BUILDING A CULTURE OF EFFECTIVE COOPERATIVE LEARNING: TEACHER

PRACTICES AND SCHOOL LEADERSHIP IN AN ELEMENTARY SCHOOL

by

Kristin L. Miller

A Paper

Presented to the Gordon Albright School of Education

In Partial Fulfillment of the Requirements

For the Degree of Master of Education
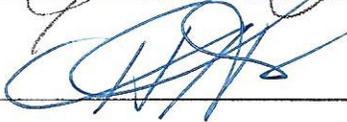
EEA650 Leadership Project

May, 2017

Building a Culture of Effective Cooperative Learning: Teacher Practices and School

Leadership in an Elementary School

APPROVED:

(Dr. David Khatib: Faculty Advisor)

(Ms. Heather Henderson: Program Director)

Acknowledgements

The journey of earning a Master's Degree in Educational Leadership and completing a capstone has been rewarding. God has guided me through this journey that I embarked on, and I am forever thankful for His presence in my life. The Lord does work in mysterious ways.

In addition, I would like to thank my beautiful grandmother, Lillian Bertrand. Thank you for supporting me by providing me with endless love, prayers, and encouragement. This capstone is dedicated to her.

I thank my husband, John Miller, for supporting me in this endeavor. Thank you for understanding and supporting the many challenges of balancing our life during this graduate journey.

Furthermore, to my role models that I continue to look up to: Dr. David Khatib, Dr. Pamela Toulouse, and William Baker. You have all had a profound impact on my spiritual and educational journey. Thank you for inspiring me, sharing your passion for life-long learning and helping me to recognize my gifts from God.

Abstract

Alberta Education's (2010) Inspiring Education framework, a Ministerial Order on Student Learning (Alberta Education, 2013), continues to be challenged by a diversity of learners and learning needs. With the need for cross-curricular competencies and 21st century skills, Alberta students are required to develop and demonstrate good communications skills and the ability to work cooperatively with others (Alberta Education, 2010; Alberta Education, 2013). This capstone explored common research that has demonstrated that students, regardless of their differing backgrounds and needs, learn more effectively through cooperative learning opportunities. Research has shown that cooperative learning has positive effects on student success. This capstone noted how elementary teachers can build a culture of effective cooperative learning into their teaching practices. In addition, a literature review illustrated how school leaders can build a culture of systemic cooperative learning through effective leadership, which is needed for quality learning and for school improvement.

Table of Contents

Building a Culture of Effective Cooperative Learning: Teacher Practices and School Leadership in an Elementary School

Chapter 1: Introduction

Background to Problem

Student populations in Alberta schools have become increasingly diverse in the past decade and continue to rise based on the augmentation by the province's economy, increase in immigration rates and urbanization (Alberta Commission on Learning, 2003). The Alberta Government, through the Teaching Quality Standard (1997), required teachers to base their instructional practices on the belief that all students are capable of learning and can achieve success. In order to engage all students, teachers must utilize multiple paths for learning and understand that students learn at individual rates and in individual ways (Alberta Education, 1997).

In response to increasing diversity in Alberta's classrooms, educators must keep up with current best practices to ensure that all students receive a quality education (Alberta Education, 2010b). In order for teachers to implement effective instructional strategies and differentiated instruction, educational practices need to be flexible and responsive to the needs of all students (Alberta Education, 2010b). This creates an inclusive learning environment where all students can be successful (Alberta Education, 2010b).

The Government of Alberta, through Inspiring Education framework (2010a), emphasized the need for students to demonstrate effective communication skills along with the ability to work cooperatively with others. The ability to meet these expectations accounts for organizing students to experience shared opportunities with cooperative learning (Alberta Education, 2010b). This definition of cooperative learning refers to a teacher-facilitated strategy in which students work in small groups to achieve a goal (Li and Lam, 2013). Students in each

group are responsible for their own learning and the learning of their group members (Li and

Lam, 2013). Marzano and Brown (2009) emphasized that cooperative structures are the building

blocks for students, providing essential opportunities to interact simultaneously with content and

other learners.

Statement of Problem

Researchers have demonstrated that students learn more effectively in cooperative

structures than by individualistic, teacher-centered, and competitive approaches (Gibbs, 2001).

Johnson and Johnson (1999) concluded that individuals need to learn how to balance working

competitively, individualistically, and cooperatively as all three structures are fundamental. In a

recent article, Killian (2015) reported that Marzano (2001) and Hattie (2009) agreed that

effective cooperative learning can occur only when students are explicitly taught how to work in

small, strategically structured groups. The degree to which the teacher understands effective

cooperative practices and can implement these practices with students will determine the level of

productive cooperative learning in the classroom (Killian, 2015).

Utilizing cooperative learning in a classroom is one way to meet the needs of not only all

learners but also the Teaching Quality Standards as set out by Alberta Education (1997).

Implementing cooperative learning lays the foundation for student success (Johnson & Johnson,

2009). However, Antil, Jenkins and Wayne (1998) demonstrated that cooperative learning is one

of the most misinterpreted practices in classrooms. The use of small group structures can be

very complex (Antil et al., 1998). It requires fundamental changes to classroom structures by not

only classroom organization but ways of learning (Antil et al., 1998). Students need to be able to

effectively communicate with others, ask questions, reflect, and offer constructive criticism

(Kramarski & Mevarech, 2003).

Purpose

Cooperative learning has been demonstrated to have a positive effect on student academic success, increasing active participation in learning, and providing opportunities for social learning (Antil, et al., 2003). The understanding how to effectively implement and integrate small group cooperative learning structures increases student engagement (Bennett & Rolheiser, 2008). Kagan (2000) demonstrated positive effects on all students regardless of their abilities and learning styles. The use of cooperative learning contributes to student learning and is an instructional strategy that proves to be highly effective (Kagan, 2000).

For the purpose of this capstone, the emphasis is on teachers, students and school leaders. This is not intended to reduce the importance of other stakeholders but to intentionally focus on the responsibility of teachers and school leaders (Balka, Hull & Miles, 2010). The desired outcome for this capstone is for elementary teachers at an elementary school in Central Alberta to utilize effective cooperative learning, emphasizing academic learning and the development of the whole child. To foster the development of the whole child is to consider that child's social skills and overall well-being in an effort to ensure that the child feels safe, engaged, supported, challenged and motivated in his or her learning environment. This produces accountability and promotes positive peer interdependence where students work together to enhance each other's learning (Johnson, Johnson, & Smith, 1991).

Statement of Capstone Questions

Although cooperative learning is supported by educational research, the most important and relevant research questions for this capstone are:

1. How can a culture of effective cooperative learning be implemented within elementary classrooms?

2. Based on the concepts of cooperative learning, how do school leaders build a successful culture of systemic cooperative learning through effective leadership?

Definition of Terms

Educator: A certified teacher who provides education to students. This includes teachers, administrators, principals, and vice-principals.

Facilitator: A teacher as a proactive partner in learning with students.

Inclusive learning: Learning environments that are created for the success of all students regardless of their background, need, and skill level.

