FRIEND AND COWORKER: THE ROLE OF INTERDEPENDENT INSTRUMENTAL AND EXPRESSIVE RELATIONSHIPS AMONG K-12 EDUCATORS IN CULTIVATING AN INNOVATIVE ENVIRONMENT

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By

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The state of the education system in 2013 is one of transition. Multiple influences call for change and innovation due to a belief that the system at large is not meeting student needs. The end result is that teachers are currently incorporating innovative strategies. Innovation is an important element to offering rigorous curriculum for successful students, but for teachers the implementation involves elements of risk and uncertainty. The proposed innovation may not be successful. Social relationships among peer coworkers, or teachers, can be leveraged to counteract the frustrations that come from implementing new strategies. These relationships can also be leveraged to spread new ideas through school networks, resulting in best practices to meet student needs. Continuing from the peer coworker typology developed by Kram and Isabella (1985), this study hypothesizes that the Collegial Peer relationship is most conducive to an innovative environment in K-12 schools because the Collegial Peer allows for interdependent expressive and instrumental relationship characteristics to interact for strong relationships in the workplace. A new definition to define this interdependent domain is proposed and an OLS regression analysis of peer teacher relationships based on date gathered by online survey is analyzed.
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Chapter I: Introduction

On an ordinary day, I attended a routine weekly department meeting. A small group of English teachers and the principal gathered in scarred and restrictive desks to discuss the week’s issues and collectively solve problems. The principal pointed out a strategy the science department had begun to implement with some success. Without question, I mentally rejected the idea. The strategy came from the science department, and though I considered myself friendly with them, they were neither my friends nor the colleagues I would ever go to first to solve a problem. Because the new idea came from a group of people I did not consider capable of offering me useful new ideas or innovations, I ignored it.

It wasn’t until after the meeting that I realized I had, in fact, not ignored this new idea. I had actually already successfully implemented a similar concept, though the source of the idea came from other resources. When I realized this paradox in my own thinking, I questioned why I would react negatively to the innovation when it came from one source and yet embrace it with an open mind when it came from a source which I approved. I wondered how coworker relationships can influence the culture of innovation within a school.

Public school districts routinely gamble upwards of hundreds of thousands of dollars on innovative programs and approaches that promise rewards in the form of measurable student achievement. In many cases, promised increases never materialize. Of course, the possible reasons why a particular innovation is unsuccessful are too broad of a subject for one research project. This study will then focus on one possible correlation between an innovative environment and coworker relationships. Perhaps the relationships built among teachers can be utilized to ensure successful innovation.
The peer coworker relationship is a multi-faceted entity. Peer coworkers, or workers at the same level of an organization, may develop relationships with coworkers for a variety of reasons. Some may consider coworkers friends as well as colleagues. This study will explore whether the distinction matters for teachers in the K-12 workplace environment given the many possible gradations within types of social relationships that may prove useful in creating an innovative environment.

**Key Concepts**

There can be no question that coworker relationships play a large role in the culture of a workplace. However, there is some question as to what type of relationship is more influential. Studies do not often differentiate between expressive and instrumental support and have often neglected the influence of instrumental support in favor of studying expressive relationships (Ducharme & Martin, 2000). This study will fill this gap by considering expressive and instrumental relationships separately and interdependently.

**Innovation.**

There is a relationship between communication and innovation in that innovation-based talk occurs in environments where colleagues are considered important, credible, supportive, work-compatible, and friends (Albrecht & Hall, 1991). When coworkers interact by sharing information, knowledge, and expertise, new knowledge is likely to be created and previous knowledge is more likely to be retained (Moolenaar & Sleegars, 2010). If teachers share resources more readily in accordance with the type of relationship they have cultivated, this will contribute to the culture of innovation within the school by preserving and spreading knowledge. This knowledge can help coworkers navigate through the risk taking, creativity, and ability to
adjust to change that are key characteristics of an innovative environment. One way this type of environment can be created and nurtured is through the relationships of peer coworkers.

**Instrumental relationships.**

Instrumental relationships are defined as “relationships in which resources are exchanged that can facilitate achieving organizational goals,” (Moolenaar & Sleegers, 2010, p. 100). This type of relationship is task-oriented and typically limited to the work environment (Chiaburu & Harrison, 2008). Veteran or experienced coworkers typically have both know-how and knowledge that younger or more inexperienced workers may find it valuable to access (Ahuja, 2000). Instrumental relationships can in this way take on the form of a mentorship that continues institutional knowledge including appropriate social norms and procedural processes within the organization (Chiaburu & Harrison, 2008). Instrumental relationships exist in the service of continuing the goals of the workplace, in contrast to expressive relationships that can expand beyond workplace concerns (Ducharme & Martin, 2000).

**Expressive relationships.**

Expressive relationships have been found to have strong influence on worker attitudes, job satisfaction, job involvement, and organizational commitment (Chiaburu & Harrison, 2008). In addition, when coworkers share in strong relationships marked by information sharing, feedback, and the discussion of personal topics, along with emotional support, these coworkers function as a more cohesive group (Odden & Sias, 1997). Expressive relationships are defined as “affective relationships between organizational members that are formed to exchange social resources, such as friendship and social support, that are not directly aimed at achieving organizational goals,” (Moolenaar & Sleegers, 2010, p. 100).
Research Question

Though coworker relationships have been primarily studied outside of the realm of education, instrumental and expressive relationship characteristics have been found play a necessary role when developing a culture of innovation (Ahuja, 2000). This study will delve deeper into the concept of instrumental and expressive relationship characteristics to discover the influence of an expressive relationship that includes the emotional support and trust of a friendship versus the influence of an instrumental relationship that, though fully functional in the workplace, may not extend to full-fledged friendship versus the middle ground where expressive and instrumental relationship characteristics interact. This study will determine the role of instrumental and expressive relationships in supporting elements of an innovative culture via the following research question:

RQ: How do instrumental relationships and expressive relationships cultivate a culture of innovation among K-12 teachers?

