational awareness refers to the pilot's ability to recognize a situation, react to the situation, and regain situational awareness through communication.

How do you define situational awareness in education?

F5. How can strong situational awareness impact a student's academic, social, and emotional development?

I4. What positive changes have you noticed with the implementation of Sanford Harmony?

F1. What negative changes have you noticed with the implementation of Sanford Harmony?

CONSENT FORM

Research Study Title: Developing a Grounded Theory through the use of Cockpit Resource Management in the Classroom from the Educator's Perspective
Principal Investigator: Tammy Scholder
Research Institution: Concordia University Portland
Faculty Advisor: Dr. Lori Sanchez

Purpose and what you will be doing:
You are invited to participate in a study that will develop theory based on educators' perspectives of using the aviation concept of Cockpit Resource Management (CRM) in education to improve students' interpersonal communications, leadership, and decision-making skills within their academic, social, and emotional development. The purpose of the interviews is to gather data reflective of your background and experiences in education, along with your philosophy of education. I expect approximately 10-15 volunteers. No one will be paid to be in the study. I will begin enrollment on September 1, 2017, and end enrollment on September 30, 2017. To be in the study, you will participate in multiple face-to-face interviews that will ask questions in regards to how five specific elements of CRM could impact students' academic, social, and emotional development.

Risks:
There are no risks to participating in this study other than providing your information; however, I will protect your information. Any personal information you provide will be coded so it cannot be linked to you. Any name or identifying information you give will be kept secure via the researcher's personal Dropbox. When I look at the data, none of the data will have your name or identifying information. I will code the data throughout the data analysis. I will not identify you in any publication or report. Your information will be kept private at all times, and all study documents will be destroyed three years after I conclude this study.

Benefits:
Information you provide in the interviews will help develop a new theory in education that pertains to students' academic, social, and emotional development. You could benefit this study by sharing how you perceive this new concept based on your background and experience in education.

Confidentiality:
This information will not be distributed to any other agency and will be kept private and confidential. The only exception to this is if you tell me about abuse or neglect that makes me seriously concerned for immediate health and safety of you or another person.

Right to Withdraw:

Your participation is greatly appreciated, but I acknowledge that the questions I am asking are personal in nature. You are free at any point to choose not to engage with or stop the study. You may skip any questions you do not wish to answer. This study is not required and there is no penalty for not participating. If at any time you experience a negative emotion from answering the questions, I will stop asking you questions. In the event you choose to withdraw from the study, you will have the option to contact me to retract your data.

Contact Information:

You will receive a copy of this consent form. If you have questions you may talk to or write the principal investigator, Tammy Scholder, at email [Researcher email redacted]. If you want to talk with a participant advocate other than the investigator, you may write or call the director of my institutional review board, Dr. OraLee Branch (email obranch@cu-portland.edu or call 503-493-6390).

Your Statement of Consent:

I have read the above information. I asked questions if I had them, and my questions were answered. I volunteer my consent for this study.

_____   _____
Participant Name   Date

_____   _____
Participant Signature   Date

_____   _____
Investigator Name   Date

_____   _____
Investigator Signature   Date

Investigator: Tammy Scholder; email: tammyscholder@gmail.com
c/o: Professor Lori Sanchez
Concordia University – Portland
2811 NE Holman Street
Portland, Oregon 97221

Appendix C

Classroom Community Resource Management

Interpersonal Communications	Leadership	Decision-Making
Classroom Community	Presented Opportunity	Decision-Planning
Building relationships	Risk-taking	Goal-setting
Restorative/Sanford Harmony	Confidence	Role-playing
Communication		
Feedback	Teamwork	Situational Awareness
Attitude/personality	Collaboration	Recognize
Empathy	Problem-solving	React/restorative response
Growth mindset		Regain/reflect
Event Reporting (self-evaluate)		
Reflection		
Learning outcome		
Environment		

Appendix D

Statement of Original Work

The Concordia University Doctorate of Education Program is a collaborative community of scholar-practitioners, who seek to transform society by pursuing ethically-informed, rigorously-researched, inquiry-based projects that benefit professional, institutional, and local educational contexts. Each member of the community affirms throughout their program of study, adherence to the principles and standards outlined in the Concordia University Academic Integrity Policy. This policy states the following:

Statement of academic integrity.

As a member of the Concordia University community, I will neither engage in fraudulent or unauthorized behaviors in the presentation and completion of my work, nor will I provide unauthorized assistance to others.

Explanations:

What does "fraudulent" mean?

"Fraudulent" work is any material submitted for evaluation that is falsely or improperly presented as one's own. This includes, but is not limited to texts, graphics and other multi-media files appropriated from any source, including another individual, that are intentionally presented as all or part of a candidate's final work without full and complete documentation.

What is "unauthorized" assistance?

"Unauthorized assistance" refers to any support candidates solicit in the completion of their work, that has not been either explicitly specified as appropriate by the instructor, or any assistance that is understood in the class context as inappropriate. This can include, but is not limited to:

- Use of unauthorized notes or another's work during an online test

- Use of unauthorized notes or personal assistance in an online exam setting

- Inappropriate collaboration in preparation and/or completion of a project

- Unauthorized solicitation of professional resources for the completion of the work.

Statement of Original Work

I attest that:

1.   I have read, understood, and complied with all aspects of the Concordia University-Portland Academic Integrity Policy during the development and writing of this dissertation.

2.   Where information and/or materials from outside sources has been used in the production of this dissertation, all information and/or materials from outside sources has been properly referenced and all permissions required for use of the information and/or materials have been obtained, in accordance with research standards outlined in the *Publication Manual of The American Psychological Association.*

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Digital Signature

Tammy Rae Scholder
Name (Typed)

March 14, 2018
Date