Pedagogy: The method and practice of teaching.

Professional Learning Communities: Purposefully created collaborative opportunities for educators to share learning and act on what they learn. Educators share, support, reflect, and improve teaching practices to benefit all students.

School leader: An accomplished certified teacher who has been assigned to a school from the school board and practices quality leadership to ensure that students have access to quality education. This includes principals, administrators, and vice-principals.

Stakeholders: Anyone who is invested in the success of all students and of a school. This includes school leaders, teachers, staff members, students, parents, school authorities, policy makers, and teacher training institutions.

Student-centered: Students take ownership of their own learning. The teacher facilitates and provides supports. The needs of students come first when making decisions.

Scope of the Capstone

This capstone includes the examination of a culture of effective cooperative learning in all subject areas in elementary classrooms in a central Alberta school. This study does not

consider the application of cooperative learning in a middle school and high school setting. In keeping with the research question statement, the focus is on teachers, students, and school leaders and not other central stakeholders.

Significance of the Capstone

Alberta Education (2013), through the Ministerial Order on Student Learning, mandated teachers to ensure that students are able to work cooperatively with others. In preparing students to work cooperatively, teachers are able to better meet the needs of all students. As reported by Alberta Education through Inspiring Education (2010b), "Albertans see the teacher as the single most important contributor to learner success" (p. 27). Teachers are obligated to ensure that all students reach their full potential by providing all learners with optimal learning while fostering an inclusive learning environment (Alberta Education, 2013).

Marzano, Pickering and Pollock (2001) found that cooperative learning environments are complex by nature. Placing an emphasis on supporting teachers with gaining an understanding of productive group work and refining their practices is a solution. Teachers are considered the most important factor in student achievement. To improve education is to improve teachers. Effective teachers are those that have a positive outcome on students of all achievement levels regardless of the students' diverse needs and backgrounds (Marzano et al., 2001).

Summary

Alberta's economy and schools are becoming increasingly diverse (Alberta Education, 2010b). As mandated by the Alberta Government and the Alberta Teacher Quality Standard (1997), educators must ensure that all students receive a quality education. The Alberta Ministerial Order on Student Learning (2013) requires students to demonstrate good

communication skills and the ability to work cooperatively with others while working towards the ultimate goal of becoming successful, contributing members of society.

Applying cooperative learning structures in a classroom setting is one way to meet the needs of all learners as well as the demands of Alberta Education (2013). As a classroom teacher and school leader, I explored cooperative learning as an instructional approach that is complex and more effective when strategically implemented. Research has indicated that when students work together in cooperative learning groups, they achieve better results (Marzano et al., 2001; Johnson & Johnson, 1981; Slavin, 1991). All stakeholders share the responsibility of being a partner in education (Alberta Education, 2013). This capstone, however, places emphasis on teachers, students, and school leaders solely for the desired outcome of creating a culture of effective cooperative learning environments.

Outline of the Remainder of the Paper

Chapter 1 addresses cooperative learning as a complex research-based instructional strategy that is challenging to educators. The educator needs to understand the process in order to effectively put it into practice. Increasing the understanding and refinement of practices will lead to stronger learning for students. Chapter 2 is a review of relevant literature of why and how teachers can effectively implement cooperative learning in elementary learning environments. As well, Chapter 2 highlights effective school leadership that is needed to build a successful culture of systemic cooperative learning. Chapter 3 is a summary of the research about the methodology used to execute effective cooperative learning in an elementary school setting.

Chapter 2: Literature Review

Introduction

The United Nations 2030 Sustainable Development Goals (2016) stated that quality education focuses on the whole child and is needed for individuals, communities, and societies to prosper. In a joint statement, Education International (EI) and the Association for Supervision and Curriculum Development (ASCD), supported these goals in emphasizing that quality education is inclusive and promotes lifelong learning for all learners. ASCD and EI (2016) also said that quality education involves excellent teaching, access to effective learning tools, and supportive learning environments. In preparing students to meet the needs of the 21st century, global advocates for quality education and equal opportunities must promote and support the development of the whole child (ASCD, 2016).

Classrooms in the early part of the 21st century struggled in coping with diversity. These complex classrooms were not only increasing culturally but educators were authorized by Alberta Education (2013), through the Ministerial Order on Student Learning, to enable all students to achieve mandated outcomes. The Ministerial Order on Student Learning mandated that Alberta Education's (2013) ultimate goal was for students to develop as engaged thinkers and ethical citizens and develop an entrepreneurial spirit, all of which would lead them to become contributing members of society. Likewise, valuing fairness, diversity and excellence was foundational for Alberta Education (Alberta Education, 2013).

To reinforce the aspects of the Ministerial Order, Alberta Education (2009), through the Principal Quality Practice Guideline, mandated that school leaders should promote an inclusive school culture that respected and honored diversity. As school leaders, they had the responsibility to build a positive school environment. Likewise, the Alberta Teaching Quality Standard (1997) required teachers to promote and sustain classroom learning environments that

were inclusive and embraced diversity. These inclusive learning environments promoted

equality, acceptance, and respect for the whole child, classrooms where students felt safe and

cared for (Alberta Education, 2013).

Focused on Cross-Curricular Competencies and 21st century learning, Alberta Education

(2013) required school boards to ensure that students developed effective communication skills

and the ability to work cooperatively with others. Providing students with the opportunity to

develop communication and social skills was essential in preparing them for future workplace

demands (Conway, 2011). Barron and Darling-Hammond (2008) agreed that students need to

learn to work cooperatively in preparation to eventually join the workforce. Marzano et al.

(2001) found that teachers who used cooperative learning techniques better prepared their

students for a world of collaboration and cooperation. Frey, Fisher, and Everlove (2009)

reported a similar finding; however, they added that teachers can easily underestimate the

necessary components that students must develop to work together successfully.

An article by Killian (2015) reported that Marzano (2001) and Hattie (2009) agreed that

there are benefits to students working together. All authors agreed that cooperative learning

should not replace whole-class instruction or individual learning. Hattie (2009) found that

teachers need to teach the facts and skills required for students to successfully contribute to

group work. According to both Hattie (2009) and Marzano (2001) the challenges with

implementing effective cooperative learning in classrooms include developing and implementing

norms and structures for individuals to work together in groups, developing management

strategies in group discussions to ensure that content-rich learning takes place, and developing

tasks that support effective cooperative learning (as cited in Killian, 2015). Antil et al. (1998)

found that cooperative learning is a misunderstood practice. Slavin (1991) argued that "it is not

enough to simply tell students to work together" (p.73). Hence, effective cooperative learning requires educators to have an understanding of how to properly implement it within a classroom setting.

Cooperative Learning

High achieving learning occurs in classrooms that provide significant amounts of time for students to actively discuss their learning (Allington and Johnson, 2001). The same point is made by Gardener (1997) and Goleman (1995), who found that social interactions have a positive effect on the development of intelligence (as cited in Bennett, 2001). Cooperative learning allows students to develop a shared understanding of outcomes and opportunities to interact with peers, reflect on new knowledge, process learning through discussion, and listen with peers (Marzano et al., 2001). Therefore, teachers must create learning environments where students work in small groups and are engaged in deep learning through discussions in those groups (Marzano et al., 2001).