Hypotheses

Within this research question, three hypotheses will be utilized to better understand the relationship that has the strongest influence upon an innovative culture. Three social interactions commonly occurring between teachers will be examined to discover if those relationships stem from a primary instrumental or expressive domain or from an interdependent domain where instrumental and expressive relationship characteristics interact.

H1: Resource sharing as a function of instrumental relationships is more likely than resource sharing as a function of expressive relationships or resource sharing as a function of
interdependent instrumental and expressive relationships to cultivate an innovative environment.

H₂: Social support as a function of expressive relationships is more likely than social support as a function of instrumental relationships or social support as a function of interdependent instrumental and expressive relationships to cultivate an innovative environment.

H₃: Work-related discussions as a function of interdependent instrumental and expressive relationships are more likely than work-related discussion as a function of instrumental relationships or work-related discussion as a function of expressive relationships to create an innovative environment.

Methodology

This study will use quantitative methodology to explore possible correlations between peer coworker relationships and an innovative environment. An online survey distributed to the K-12 teacher population will include a battery of questions to evaluate each respondent’s innovative climate in his or her particular school. Then the survey will evaluate whether respondents’ are more likely to turn to expressive or instrumental relationships to share resources, empathize, and discuss work-related issues. Survey Monkey will be used to distribute the survey and collect responses. The developed sample will then be a convenience sample. Convenience sampling is best used to study a group with attributes in common. The common attribute, a position as a k-12 teacher, will allow for the survey to be distributed via work emails. Most or all teachers have an accessible email account through their employment. Though the convenience sample may produce bias, this study is suited to the method in utilizing my personal network as a former teacher (Lindlof & Taylor, 2011). An initial email will be sent to
acquaintances and former colleagues spread across the East and West coasts who are current classroom teachers. Online teachers will be omitted from this sample because they do not reliably see colleagues face to face within a physical location. This sample will also be limited to K-12 classroom teachers, but will be open to public, private, parochial, and charter school educators. The snowball technique will be incorporated by asking each contact to forward this survey to colleagues. This method was also chosen because it will not tie findings to a particular context or shift in approach such as a curriculum change being implemented as it would if this study focused on one specific school (Moolenaar & Sleegers, 2010).

**Chapter Description**

This introduction in chapter I introduced and defined the scope of this study in exploring the way relationships among teachers support characteristics of innovative cultures. In chapter II the conceptual framework of this study is grounded in the pioneering work of Kram and Isabella (1985) who defined three levels of peer to peer coworker relationships. The Information Peer relationship allows for task oriented information sharing. Collegial Peers incorporate an element of friendship with increased information sharing. The Special Peer is a relationship of deep personal friendship, empathy, and emotional support. Through these gradations of peer coworker relationships, this study will consider which type of relationship helps to create facets of an innovative environment. Chapter II also contains a proposal for a new definition to better identify the interdependent relationship domain encompassed by the Collegial Peer relationship. The literature review in chapter III will establish a correlation found in research between innovative cultures and expressive and instrumental relationships. The methodology section of chapter IV will describe the process of developing the survey, collecting data, preparing the data
through creating indices, and performing a statistical analysis using OLS regression techniques. The analysis and discussion section of chapter V will analyze relevant findings against the proposed hypotheses. Chapter V explores the key findings of this study. In particular, the strong influence of interdependent instrumental and expressive relationships, the non-finding of independent expressive relationships, and the influence of grade level on an innovative environment will be addressed. The conclusion in chapter VI will summarize the core elements of this study and propose further steps for future research.
Chapter II: Conceptual Framework

The purpose of this study is to examine the potential for expressive and instrumental relationship characteristics of coworker relationships in terms of fostering an innovative environment where workers are able to appropriately work through the uncertainty and risk associated with change. Research into the nature and purpose of social support in the workplace has a long history (see Kram & Isabella, 1985; Albrecht & Hall, 1991; Odden & Sias, 1997; Sias, 2009) and current research in the field of social network analysis has applied social network theory to coworker relationships in the K-12 classroom (see Daly, 2010). Outside of social network analysis, there is a need for more research into the specific context of the working environment of the K-12 classroom teacher as it applies to coworker relationships. This study will in some part connect research into the nature of the coworker relationship as it relates to educators at the elementary and secondary levels.

Defining Coworkers

In most organizational structures, most employees work at the same level and can therefore refer to their coworkers as peers. The term coworker denotes all individuals working within the same organization and includes both those higher and lower in the hierarchical structure (Sias, 2009). Kram and Isabella (1985) focused on the peer to peer coworker relationship, wherein coworkers are those who work at the same level within the hierarchy of the organization. In a typical school, the majority of employees work at the same level as a classroom teacher, with administrators and some mid-level support positions such as an academic coach or curriculum specialist acting in a supervisory role. Because most workers within a typical school are peer coworkers, the peer relationship is a valuable entity with the
potential to support competence and confidence in terms of professional roles as well as a degree of reciprocity in the sense that these relationships involve give and take (Kram & Isabella, 1985).