Cooperative learning provides a framework where all students learn from one another. It is student-centered and the role of the teacher is to be a facilitator (Marzano, 2004). Small group structures are established with each student engaged in improving his or her understanding of content (Marzano, 2004). Every individual is responsible for not only his or her own learning but that of the other students in the group (Marzano, 2004). This results in a learning environment of academic achievement (Johnson, 2005).

The Advantages of Cooperative Learning

Research has shown that cooperative learning has positive effects on student learning (Cohen, Kulik, & Kulik, 1982; Johnson, Maruyama, Nelson, & Skon, 1981; Rohrbect, Ginsburg-Block, Fantuzzo, & Miller, 2003).

As stated by Alberta Education (2005, p. 1), cooperative learning contributes to:

  • higher self-esteem

  • higher achievement

  • increased retention of information

  • greater social support

  • more on-task behaviour

  • greater collaborative skills

  • greater intrinsic motivation

  • increased ability to see other points of view

  • better attitudes toward school and teachers

  • greater use of high-level reasoning

  • more positive psychological adjustment.

Likewise, it was found amongst 67 studies, of the benefits of cooperative learning on student learning, 61% of these studies resulted in students having greater achievement in comparison to traditional teaching control groups. The positive effects on students have been evident in elementary, middle, and high school settings and across numerous disciplines (Frey et al., 2009).

Ofodu and Lawal (2011) studied students with high, average, and low performance levels. They found a significant increase in reading comprehension when cooperative learning was employed with all three groups. Sumarsih and Sanjaya (2013) obtained the same results in a study that looked at using cooperative learning to improve descriptive writing. Johnson and Johnson's results (1999) support this finding; they determined that cooperative learning leads to high achievement, most significantly with low performance students.

Okebukola (1984; 1986) found that cooperative learning environments enhanced student

communication, collaboration, critical thinking skills, and problem solving skills. Similar results were obtained from Caposey and Heider (2003), showing that when students are placed in cooperative groups, they retain more information due to the opportunity to discuss, question, and summarize information with their group members. Research has shown that cooperative learning has positive effects on all learners, including those from diverse backgrounds.

Cooperative learning links into diverse cultural values within an inclusive learning environment. A study conducted by Suwantarathip and Wichadee (2010) showed that when a teacher used cooperative learning with English Language Learners, those students had reduced anxiety levels and higher language proficiency scores. The students reported feeling that they belonged to a supportive community of learning. Cooperative learning benefits all learners regardless of their language, backgrounds, culture, and values.

Effective cooperative learning has been shown to have a positive effect on self-esteem, feelings towards peers, social relationships, and social skills (Frey et al., 2009). Mueller and Fleming (2001) reported that Grade 6 and 7 students preferred working in a cooperative group rather then individually. The same has been demonstrated with elementary school students. Battistich, Solomon, and Delucchi (1993) showed that student motivation levels increased and students had a positive attitude towards school when cooperative leaning was utilized effectively as an instructional strategy.

To substantiate the research on cooperative learning, intelligent behavior is enhanced when humans communicate with others (Bennett & Rolheiser, 2008). Researchers have showed that cooperative learning opportunities help students to develop interpersonal communication skills more readily in comparison to other classroom settings where students are not discussing majority of the time (Li & Lam, 2013). The learner benefits as communication helps to deepen,

solidify and extend thinking (Ontario Education, 2006). Research has found that cooperative

learning contributes to numerous benefits for student learning.

Effective Cooperative Learning

Johnson and Johnson (1999) identified elements that teachers need to carry out effective

cooperative learning. They identified these five elements of cooperative learning as: positive

interdependence, individual accountability, structures that promote face-to-face interaction,

social skills, and group processing. With advancements in technology, Johnson and Johnson

(1996) linked the element of face-to-face interaction with promotive interaction. Teachers

should explicitly integrate these elements into cooperative learning opportunities (Johnson &

Johnson, 1999). Johnson and Johnson argued that not applying these elements in practice has

inhibited learning processes.

1. Positive interdependence

    Individuals working together towards a common goal in supportive and caring ways

    as each member's effort is required for group success.

2. Individual accountability

    Each student in a group is responsible for his or her own learning as well as the

    learning of others in the group (Ontario Education, 2006).

3. Promotive interaction (also known as face-to-face interaction)

    Individuals encourage and facilitate each other's efforts to reach the group's goals.

4. Social/collaborative skills

    The social communication and critical thinking skills that individuals in a group use

    in order to effectively work together.

5. Group processing

The action of group members reflecting on and discussing their efforts as they assess

how well they are achieving their goals and working with one another.

Frey et al. (2009) added a sixth element: meaningful task. They emphasized that effective

group work involves a meaningful task that is challenging; when the task at hand is challenging,

students rely on one another and must cooperatively work together to solve it. Marzano et al.

(2001) stated that the two most essential elements needed to be considered a cooperative learning

activity are: positive interdependence and individual accountability.

Kagan and Kagan (2009) acknowledged seven key concepts that summarize effective

cooperative learning: cooperative learning structures, learning teams, management strategies,

class-building, team-building, social skills, and basic principles (see Appendix). Basic

components include positive interdependence, individual accountability, equal participation and

simultaneous interactions where students are frequently participating. Kagan and Kagan said

that not every key concept is necessary all the time for effective cooperative learning to take

place. They (2009) noted that when teachers master the seven concepts, student learning will

increase, discipline problems will be reduced, and the curriculum will be rich with social skills

and thinking skills.

Implementing Cooperative Learning Practices

Alberta Education (2005) indicated the following guidelines for teachers implementing

cooperative learning in classrooms (pg. 3):

•Establish and maintain a climate of trust and respect within the classroom

• Plan ongoing team-building activities that allow students to communicate freely with

one another about topics of personal importance (e.g., interests, experiences, talents)

• Adopt the role of facilitator rather than leader during cooperative learning activities

• Identify academic and social objectives for the cooperative learning activity

• Determine appropriate grouping of students, room arrangements, and materials

• Before students begin the task, determine how group connection and individual

accountability will be established, and the goals and criteria for success

• Ensure that students are familiar in advance with the attributes of specific social skills

(e.g., active listening) and the procedures for cooperative structures (e.g., Jigsaw)

• Inform students in advance of the expectations of the group process and the criteria for

success

• Monitor behaviour and understanding as students work together, using checklists,

anecdotal notes or other methods, and intervene if necessary

• Assess both the product and the process of group work

• Use follow-up activities to encourage students to reflect on learning.

Positive interdependence. To implement the element of positive interdependence,

Marzano et al. (2001) said that goals need to be structured because whole-group success depends

on each individual's success. The element of positive interdependence does not always occur

naturally (Bennett & Rolheiser, 2008). Goals and directions need to be visually presented to

meet the needs of different learners. Each student in a group needs to understand his or her role.

The teacher must be strategic when selecting and using roles (Bennett & Rolheiser, 2008).