The shades of distinction between coworker relationships and what constitutes a friendship were first delineated by Kram and Isabella (1985). Placed on a continuum, there are three types of coworker relationships as shown by Figure 1.

*Figure 1: A Continuum of Peer Relationships*

<table>
<thead>
<tr>
<th>Information Peer</th>
<th>Collegial Peer</th>
<th>Special Peer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Primary Function</td>
<td>Career strategizing</td>
<td>Confirmation</td>
</tr>
<tr>
<td>Information-sharing</td>
<td>Job-related feedback</td>
<td>Emotional Support</td>
</tr>
<tr>
<td></td>
<td>Friendship</td>
<td>Personal feedback</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Friendship</td>
</tr>
</tbody>
</table>

**Information Peer**

At the first level, coworkers develop information peer relationships. Information peer relationships serve as a starting point for new employees who need to glean knowledge about formal and informal procedures within the organization (Sias, 2009). In fact, most coworker relationships fall under this category, and coworkers seem able to maintain a large number of information peer relationships (Kram & Isabella, 1985), which is marked by "a low level of intimacy and low levels of self-disclosure and trust and is limited to work-related topics," (Sias, 2009, p. 61). This relationship is task oriented. For instance, a teacher may ask the office expert for help to fix the jammed copier or a new teacher might check with a more experienced colleague before moving forward with a process. This process does not involve much in the way of emotional support, but at the same time this type of relationships asks little of either party (Kram & Isabella, 1985). This type of relationship essentially gets the job done by allowing
information to move efficiently through the organizational structure. What the information peer relationship is not, however, is personal.

**Collegial Peer**

The second level of coworker relationship as outlined by Kram and Isabella (1985) allows for a more personal relationship between peer coworkers. The collegial peer relationship is a fusion of the information peer relationship with characteristics of friendship marked by "moderate levels of trust, intimacy, emotional support, and self-disclosure," (Sias, 2009, p. 61). At this relationship level, a teacher may seek out a trusted colleague to vent about a difficult student or to seek out advice and then stay to discuss common interests. At this level, coworkers disclose work related problems. For instance, the collegial peers may discuss issues regarding a problematic coworker or supervisor (Sias & Cahill, 1998). The topic of conversation at this level of relationship becomes broader and includes non-work related topics (Sias, 2009). Kram and Isabella (1985) found that “the primary functions provided by the collegial peer relationship are career strategizing, job-related feedback, and friendship, as well as some information sharing, confirmation, and emotional support” (p. 121). This level incorporates interdependent instrumental and expressive relationship characteristics.

**Special Peer**

The third and final level of coworker relationship as outlined by Kram and Isabella (1985) is what they refer to as "best friends." The special peer relationship is rare and marked by "high levels of trust, intimacy, emotional support, and self-disclosure," (Sias, 2009, p. 61). At this stage, virtually no topic of conversation is off limits as these coworkers discuss both work related topics and the full range of personal topics that may include sensitive subjects. This type
of relationship typically takes years to develop, but it is also able to withstand periods of transition or change within the organization. Where the information peer or collegial peer relationships often fade, the special peer relationship endures (Kram & Isabella, 1985).

**Social Support in the Workplace**

The ability for a peer to provide effective and unique social support for another peer is well documented (Sias, 2009). Peer coworkers come from the same place in terms of understanding the context of work-related issues and can therefore be a more effective source of support. Coworkers often seek out a coworker first instead of turning to a family member to deal with a work-related problem (Sias & Cahill, 1997). There is much evidence to point to peer coworker relationships being a crucial source of social support (Sias, 2009). When coworkers share in strong relationships marked by information sharing, feedback, the discussion of personal topics, and emotional support, these coworkers function as a more cohesive group than when coworker’s relationships are marked simply by the sharing of work-related information (Odden & Sias, 1997).

Kram and Isabella (1985) formed their conclusions based on interviews that took place at a large, northeastern manufacturing company. This study will consider whether the relationship continuum presented holds when applied to general education teachers at the K-12 level.

**Instrumental and Expressive Relationships**

The categories of Instrumental and Expressive relationships are broad domains that encompass a wide variety of relationship characteristics. When considering how these broad categories relate to the framework created by Kram and Isabella (1985), the interactions between and potential functionalities of the relationship gradations become apparent. This is represented
in Figure 2. In particular, as Billet (2012) discusses, “the processes that secure and sustain innovations at work also draw interdependently on personal and social contributions,” (p. 93).

**Figure 2: Functions of Peer Coworker Relationships**

![Diagram of Peer Coworker Relationships]

Although the Information Peer, Collegial Peer, and Special Peer have differentiated strengths, they all contain some element of both Instrumental and Expressive relationships. This suggests some interactions between the two domains as well as an added level of complexity. In terms of developing an innovative environment, does the Information Peer have more influence as a function of the Instrumental relationship, the Expressive relationship, or both? When the Collegiate Peer appears to value the Instrumental and Expressive domains in equal measure, does that make the Collegiate Peer the “sweet spot” of an innovative culture? In all cases, the complexity of these relationships could be analyzed as potentially intersecting, interdependent domains as well as independent ones.