Individual accountability. Two levels of accountability need to be in place in order to

have effective cooperative learning groups: individual accountability and group accountability

(Frey et al., 2009). Students must understand the expectations for their own learning and the

groups' learning (Frey et al., 2009). Individual accountability makes each student in the group

responsible for his or her own learning while encouraging students to motivate and support

others in the group (Bennett & Rolheiser, 2008). A teacher including individual assessment, supports students in understanding that each individual in the group needs to contribute for overall success (Marzano et al., 2001).

   Social and collaborative skills. The element of social and collaborative skills ensures that all students have a clear understanding of what the norms and expectations are in small group structures (Marzano et al., 2001). Students need to understand how to use social skills when working in a structured group (Marzano et al., 2001). Bennett and Rolheiser (2008) add that collaborative skills not only include social skills but also encompass communication skills and critical thinking skills. Boaler (2016) stated that it is important at the beginning of the school year for teachers to spend time instructing students how to work well in groups. She writes that group norms can be developed by having students discuss the positives and negatives of working in groups. Alberta Education (2016), through the Learning through the Competencies Guide, also recommended norms for working together. These include active listening, equity of voice, and respecting points of view.

   Group processing. Group processing allows students to reflect on both academics and group interactions. This is crucial so that groups can develop effectively (Bennett & Rolheiser, 2008). Teachers need to dedicate time for students to engage in reflecting on their individual growth and group effectiveness (Bennett & Rolheiser, 2008). After reflecting, students set new goals for future cooperative learning opportunities to promote continued improvement (Ontario, 2001). The teacher must provide students with corrective feedback about group skills and expectations (Marzano et al., 2001).

   Promotive interaction. Promotive interaction allows students to encourage one another and activate each individual's efforts to support learning (Marzano et al., 2001). Johnson,

Johnson, and Smith (1998) noted that during these interactions, students support one another as they are required to explain and challenge each other's ideas, and discuss learning. Bennett and Rolheiser (2008) wrote that promotive interaction involves the teacher setting up the physical environment so that students can successfully speak with one another in discussion. Using classroom space, for example grouped tables, ensures that the physical set-up is effectively structured and that students can hear each of their group members (Bennett & Rolheiser, 2008).

  Teacher modelling. Marzano et al. (2001) suggested that teachers need to model what is expected of students who are working in small group structures. The Alberta Government, through the Alberta Education Competencies Overview Learning Guide (2016), said the same thing. The Guide proposed techniques for the students to respectfully work together. As a structured method of teaching pedagogy, the gradual-release-of-responsibility model begins with the teacher modelling the desired learning (Frey et al., 2009). This model of scaffolding instruction has been recognized as a successful approach to moving instruction towards student-centered collaboration and independent practice (Levy, 2007). Students need sufficient opportunities to practice the skills and processes of cooperative learning on their own (Marzano et al., 2001). Structures must have clear goals for learning and each group member must have a role and responsibility that is held by accountability (Marzano et al., 2001).

Formation of Grouping Students

  Marzano et al. (2001) wrote that engaging students in cooperative learning is not just a matter of placing them in groups. These researchers acknowledged the importance of strategic and intentional planning by teachers. They suggested that teachers consider the elements of cooperative learning and group size, and the development of collaboration skills. Marzano (2001) and Hattie (2009) agreed that cooperative learning is only effective when teachers keep

the groups small, structure the process carefully, and instruct students on how to work in groups

(as cited by Killian, 2009). Groups with more than five individuals are less effective than groups

that are smaller (Marzano et al., 2001). Larger sizes may result in the loss of positive

interdependence as students are more likely to feel socially pressured and less motivated, which

can potentially have a negative effect on individual accountability (Marzano et al., 2001).

Teachers should form groups based on assessments of each student's strengths, areas of

growth, ability levels, needs, interests, and backgrounds (Ontario Education, 2006). Bennett and

Rolheiser (2008) found that there are three different ways to group students: by friendships,

randomly, and teacher-structured. They pointed out that all three groups should be used.

However, they stated that teacher-structured is the most powerful in terms of learning. Using

Johnson and Johnson's research (1999), Ontario Education (2006) identified three types of

learning groups:

1. Informal groups: These are groups are utilized for on-the-spot activities or a few
   minutes during class time. An example of this type of grouping is when teachers use
   the think-pair-share cooperative learning structure.

2. Formal groups: These groups are designed for a longer duration in which the teacher
   uses Johnson and Johnson's five basic elements of cooperative learning (1999).

3. Base groups: Groups created to provide students with long-term support. Students
   stay together for a full term or full school year (Marzano et al., 2001). The Tribes
   Learning Communities (Gibbs, 2001) is an example of a base group. Base groups
   support creating a safe and inclusive community of learners (Gibbs, 2001).

Cooperative Learning Structures

According to Bennett and Rolheiser (2008), cooperative learning structures can range

from simple structures (which are less effective) to complex structures (which have more

significant effects on student learning). An example of a simple structure is a think-pair-share, in

which a teacher poses a question or statement and individual students first think silently to

themselves. Students then share their thinking with a partner, then the partners share their ideas

with the whole class (Alberta Education, 2010). An example of a complex structure is a jigsaw

strategy where students are organized into groups of four or five. Each student in the group is

assigned material to learn and then teach to the other group members. Students who are learning

about the same material work together as an expert group to determine the important key points

of the material and how to teach it to their group members. The original groups re-form and

students teach each other about their material (Alberta Education, 2010). Of particular note, is

the concept of stacking as developed by Bennett and Rolheiser (2008). Stacking is when

teachers integrate cooperative learning structures with other instructional strategies to push

students to use higher order thinking. Marzano et al. (2001) has also concluded that

understanding can be deepened if a teacher designs cooperative learning tasks that embed other

instructional strategies.

School Leadership

For change to occur within a school, effective instructional and school leadership is

required (Shannon & Bylsma, 2007). Effective school leaders nurture an instructional program

and school culture that supports learning and professional growth (Shannon & Bylsma, 2007).

Two essential objectives that are critical to any organization's effectiveness are supporting set

directions and influencing members to move forward in those directions (Leithwood, Seashore,

Anderson & Wahlstrom, 2004). Elmore (2000) reported that school improvement must come

from leaders who are responsible for instruction. Based on the concepts of cooperative learning,

the following section highlights the role that school leaders play in building a successful culture

through effective leadership.

Building trusting relationships. Leadership depends on the relationships between

leaders and followers (Shannon & Bylsma, 2007). Leadership is effective only if it is based on

trust, integrity, and strengthening peer relations (Fullan, 2005). School leaders whose goal is to

produce a positive school culture understand the foundational importance of building authentic

relationships with stakeholders, as relational trust is an essential resource for school

improvement (Shannon & Bylsma, 2007).   Effective leaders understand that it takes time to

create and strengthen trusting relationships, which is why they devote time and energy to

fostering relationships (Hall & Simeral, 2008). To foster effective trusting relationships, a leader

must act with fairness, dignity and integrity (Alberta Education, 2009).

Creating a vision. To build a culture of systemic cooperative learning, a clear and shared

vision is important, but leaders must have well-grounded beliefs before carrying out a shared

vision within an organization (Whitaker, 2008). It is the role of the leader to involve the school

community in creating a vision where stakeholders understand and are committed to that vision

(Alberta Education, 2010). High performing schools succeed in establishing shared goals that

resonate with stakeholders (Shannon & Bylsma, 2007). These shared goals provide direction

and purpose for teachers with the focus on learning and professional growth, an important step

for improving schools (Shannon & Bylsma, 2007).

Professional development. To support leaders and teachers, professional development

has been recognized as the best hope for improving student learning and teacher practices

(Shannon & Bylsma, 2007). Effective professional development emphasizes the why and the

how of teaching and relies on internal expertise (Shannon & Bylsma, 2007). Ledford and

Warren (1997) investigated the perceptions of teachers on cooperative learning. These authors concluded that to improve teacher understanding of cooperative learning, professional development is a key component. The same point has been made by Johnson and Johnson (1999), that teachers need training and practice of the elements of cooperative learning to develop teacher expertise.

Professional learning communities. Professional learning communities promote collaboration and communication, both of which have a positive effect on student achievement and teacher efficacy (Rozenholtz, 1989). This collaboration provides a chance for teachers to examine critical data, deepen learning, solve problems, and participate in intellectual conversations (Fullan, 2005). Johnson and Johnson (1993) added that teachers and school leaders have to support and encourage their colleagues. The single most important factor for moving schools forward is for school leaders to also be learners (Knight, 2011). Opportunities to collaborate with one another must be frequent, continuous, and structured (Shannon & Bylsma, 2007).

Visible school leaders. A characteristic of effective school leaders that is extremely important in the life of a school is that of being visible (Whitaker, Whitaker & Lumpa, 2009). Effective leaders are those who are seen in the classrooms every day, not always for evaluation purposes but for professional support (Fink and Resnick, 2001). Through classroom walkthroughs, leaders monitor teaching practices in order to promote teacher support, make suggestions and model reflective practices for staff development (Shannon & Bylsma, 2007).

Building capacity. Leadership is not about leading others as much as it is about building capacity within others. This involves developing new knowledge and skills and working together for effective change (Fullan, 2005). It requires skills and competencies and a

concentration of resources, and deepens the desire to continue improving (Fullan, 2005).

Maxwell (1999), stated that leaders must create a culture that builds potential leaders. He adds

that leaders should observe the leader among each person and provide growth opportunities.

Similarly, leaders need to be aware of which teachers can influence others (Whitaker et al.,

2009). Fullan (2005) pointed out that school leaders must ensure that they are building capacity

so that continuous leadership can be developed for the future. Building capacity can sustain

ongoing leadership and continuous effective change (Fullan, 2005).

Summary

Implementing cooperative learning in a classroom environment positively affects all

students (Kagan, 2000). Teachers are able to provide opportunities for students to interact with

one another, which enhances and deepens their learning (Marzano et al., 2001).

However, implementing cooperative learning is a complex process (Marzano et al., 2001).

Despite this, the research questions in this capstone and the literature on cooperative learning

support the importance of educators building a culture of cooperative learning.

Research demonstrates that having students work with each other supports them to

achieve greater results (Killian, 2015). Furthermore, the research established not only why

cooperative learning is important but how teachers can effectively implement cooperative

learning into learning environments. Finally, to improve learning and improve school's,

effective leadership is needed (Leithwood et al., 2004).

Outline of the Remainder of the Paper

The body of research that was examined in Chapter 2 illustrates the importance of

cooperative learning, defines effective group work, and shows how a culture of effective

cooperative learning structures can be implemented within elementary classrooms. Chapter 2

also validates how important effective leadership is for school improvement. Chapter 3 is a

summary of the research that addresses the methodology of how school leaders can build a

culture of effective cooperative learning in an elementary school setting. The chapter also

includes implications, recommendations and future considerations.

Chapter 3: Summary, Implications, Recommendations, Suggested Research, Final Statements

Summary

This capstone has provided an in-depth analysis of the significance of teachers utilizing cooperative learning practices and how a culture of effective cooperative learning can be implemented within elementary school classrooms. In addition, this capstone explained effective school leadership needed to build a culture of systemic cooperative learning. Although studies have noted that implementing cooperative learning is a complex and not easily understood process (Antil et. al., 1998; Marzano et al., 2001), further research has shown that implementing it into teaching benefits students (Alberta Education, 2005; Kagan, 2000; Marzano et al., 2001).

To implement cooperative learning into teaching practices, teachers must understand that learning can be maximized through well-designed and intentional social interaction with others (Marzano et al., 2001). Cooperative practices in a learning environment should be applied consistently and systematically (Marzano et al., 2001). It provides students with a chance to reflect on new knowledge, process their learning through discussion, and actively listen to their peers (Marzano et al., 2001). It requires teachers to be strategic in planning and intentional when facilitating students during group work activities (Marzano et al., 2001). To implement change and nurture a culture of learning and professional growth requires effective school leaders (Shannon & Bylsma, 2007).

Implications

Students in the 21st century need to possess not only intellectual skills but also the ability to function effectively in an environment that requires working cooperatively with others to accomplish a variety of tasks (Marzano et al., 2001). To appreciate all learners within diverse classrooms, students need to develop social interaction skills that will foster positive peer

relations (Lyman, Foyle and Azwell, 1993). Students need to be taught to develop individual

skills and become motivated to increase their academic success (Lyman et al., 1993).

In response to students having the ability to work effectively with others involves

educators utilizing a broad array of research based practices that support diverse learning

(Alberta Education, 2010b). As Alberta educators were given a mandate that students work

cooperatively, teachers became foundational to providing students opportunities to develop

communication and social skills as essential in preparing them for the workplace demands

(Conway, 2011). Thus, this capstone reinforces that a culture of systemic cooperative learning

can be implemented within an elementary school setting.

Recommendations

Research has indicated that school leadership has a positive effect on student

achievement, and that leadership can be considered the most important aspect of effective school

reform (Marzano, 2003; Marzano, Waters & McNuilty, 2005). Based on the concepts of

cooperative learning, the following recommendations address how school leaders can build a

successful culture of systemic cooperative learning in an elementary school setting. School

leaders who have limited knowledge about and experience building a culture of effective

cooperative learning can refer to the following recommendations.

School-wide focus on all students. Central to building a culture of systemic cooperative

learning through effective leadership is the focus on all students and student learning. With an

emphasis on all students, and the knowledge of 21st century learning outcomes set out by Alberta

Education through the Ministerial Order on Student Learning (2013), school improvement teams

can:

- Place an emphasis on increasing student learning

- Establish a process for implementation

- Monitor the effectiveness of the implementation plan

- Reflect and fine-tune practices

Placing the focus on student learning requires a school team to establish a shared mission, vision, and goals founded on a shared understanding and commitment (Edmonton Regional Learning Consortium, 2016).