**A New Definition of Workplace Friendship**

The role of friendship in this conceptual framework does not distinguish a difference between a friendship functioning outside of the workplace and how a friendship might function
bounded by the workplace environment. The Special Peer relationship appears to incorporate a conceptual understanding of traditional friendship that falls outside the purview of the scope of the workplace. However, friendship characteristics in the workplace differ from friendship characteristics in the wider world. The Collegial Peer relationship incorporates this distinction. When instrumental and expressive relationship domains are connected to the framework provided by Kram and Isabella (1985) as seen in Figure 2, it becomes clear another definition beyond the defined domains of instrumental and expressive relationships is required.

The definition for instrumental relationships in the workplace incorporates social interactions put to the purpose of completing tasks. The expressive relationship incorporates social interactions not explicitly related to or bounded by the interests of the workplace (Moolenaar & Sleegars, 2010). I propose a third domain, interdependent expressive and instrumental relationship, defined as the following:

Social interactions between coworkers that interdependently allow for both instrumental relationship characteristics and expressive relationship characteristics as they pertain to the sphere and scope of the workplace.

This definition is best reflected by the Collegial Peer relationship where friendship, trust, and empathy play a role, but that role is still fine-tuned to the context of the workplace and the completion of tasks within the workplace.

**Chapter Summary**

The framework developed by Kram and Isabella (1985) found three types of peer coworker relationships in the workplace. All three types exist in the workplace at varying levels with Information Peer being the most common and Special Peer the rarest. The Information Peer
and Special Peer encompass broad relationship domains with one domain in dominance. The Collegial Peer maintains interdependent relationship domains which might best be described in the new definition for interdependent expressive and instrumental relationships I have proposed. The purpose of this study is to explore possible correlations between peer to peer coworker relationships and an innovative environment. The literature review of chapter III will consider the connection between social relationships within this two broad domains and an innovative environment.
Chapter III: Literature Review

Introduction

The purpose of this study is to explore possible correlations between instrumental and expressive relationships and an innovative environment. In particular, this study will examine the kinds of social relationships that are most likely to foster an innovative environment. The three major concepts that will be examined in this literature review are innovation, expressive relationships, and instrumental relationships. Within those subjects, literature is reviewed that explores the need for innovation in an educational context, the connection between innovation and social relationships, and the interdependence between the instrumental and expressive domains.

A Need for Change

Since the early 1980’s, the prevailing opinion regarding the effectiveness of schools includes a belief that change is not only necessary, but imperative to solve a national crisis. From the publication of the 1983 report A Nation at Risk through the 2001 No Child Left Behind (NCLB) legislation and current Race to the Top funded initiatives, policy has been established that calls for change. As evidenced by current debates about public education, something is not working. At any one time, one can hear arguments that students are failing, teachers are failing, or the system itself is failing to meet the needs of those it serves (see Allen & Shaw, 1990; Rouse & Barrow, 2006). Vogl (2008) notes the negative impact on teacher’s relationships of such negative media coverage.

In recent decades, the American public has shown diminishing confidence in the public school system. Polls in 1974 report that 69% of those surveyed gave a grade of A, B, or C to
their local public schools. By 1981 that figure dropped to 63% and coordinated with an increase in C’s and a large decrease in A’s (Graham, 2005). A 2001 Gallup poll, corresponding to the year NCLB was passed, found only 34% of those polled expressed a “great deal” or “quite a lot” of confidence in the public schools. Gallup called this a near record low (Morales, 2001). Yet there was still further to fall. Confidence polls found that by 2007 that figure had fallen to 33% and, in 2012, confidence in education reached a new low with only 29% reporting a “great deal” or “quite a lot” of confidence in public schools (Jones, 2012). The national mood towards educational practices points to a desire for change which can best be traced back to the publication of *A Nation at Risk* in 1983.

When *A Nation at Risk* was published, it electrified the American imagination with allegations that “the United States was committing unilateral disarmament by failing to educate its children,” (Graham, 2005, p. 155). *A Nation at Risk* was the smoking gun that ushered in a full bodied belief that the public education system was and is not meeting the needs of students. Another mandate for change occurred in the 2001 passing of No Child Left Behind (NCLB). Drawing on a well-established base of research and applied practices in accountability and standards, the NCLB legislation was “the latest incarnation of a fascination with standards, testing, and evaluation whose roots were old but well watered over the last generation,” (Reese, 2011, p. 322).

Following the passing of the legislation, states and districts had to adjust practices to meet the new requirements (Linn, Baker, & Betebenner, 2002) and are, in 2013, still adjusting to meet the mandate. The crux of the NCLB approach is an emphasis on achievement as measured by standardized test scores. English (2010) notes that “tests reinforce the social status quo, and
to focus on them exclusively runs the risk of freezing the existing social order, injustices, inequities, exclusivities, and the prevailing power distribution of the here and now into the future,” (p. 107). At this time there exist strong concerns at the unintended consequences of these types of reforms, particularly for poor students, when test scores are made the focus. A school that produces low test scores is most scrutinized and most likely to embrace a series of reform that Kohn (2011) refers to as scripted and militaristic. Although the intention may have been to push schools to promote learning for all students, the outcome has essentially pushed schools to scramble to ensure they do not appear to be failing in terms of how they measured. Change has become the watchword of American education.