Knowledge and beliefs of the school leader. To establish a vision of a culture of effective cooperative learning, and goals to achieve that vision, school leaders must first have well-grounded beliefs of their own (Marzano et al., 2001). This requires school leaders to have a broad repertoire of competencies and a deep knowledge of current pedagogy and curriculum (Alberta Education, 2009). Educators need to stay current with research by reading books and journal articles, taking additional college/university courses, and attending relevant professional development on an ongoing basis. Doing this will enable school leaders to not only deepen their own knowledge but nurture and sustain a school culture by promoting and modelling lifelong learning to students and staff.

School-wide collected data. School leaders should use collected data and research literature to inform and sustain decision-making (Leithwood, 2013). This can help them with identifying potential gaps in a school. To collect data, school leaders can administer pre and post surveys to teachers about cooperative learning. They can also obtain data by taking notes during walkthroughs, videotaping teachers teaching, and participating in professional learning communities. The data can be analyzed to identify any potential gaps in regards to a teacher's knowledge about cooperative learning and the methods he or she uses to implement it into teaching practices.

Development of an implementation plan. Once a gap is identified, school leaders may create a process to figure out how to fill the gap with stakeholders, creating purpose and direction (Shannon & Bylsma, 2007). It is recommended that an implementation plan be developed. Establishing and sharing high standards and expectations of what is expected from students and teachers helps everyone to attain the desired outcomes (Shannon & Bylsma, 2007). In building a culture of cooperative learning, school leaders should develop a plan, share beliefs and values, have clear goals and a vision of change (Shannon & Bylsma, 2007). These goals should also be aligned with school district initiatives and be embedded into a school improvement plan.

Ongoing professional development. Once the school team has a clear understanding of the shared focus and expectations, a support system is needed to assist teachers in a recommended three-year plan to improve teacher competence in cooperative learning (Johnson & Johnson, 1992). Ongoing professional development involves training staff about effective cooperative learning and using research-based evidence. The professional development should emphasize the why and the how of implementing cooperative learning into teaching practices. Indeed, this would involve an alignment of the Alberta curriculum and expectations set out by Alberta Education (2016). School leaders should use concrete examples of lessons and strategies that are useful in helping educators to get started (Johnson & Johnson, 1992).

Implementing cooperative learning in the classroom. After professional development sessions, teachers can begin teaching students appropriate and respectful ways of working together. Teachers can use co-constructed criteria building to develop norms to help students understand how to work together. Such norms can include using teacher modelling to show students how to be active listeners, practice equity of voice and respect viewpoints (Alberta

Education, 2016). Teachers can engage students in mini-lessons about conflict resolution skills, decision-making skills and how to compromise. Additionally, teachers can embed cooperative learning structures and provide time after these structures for students to reflect and evaluate their growth to working with other's (Alberta Education, 2016). To ensure that the process of school improvement of building a culture of effective cooperative learning moves forward, school leaders should ensure that accountability is placed on teachers.

Frequent monitoring of teaching. To improve teaching and learning, support needs to be provided to teachers through ongoing guidance, monitoring, and oversight (Shannon & Bylsma, 2007). At the same time, this monitoring can be used to hold teachers accountable for applying school improvement goals. Among the ways that school leaders can ensure that effective cooperative learning is being implemented are by ongoing walk-throughs in classrooms and initiating and guiding conversations using reflective questioning during collaborative professional learning communities. These methods can also help to ensure that quality teaching is taking place.

Trusting working relationships. Central to effective execution of building a positive school culture, are school leaders who build trusting working relationships with stakeholders (Alberta Education, 2009; Marzano et al., 2005): that is, school leaders who act with fairness, dignity, and integrity; who use effective communication; and who cultivate a climate of mutual respect (Alberta Education, 2009). Effective school leaders also identify and understand staff dynamics (Whitaker et al., 2009). They can successfully identify key teacher leaders in their school, which is an important understanding to support school progress (Whitaker et al., 2009).

Building capacity by identifying teacher leaders. Knowing and understanding staff members is an essential characteristic of an effective leader (Whitaker et al., 2009). A teacher

leader is defined as a highly skilled teacher who implements change and growth in a school; accepts and shares responsibility for the success of students, staff, school and self; assists with the change process; and takes ownership of their schools' success (Lambert, 2003). The ability to identify key teacher leaders, is needed when incorporating instructional reform like the implementation of effective cooperative learning into classrooms. It is critical that school leaders identify teacher leaders and gather feedback from teacher leaders (Whitaker et al., 2009). To identify teacher leaders is to recognize who meets the identified criteria. Classroom walk-throughs is a way to determine these teacher leaders (Marzano et al., 2005). Building capacity school-wide is dependent on school leaders to leverage these teacher leaders into building a culture of effective cooperative learning. That is because these teacher leaders have the potential to model numerous positive habits which can then foster into reflective growth of all staff.

Reflective growth through videotaping. To foster a culture of reflective growth for all teachers, is in building teacher capacity for success (Hall & Simeral, 2008). It is therefore recommended that a school leader videotape teachers teaching and then send the teachers their tapes with feedback and reflective questions. Teachers would have to give permission to be videotaped. Most teachers never have the opportunity to view themselves teaching. When they are able to do so, they learn a lot (Hall & Simeral, 2008). School leaders should also share with all staff a videotape of a teacher using cooperative learning effectively. This can provide staff with a chance to reflect and debrief.

Reflective growth through peer observations. To encourage reflective growth and improve school progress is to foster peer observations. Hall and Simeral (2008) reported that there is a vast amount of research that peer observations support professional development, but that teachers rarely observe their colleagues. School leaders should be strategic when setting up

time for teachers to observe other teachers. This could involve finding coverage for a teacher's

class, utilizing other teachers in the school or having a substitute teacher in for the day. It is also

recommended that school leaders communicate to teachers the reasoning for peer observations

and clarify that the session is not an evaluation. School leaders should also provide time after

observations for the teachers to debrief with one another and receive feedback.

Sustaining school improvement. In sustaining an improvement of building a culture of

effective cooperative learning, on-going monitoring and reviewing of the implementation plan is

necessary (Shannon & Bylsma, 2007). To monitor and review the teaching and learning of

cooperative learning, involves the use of on-going collected data. This collected data can be

obtained through a variety of assessments and observational approaches. Analyzing the

collected data monitors teaching and learning and provides measures of success to be celebrated.

This data also gives evidence and direction for the next steps in the implementation plan.

Suggested Research for the Future

Although this capstone illustrated how teachers can build a culture of effective

cooperative learning within elementary school learning environments and how school leaders

can build a successful culture of systemic cooperative learning through effective leadership,

further research is needed. With the continued rise of increasingly diverse student populations in

Alberta schools, one of those populations is sure to be refugees. One area of future research is

how cooperative learning can be used with and for refugees. Furthermore, research on the role

and knowledge of educational assistants in the implementation of building a culture of

cooperative learning could be researched.