Innovation to Meet Changing Needs

Another word for change is innovation. In business, organizations have connected an ability to compete in increasingly complex environments with an ability to maintain continuous innovation (Porth, McCall, & Bausch, 1999). Thus it is important to develop a working “environment where the behaviors and practices involved in continuous development are actively encouraged,” (Mumford, p. 27 as cited in Teare & Dealtry, 1998, p. 47). When coworkers collaborate to solve problems and meet challenges that cannot be solved independently, collaboration “is an innovation that fosters more innovation,” (Lawson, 2004, p.228). Innovation then acts as both an outcome and benefit for the organization (Kontogiorghes, Awbrey, & Feurig, 2005). Given the rate of change and adaptation required to maintain a continuous rate of change, uncertainty can create resistance among workers attempting to adapt to new and modified practices (Fidler & Johnson, 1984).
Uncertainty and risk.

In an environment of change, “practitioners must cope with rapid and significant changes in educational technology, systems logic, document designs, etc. as well as new findings in concept acquisition and retention,” (Langer, Duncan, & Rassen, 1980, p. 147-148). Coping with such rapid change involves taking steps to deal with inherent risk and uncertainty in part because success cannot be predicted. The larger and more complex the innovation, the more unpredictable success becomes. In response to perceptions that the new practice will not or cannot succeed, risk and uncertainty derived from complexity can lead to resistance from workers (Fidler & Johnson, 1984). Essentially, workers do not need to be classified as risk-takers, but they do need an environment that effectively manages risk and uncertainty when making changes (Albrecht & Hall, 1991). In particular, an environment that encourages norms of reciprocity as well as trust in relationships between coworkers who collaborate and communicate can help reduce risk and uncertainty connected with change (Lawson, 2004).

The hierarchical structure.

In the traditional and typical hierarchical work environment, peer coworkers will outnumber higher up leadership (Kram & Isabella, 1985). Workers will then communicate with and have influence upon a number of coworkers at a variety of lower, equal, and higher levels (Bridge & Baxter, 1992). Often, leaders will treat subordinates differently, and the way leaders treat their subordinates can affect coworker communication among their peers (Sias & Jablin, 1995). When communication channels between leaders and workers are positive and open, this will influence the quality of worker attitudes and the level of communication among peer coworkers (Sherony & Green, 2002). An organization that fosters high morale and promotes
trust among coworkers at the peer level, in addition to a perception that managerial levels act in a just manner to all staff, have a relation to how well peer coworkers are able to work together to achieve goals (Forret & Love, 2007). Therefore, leadership within the hierarchical structure of the organization can play a role in creating effective and positive communication at the peer coworker level.

Given how crucial success is when implementing an innovative strategy, it is important to note that in a hierarchical setting, decisions to make changes often travel in a top down format where leadership adopts an innovation that is implemented by others (Fidler & Johnson, 1984). In education particularly, the norm is management models that promote “a hierarchical nonreciprocal relationship in which the “supervisor” has near total power over the relationship and is expected to point out the errors of the ways of the worker” (English, 2010, p. 121). The paradox is that while supervisors may provide the impetus for an innovation, supervisors do not directly implement the new practices. When an innovative practice is introduced, it will be modified, adapted, and socially co-constructed by those implementing the practice as peers (Fidler & Johnson, 1984; Moolenaar & Sleegers, 2010). When coworkers must collaborate to implement a new practice, the hierarchical organization can become a hazard “because traditional structures and policies, along with taken for granted rules, constrain and prevent” effective development of collaboration strategies (Lawson, 2004, p. 234). Thus, employees must be involved in taking responsibility for implementing change (Porth, McCall, & Bausch, 1999). Collaboration, or effective communication between a group of people working together to solve a problem, can either be helped or hindered by the organizational setting, including whether the proposed innovation comes from a top down or bottom up approach (Høyrup, 2012).
The learning organization.

A learning organization is “a social system whose members have learned conscious, communal processes for continually: generating, retaining, and leveraging individual and collective learning to improve the performance of the organizational system in ways important to all stakeholders; and monitoring and improving performances,” (Teare & Dealtry, 1998, p. 49). A learning organization with strong ties between coworkers allows for access to new ideas from outside sources plus the ability to spread those ideas and practices through the network (Ahuja, 2000). In a group that shares information, knowledge, and expertise at increasing rates, it is also more likely new ideas will be generated and knowledge will be retained (Moolenaar & Sleegers, 2010). The role of coworker relationships in this process is highlighted when Hodson (1997) called for a reconceptualization of coworker relations in favor of “a greater role for coworker cohesion and solidarity as foundations for smoothly functioning workplaces,” (p. 449). An organization that emphasizes learning and allows for the type of social relationships needed to foster such learning is organized based on the underlying belief that “learning is understood as the bridge between working and innovating (Høyrup, 2012, p. 12). This process will also simultaneously shape the innovation as practitioners collaboratively interact with and develop their understanding of the innovative process as a group (Billet, 2012). Communication then plays a key role in how the innovative practice is received and implemented.

Communication and innovation.

Coworker relationships and the communication channels created by those relationships have an integral influence on innovative practice. When information is openly shared between departments and levels, employees can better adapt to rapid changes, allowing for more
innovative practices adapted to change (Kontoghiorges, Awbrey, & Geurig, 2005). Relationships matter because they can help employees adapt, but also because employees shape understanding of a change in practice, or even whether new ideas are being introduced. New ideas travel through an organization networked through relationships, via direct ties or strong relationships developed between coworkers (Albrecht & Hall, 1991). Ideally, these relationships incorporate work-related elements as well as social or personal elements. For instance, Bidwell and Yasumoto (1999) found that high school departments developed social norms that either helped to create or inhibited an environment where the social organization encouraged teachers to work collaboratively, share expertise, and solve problems as a cohesive unit.

To be an innovative enterprise that can incorporate new ideas, disseminate them through a team, and then adjust despite expected uncertainty and risk, coworker relationships should be considered an integral part of the environment. There is a relationship between organizational performance and the characteristics of an organization that is adaptive to change (Kontoghiorghes, Awbrey, & Feurig, 2005). Collaborative relationships have also been positively connected to innovative output (Ahuja, 2000). For instance, one study found that innovation based talk occurred in an environment where coworkers considered their colleagues to be important, credible, supportive, work-compatible, and friends (Albrecht & Hall, 1991). Communication and job satisfaction significantly contribute to innovation when there is present in the organization an open structure and high staff morale (Langer, Duncan, & Rassen, 1980). When coworkers share in strong relationships marked by information sharing, feedback, the discussion of personal topics, and emotional support, these coworkers function as a more cohesive group than when coworker relationships are marked simply by the sharing of work-
related information (Odden & Sias, 1997). For this cohesive group to be innovative, educators need to “feel they can experiment with new teaching practices without the fear of failure or ridicule of colleagues, and be open and vulnerable to the new ideas and opinions of others that are exchanged through work-related discussions,” (Moolenaar & Sleegers, 2010, p. 112). Instrumental and Expressive relationship characteristics are both crucial to the ability of an organization to develop new knowledge or practices.

Coworker relationships and innovative practice in education are linked because “when educational reforms hit the school door, they are modified, socially co-constructed, and assigned collective meaning,” (Moolenaar & Sleegers, 2010, p. 112). That collective meaning is constructed via two types of relationships: instrumental and expressive. There has, as yet, been limited attention paid to the potential for instrumental and expressive relationships in the workplace to affect organizational outcomes (Ducharme & Martin, 2000). Yet “coworkers are not only a vital part of the social environment at work; they can literally define it,” (Chiaburu & Harrison, 2008, p. 1082).

**Coworker Relationships**

Relationships can influence levels of job satisfaction and attitudes toward work (Ducharme & Martin, 2000; Sherony & Green, 2002). Coworkers who do not maintain supportive relationships at work experience increased stress, a negative attitude towards others, and a lack of control over their work environment (Fritz, 2002; Odden & Sias, 1997). There are also studies that connect coworker behaviors and communication to outcomes beyond health (see Chiaburu & Harrison, 2008; Leiter & Maslach, 1988). For instance, Kahn, Schneider, Jenkins-Henkelman and Moyle (2006) considered the relationship between social support in the
expressive domain and burnout among high school teachers. They found an inverse relationship between emotional support and emotional exhaustion and cynicism. In a profession plagued by high rates of turnover, particularly at the secondary level, this study notes that positive coworker relationships supported at the organizational level can help provide burnout prevention and therefore a more stable workforce.

Relationships often form because of physical proximity and frequent exposure (Odden & Sias, 1997). As relationships develop over time, the way coworkers perceive their peers becomes important. Qualities like trust, credibility, supportiveness, and influence allow for relationships to progress in a positive and mutually beneficial way (Albrecht & Hall, 1991). When coworkers begin to discover similarities between themselves and peers, they may seek out advice, instruction, and help (Chiaburu & Harrison, 2008). For these purposes, both instrumental and expressive relationships play a role.

**Instrumental relationships.**

The instrumental relationship is defined as “relationships in which resources are exchanged that can facilitate achieving organizational goals,” (Moolenaar & Sleegers, 2010, p. 100). This type of relationship is task oriented and information rich. Employees are able to gather information to discover appropriate work behaviors and processes within the social norms of the peer group (Chiaburu & Harrison, 2008). Through information shared explicitly and implicitly, the employee learns about perceived similarities with peers based on perceptions, values, and beliefs shared (Ducharme & Martin, 2000). Instrumental relationships may be most important to newcomers to the institution because they need information to navigate their uncertainty in a new environment and to make a contribution as they gain experience over time.
in their place of employment (Morrison, 1993). However, instrumental relationships continue to play an integral role for employees at all levels of experience as they interact to complete their work (Kram & Isabella, 1985).

**Expressive relationships.**

Expressive relationships are defined as “affective relationships between organizational members that are formed to exchange social resources, such as friendship and social support, that are not directly aimed at achieving organizational goals,” (Moolenaar & Sleegers, 2010, p. 100). Interactions in this realm increase the emotional component of the relationship for instance by displaying empathy (Chiaburu & Harrison, 2008). Relationships at this level allow for “a person to believe that he or she is cared for, esteemed, and valued,” (Kirmeyer & Dougherty, 1988, p. 125). Additionally, social support may play a role in providing relief from strain (Beehr, Jex, Stacy, & Murray, 2000; Seers, McGee, Serey, & Graen, 1983). Expressive relationships develop through perceived similarities (Odden & Sias, 1997) and incorporate loyalty and trust as the relationship develops (Sherony & Green, 2002). Organizational structures can also influence expressive relationship characteristics made manifest in the workplace by creating formal and informal norms for how peer coworkers should express emotion in the workplace (Rafaeli & Sutton, 1987).