Final Statements

A review of research has indicated that students learn more effectively through cooperative learning opportunities. Although research has shown that cooperative learning has a positive effect on student success, implementing effective cooperative learning practices into classrooms is poorly understood. This led to a literature review about how elementary teachers can build a culture of effective cooperative learning into their teaching practices by implementing essential elements of and guidelines on cooperative learning. The literature review illustrated how school leaders can build a culture of systemic cooperative learning through effective leadership, which is needed to improve learning. Indeed, central to Alberta education is in creating inclusive learning environments where all students can be successful. This fundamental responsibility requires teachers and school leaders to effectively implement cooperative learning into learning environments.

References

Alberta's Commission on Learning. (2003). *Every child learns, every child succeeds: Report and*

      recommendations. Edmonton: Alberta's Commission on Learning. Retrieved from

      https://open.alberta.ca/dataset/b0ad8515-edad-419a-968d-a30ec9975901/

      resource/491dd557- 1f9a-4184-a3b1-c72e543c0168/download/commissionreport.pdf

Alberta Education (1997). *Teaching quality standard applicable to the provision of basic*

      education in Alberta: Ministerial order (#016/97). Retrieved from

      https://education.alberta.ca/media/1626523/english-tqs-card-2013_3.pdf

Alberta Education (2005). *Instructional strategies: Cooperative learning.* Retrieved from

      http://www.learnalberta.ca/content/kes/pdf/or_ws_tea_inst_04_cooplearn.pdf

Alberta Education (2009). *Principal Quality Practice Guideline. Promoting successful school*

      leadership in Alberta. Retrieved from http://georgecouros.ca/blog/wp

      content/uploads/2010/04/pqs.pdf

Alberta Education (2010a). *Inspiring education: A dialogue with Albertans.* Retrieved from

      https://open.alberta.ca/dataset/45370ce9-3a90-4ff2-8735-

      cdb760c720f0/resource/2ee2452c-81d3-414f-892f-060caf40e78e/download/4492270-

      2010-Inspiring-Education-Dialogue-Albertans-2010-04.pdf

Alberta Education (2010b). *Making a difference: Meeting diverse learning needs with*

      differentiated instruction. Retrieved from

      https://education.alberta.ca/media/384968/makingadifference_2010.pdf

Alberta Education. (2013). *Ministerial order on Student learning (# 001/2013)*. Retrieved from

      http://education.alberta.ca/department/policy/standards/goals.aspx

Alberta Education. (2016). *Learning through the Competencies Guide.* Retrieved from

http://erlc.ca/resources/resources/cross_curricular_competencies_overview/documents/20

16/erlc/learning-guide-collaboration.pdf?1483732028

Alberta Education. (2016). *Meeting the Needs of each student.* Retrieved from

https://education.alberta.ca/diverse-learning-needs/meeting-the-needs-of-each-student/

Antil, L. R., Jenkins, J. R., Wayne, S. K., & Vadasy, P. F. (1998). Cooperative learning:

Prevalence, conceptualizations, and the relation between research and practice. *American

educational research journal*, *35*(3), 419-454.

Antil, L. R., Jenkins, J. R., Wayne, S. K., & Vadasy, P. F. (2003). How cooperative learning

works for special education and remedial students. *Exceptional children, 69*(3), 279-292.

Balka, D. S., Hull, T. H., & Miles, R. H. (Eds.). (2010). *A guide to mathematics leadership:

Sequencing instructional change*. Thousand Oaks, CA: Corwin Press.

Barron, B., & Darling-Hammond, L. (2008). *Teaching for meaningful learning: A review of

research on inquiry-based and cooperative Learning*. Retrieved from

https://pdfs.semanticscholar.org/05bb/40f4937dbdb7be66b9abeb47dace529e241a.pdf

Battistich, V., Solomon, D., & Delucchi, K. (1993). Interaction processes and student outcomes

in cooperative learning groups. *The Elementary School Journal*, *94*(1), 19-32.

Bennett, B., & Rolheiser, C., (2003). *Beyond monet: The artful science of

instructional integration.* Toronto, ON: Bookation Inc.

Boaler, J. (2016). *Mathematical mindsets: Unleashing students' potential through creative math,

inspiring messages and innovative teaching*. San Francisco, CA: Jossey-Bass

Caposey, T., & Heider, B. (2003). *Improving reading comprehension though cooperative

Learning.* Retrieved from http://files.eric.ed.gov/fulltext/ED478463.pdf

Cohen, P. A., Kulik, J. A., & Kulik, C. L. C. (1982). Educational outcomes of tutoring: A meta-

analysis of findings. *American educational research journal*, *19*(2), 237-248.

Conway, J. A. (2011). *Connecting cooperative learning to classroom environment* (Order No.

3478572). Available from Education Database. (903795943). Retrieved from

http://proxy.cityu.edu/login?url=http://search.proquest.com.proxy.cityu.edu/docview/903

795943?accountid=1230

Edmonton Regional Learning Consortium (2016). *A guide to support implementation: Essential*

conditions. Retrieved from: http://essentialconditions.ca/wp-

content/uploads/2016/11/essentialconditions_eng.pdf

Dale, N. (2016, May 31). Video and professional development: The power of observation [Web

log post]. Retrieved from https://www.edutopia.org/blog/video-pd-power-of-observation-

nira-dale

Elmore, R.F. (2000). Building a new structure for school leadership. Retrieved from

http://www.shankerinstitute.org/sites/shanker/files/building.pdf

Fink, E., & Resnick, L. B. (2001). Developing principals as instructional leaders. *Phi Delta*

Kappan, *82*(8), 598-610.

Frey, N., Fisher, D., & Everlove, S. (2009). *Productive group work: How to engage students,*

build teamwork, and promote understanding. Alexandria, VA: ASCD.

Fullan, M. (2005). *Leadership & sustainability: System thinkers in action*. Thousand Oaks, CA:

Corwin Press.

Gibbs, J. (2001). *Tribes: A new way of learning together.* Windsor, CA: Centre Source systems.

Hall, P., & Simeral, A. (2008). *Building teachers' capacity for success: A collaborative*

approach for coaches and school leaders. Alexandria, VA: ASCD.

Hattie, J. (2009). *Visible Learning: A Synthesis of 800 Meta-Analyses Relating to*

Achievement. New York, NY: Routledge.

Johnson, D., Maruyama, G., Johnson, R., Nelson, D., & Skon, L. (1981). The effects of

cooperative, competitive and individualistic goal structure on achievement: A

meta-analysis. *Psychological Bulletin, 89*, 47-62.

Johnson, D. W., & Johnson, R. T. (1996). Cooperation and the use of technology. In D. H.

Jonassen (Ed.), *Handbook of research for educational communications and technology*

(p. 1017-1044). New York: Simon and Schuster Macmillan.

Johnson, D. W., & Johnson, R. T. (2009). An educational psychology success story: Social

interdependence theory and cooperative learning. *Educational researcher*, *38*(5), 365-

379.

Johnson, D. W., & Johnson, R. T. (1992). Implementing cooperative learning. *Contemporary

Education*, *63*(3), 173.

Johnson, D. W., Johnson, R. T., & Holubec, E. J. (1994). *The nuts and bolts of cooperative

learning*. Edina, MN: Interaction Book Company.