**Distinctions between relationship types.**

Typically, studies do not often differentiate between these two types of relationships, opting instead to focus solely on one type of relationships or in combination as one measure (Ducharme & Martin, 2000). In either case, the interplay between expressive and instrumental relationships as separate entities has often been overlooked. The distinction between expressive
and instrumental relationships is that instrumental relationships are primarily concerned with tasks while expressive relationships move into the emotional realm (Chiaburu & Harrison, 2008).

**Interdependence between relationship types.**

To date there has been minimal research into the concept of instrumental and expressive domains as overlapping and interdependent within the workplace. However, the field of social network analysis identifies a similar concept called the multiplex relationship. The multiplex relationship is “fundamentally different from either exclusively instrumental or exclusively friendship ties in terms of their implications for work functioning, largely because multiplex ties allow the resources of once relationship to be appropriated for use in another,” (LePine, Methot, Crawford, & Buckman, 2012, p. 178). LePine et al. (2012) also propose that when team members depend on each other to complete tasks and also “believe that they share interests, goals, and values with those same team members they will be more likely to communicate expressive content and establish ties that have a friendship component in addition to the instrumental component,” (p. 181). This study will consider a similar concept to the multiplex relationship by exploring whether interdependent instrumental and expressive relationship characteristics help to cultivate a more innovative environment.

**Conclusion**

Communication between peers who are coworkers can play an important role in developing an organizational structure capable of implementing and absorbing change through innovation. Teachers who express trust in and feel support from their colleagues are more likely to believe they have the power to motivate all students. Adoption of innovation has also been connected with teachers’ beliefs that they can positively affect student learning (Hoy &
Social relationships among teachers in schools do not just foster an effective working environment; they can be leveraged to support the goal of every school in helping children to learn.

Within the communication spectrum, instrumental and expressive relationships may play independent and yet interactive roles in allowing for an innovative environment. When both types of relationships are encouraged and fostered, they both can have an influence on the ability for a collaborative group of educators to innovate. Teachers who are involved in collaborative activities are more likely to be committed long term to their profession (Chuan, 2007). Communication can influence the environment as coworkers shape it. This can decide whether the working environment is one where “risk-taking, change, and creativity are encouraged,” (Odden & Sias, 1997, p. 155).

The next chapter will describe the process this study took to develop a survey and gather and prepare data to address possible correlations between an innovative culture and instrumental and expressive relationships.
Chapter IV: Methodology

Research Question

The purpose of this study is to explore how different gradations of coworker relationships can facilitate and support the adoption of innovative strategies in K-12 schools. The following research question guided the scale and scope of this study:

RQ: How do instrumental and expressive relationships cultivate a culture of innovation among teachers?

The framework developed by Kram and Isabella (1985), a continuum of peer relationships, were connected to the broad expressive and instrumental categories of social relationships. In Kram and Isabella’s (1985) framework, the Information Peer places a premium on instrumental relationship characteristics such as information and resource sharing and task completion in the service of moving work forward. On the other end of the continuum, the Special Peer relationship emphasizes the expressive relationship characteristics of trust, empathy, and “best friend” level sharing of personal and non-work related information. The Special Peer relationship still retains some elements of instrumental relationships, but expressive relationship characteristics maintain dominance. The middle ground Collegial Peer combines elements of both the instrumental and expressive relationship. The sharing of information and resources as well as task completion are conducted at deeper, more complex levels while at the same time a less rich personal relationship emphasizing trust and empathy are growing. The Collegial Peer displays characteristics of both relationship domains.
Conceptual Definitions

This study considered the correlation between four concepts. The dependent variable centered on the concept of innovation, defined as an environment in which risk taking, creativity, and ability to adjust to change are characteristics. This concept was operationalized by a battery of eight questions designed to evaluate whether teachers work in innovative environments. Participants responded using a Likert scale spanning five options with the final question allowing for a long form open response. The eight questions are as follows:

1. Teachers in my school are generally willing to try new ideas
2. Teachers in my school are interested in learning how to implement new ideas
3. Teachers in my school are continuously developing better approaches to learning for students
4. Teachers in my school are constantly trying to improve their teaching practices
5. Teachers in my school are willing to take risks to make this school better
6. Teachers in my school have a positive ‘can-do’ attitude
7. Teachers in my school are encouraged to go as far as they can when developing a new approach to a problem
8. Do you have any anything else you would like to say regarding the environment in which you and your fellow classroom teachers conduct your work?

The first independent variable focused on the concept, instrumental relationships, defined as “relationships in which resources are exchanged that can facilitate achieving organizational goals,” (Moolenaar & Sleegers, 2010, p. 100). The Instrumental Relationship variable was operationalized by a battery of six questions where participants were asked to consider a person
with whom they primarily interact within the characteristics of an instrumental relationship, represented by the sharing of resources. Respondents chose from a variety of options, with some questions presenting a Likert scale and others offering multiple options. Again, the final question allowed for a long form open answer. The questions are as follows:

1. What kind of relationship best describes your relationship with this person?
2. Please check all boxes that describe how you regard this person
3. How often do you generally trade or share resources with this person?
4. How likely is it that you would spend time with this person outside of a work environment?
5. How likely is it that you would still trade resources with this person if you felt that you did not get along with this person?
6. Do you have any anything else you would like to say regarding your relationship with a coworker with whom you share or trade materials and resources?