Johnson, D., Johnson, R. & Smith, K. (1991). *Cooperative learning: Increasing college faculty

instructional productivity.* Washington, DC: The George Washington University.

Johnson, D. W., Johnson, R. T., & Smith, K. A. (1998). *Active learning: Cooperation in the

college classroom*. Edina, MN: Interaction Book Company.

Johnson, D. W., & Johnson, R.T. (1999). *Learning together and alone: Cooperative,

competitive, and individualistic learning.* Boston: Allyn & Bacon.

Kagan, S. (1994). *Cooperative learning*. San Clemente, CA: Kagan Cooperative Learning.

Kagan, S. (2000). Group grades are pointless. Kagan Online Magazine, 1-6. Retrieved

from http://www.kaganonline.com/KaganClub/ FreeArticles/GroupGrades.html

Kagan, S., & Kagan, M. (2009). *Kagan cooperative learning.* San Clemente, CA: Kagan

    Publishing.

Knight, J. (2011). *Unmistakable impact.* Thousand Oaks, CA: Corwin.

Killian, S. (2015). *8 strategies robert marzano and john hattie agree on.* Retrieved from:

    http://www.evidencebasedteaching.org.au/robert-marzano-vs-john-hattie/

Kramarski, B., & Mevarech, Z. R. (2003). Enhancing mathematical reasoning in the classroom:

    The effects of cooperative learning and metacognitive training. *American Educational*

    Research Journal, *40*(1), 281-310.

Lambert, L. (2003). *Leadership capacity for lasting school improvement.* Alexandria, VA:

    Association for Supervision and Curriculum Development.

Ledford, C. C., & Warren, L. L. (1997). Cooperative learning: Perceptions of preservice

    teachers. *Journal of Instructional Psychology*, *24*(2), 105.

Leithwood, K., Seashore, K., Anderson, S., & Wahlstrom, K. (2004). How leadership influences

    student learning. Retrieved from http://www.wallacefoundation.org/knowledge-

    center/Documents/How-Leadership-Influences-Student-Learning.pdf

Leithwood, K. (2013). Strong districts and their leadership: A paper commissioned by the

    council of Ontario directors of education and the institute for education leadership.

    Retrieved from http://www.ontariodirectors.ca/downloads/Strong%20Districts-2.pdf

Levy, E. (2007). Gradual release of responsibility: I do, we do, you do. Retrieved from

    http://www.sjboces.org/doc/Gifted/GradualReleaseResponsibilityJan08.pdf

Li, M. P., & Lam, B. H. (2013). Cooperative learning. Retrieved from https:// www.

    ied.edu.hk/aclass/Theories/cooperativelearningcoursewriting_LBH%2024June.pdf

Marzano, R., Pickering, D., & Pollock, J. (2001). *Classroom instruction that works: Research-*

based strategies for increasing student achievement. Alexandria, VA: Association for

Supervision and Curriculum Development.

Marzano, R. J. (2003). *What works in schools: Translating research into action*. Alexandria,

VA: Association for Supervision and Curriculum Development.

Marzano, R. J., Waters, T., & McNulty, B. A. (2005). *School leadership that works: From

research to results.* Alexandria, VA: Association for Supervision and Curriculum

Development.

Marzano, R. J., & Brown, J. L. (2009a). *A Handbook for the Art and Science of Teaching*.

Alexandria, VA: Association for Supervision and Curriculum Development.

Marzano, R. J. (2009b). Setting the record straight on "high-yield" strategies. *Phi Delta Kappan,

91*(1), 30-37.

Maxwell, J. C. (1999). *Twenty-one indispensable qualities of a leader*. Nashville, TN: Thomas

Nelson Inc.

McWhaw, K., Schnackenberg, H., Sclater, J., & Abrami, P.C. (2003). *From cooperation to

collaboration: Helping students become collaborative learners. In R.M. Gilles (Ed.), Co-

operative learning: The social and intellectual outcomes of learning in groups.* New

York, NY: Routledge Falmer.

Mueller, A., & Fleming, T. (2001). Cooperative learning: Listening to how children work at

school. *The Journal of Educational Research*, *94*(5), 259-265.

Okebukola PA. (1986). The influence of preferred learning styles on cooperative learning in

Sciences. *Science Education*, *70*(5): 509-517.

Okebukola PA. (1984). The relative effectiveness of cooperative and competitive interaction

techniques in techniques in strengthening students' performance in science courses.

    Science Education, 69: 501-506.

Ontario Education. (2006). A guide to effective literacy instruction, grades 4 to 6: Volume 1.

    Retrieved from

    http://eworkshop.on.ca/edu/resources/guides/Guide_Lit_456_Vol_1_Assessement.pdf

Orlich, D. C., Harder, R. J., Callahan, R. C., Trevisan, M. S., & Brown, A. H. (2007). *Teaching*

    strategies: A guide to effective instruction (8th ed.). Boston, MA: Houghton Mifflin.

Rohrbeck, C. A., Ginsburg-Block, M. D., Fantuzzo, J. W., & Miller, T. R. (2003). Peer-assisted

    learning interventions with elementary school students: A meta-analytic review.

    Journal of Educational Psychology, 95(2), 240-257.

Rosenholtz, S. J. (1989). *Teachers' workplace: The social organization of schools*. White Plains,

    NY: Longman, Inc.

Routman, R. (2014). *Read, write, lead: Breakthrough strategies for school wide literacy success*.

    Alexandria, VA: Association for Supervision and Curriculum Development.

Shannon, G. S., & Bylsma, P. (2007). Nine characteristics of high-performing schools: A

    research-based resource for schools and districts to assist with improving student

    learning. *Washington Office of Superintendent of Public Instruction*. Retrieved from

    http://files.eric.ed.gov/fulltext/ED499819.pdf

Slavin, R. (1991). Synthesis of research on cooperative learning. *Educational*

    Leadership, *48*(5), 71-82.

The 2030 sustainable development goals and the pursuit of quality education for all: A statement

    of support from Education International and ASCD [Joint Statement] (2016). Retrieved

    from www.ascd.org/qestatement

Torchia, S. P. (2012). *Cooperative learning and its effect on fourth-grade mathematics students'*

    achievement, motivation, and self-efficacy. Retrieved from http://proxy.cityu.edu/login?

    url=http://search.proquest.com.proxy.cityu.edu/docview/1008915878?accountid=1230

Whitaker, T., Whitaker, B., & Lumpa, D. (2000). *Motivating and inspiring teachers: The*

    educational leader's guide for building staff morale. Larchmont, NY: Eye On Education

Appendix

Key 1. Structures	How to use cooperative learning instructional strategies
Key 2. Teams	How and when to form and re-form the various types of teams
Key 3. Management	How to manage the cooperative classroom
Key 4. Class-building	How to create a caring, cooperative community of learners
Key 5. Team-building	How to develop powerful learning teams
Key 6. Social Skills	How to develop students' ability to cooperate
Key 7. Basic Principles (PIES)	How to use the proven principles of cooperative learning