The Expressive Relationship concept was defined as “affective relationships between organizational members that are formed to exchange social resources, such as friendship and social support, that are not directly aimed at achieving organizational goals,” (Moolenaar & Sleegers, 2010, p. 100). This concept was operationalized by a battery of six questions where participants were asked to consider a person with whom they primarily interact within the confines of an expressive relationship. Participants were asked to consider their relationship with a peer coworker with whom they have shared personal information regarding personal distress or problems. The battery of six questions directly copied the six questions used for instrumental relationships, with appropriate subject changes. The options for answering were
also exactly identical to options for the questions relating to instrumental relationships. The questions are as follows:

1. What kind of relationship best describes your relationship with this person?
2. Please check all boxes that describe how you regard this person
3. How often do you have discussions centered on personal distress or problems?
4. How likely is it that you would spend time with this person outside of a work environment?
5. How likely is it that you would still discuss personal distress or problems with this person if you felt that you did not get along with this person?
6. Do you have any anything else you would like to say regarding your relationship with a coworker with whom you discuss personal or emotional issues while at work?

The final concept allowed for interdependent interaction between Expressive and Instrumental Relationships, essentially a combination where friendship and social support are present in addition to task completion and resource exchange roles in the service of getting the job done. In this section, participants were asked about a person with whom they have work-based discussions. Again, with appropriate changes for the mode of interaction, participants were asked the same six questions with the same options for response. This variable was operationalized by a battery of six questions where participants were asked to consider a person with whom they interact because they are both friends and coworkers. The questions are as follows:

1. What kind of relationship best describes your relationship with this person?
2. Please check all boxes that describe how you regard this person
3. How often do you have discussions centered on work-related matters with this person?
4. How likely is it that you would spend time with this person outside of a work environment?
5. How likely is it that you would still discuss work-related matters with this person if you felt that you did not get along with this person?
6. Do you have any anything else you would like to say regarding your relationship with a coworker with whom you discuss professional matters such as interventions, behavior management, lesson planning, etc.?

The complete survey is included in Appendix A.

**Hypotheses**

The following hypotheses were developed to address the potential strengths of each type of social interaction in so far as they relate to the broader categories of instrumental and expressive relationship types.

**H1:** Resource sharing as a function of instrumental relationships is more likely than resource sharing as a function of expressive relationships or resource sharing as a function of interdependent instrumental and expressive relationships to cultivate an innovative environment.

**H2:** Social support as a function of expressive relationships is more likely than social support as a function of instrumental relationships or social support as a function of interdependent instrumental and expressive relationships to cultivate an innovative environment.
H3: Work-related discussions as a function of interdependent instrumental and expressive relationships are more likely than work-related discussion as a function of instrumental relationships or work-related discussion as a function of expressive relationships to create an innovative environment.

Participants

A survey of teachers who are actively working in K-12 public, private, parochial, and charter schools was conducted. Participants voluntarily completed an online convenience survey. The snowball method of sampling was utilized to take advantage of the researcher’s social network of teachers, given that the researcher had earned an undergraduate degree in Education and then worked in the profession for three years. Approximately twenty-five primary and secondary school teachers were initially contacted across the continental United States, who then forwarded the email containing a link to the survey to other colleagues. Surveys were sent to contacts in Arizona, California, Utah, Nevada, New Jersey, Idaho, the District of Columbia, Massachusetts, Virginia, Maryland, and Ohio. The result was a total of 104 responses.

All participants were currently employed classroom teachers teaching in K-12 public, private, parochial, and charter schools. Teachers primarily employed by online schools were omitted because of their unique work environment where teachers may not interact with colleagues face to face in a physical environment.

Instrumentation

The survey designed for this study drew on the work of Moolenaar and Sleegars (2010) who found that work discussions mediated by trust contribute to an innovative environment. Their analysis incorporated social network analysis with quantitative analysis, but focused
mainly on the effects of instrumental relationships over expressive relationships. This study will consider instrumental and expressive relationships as interdependent domains. A battery of eight questions to evaluate teachers’ innovative working environment was derived from the Chicago Consortium as Moolenaar and Sleegars (2010) used these survey questions. All other survey questions were originally created for this study. The survey was modified following review from peers and advisors to ensure survey questions were designed to tease out gradations of relationships in that a primarily instrumental relationship could also contain traces of expressive relationship characteristics and vice versa. Questions were pilot tested and reviewed first by a group of graduate students with knowledge in the subject area and then, following adjustment, by two classroom teachers. One was a female Kindergarten teacher with twenty-one years of experience and the other was a male high school History teacher with five years of experience. From these two reviews, survey question wording and additional instructions were added for clarity. The complete survey is available in Appendix A.

**Data Collection**

The survey was constructed using Survey Monkey and was sent via email containing relevant information and a link to an initial contact group of teachers in the researcher’s social network. The snowball method of surveying was chosen as an effective and efficient method of reaching the sample population of primary and secondary classroom teachers. The survey was administered from February 12, 2013 to March 4, 2013. The survey instrument did not track the geographical spread of the convenience survey, so it is difficult to say whether the sample accurately represents the population of K-12 teachers on a national level.
Data Analysis

An OLS regression analysis using the Statistical Package for Social Sciences (SPSS) version 19 was conducted. This method was chosen in order to measure the strength and direction of influence of various gradations of relationships between peer coworkers in creating and cultivating an innovative environment.

Measures

Several indices were created to better represent concepts connected to this study. The dependent variable, Innovation, comprised seven questions from the survey. The Cronbach’s Alpha indicator of reliability was very strong at .906. Multiple indices were used as independent variables and are represented in Table 1.

The instrumental, expressive, and interdependent relationship variables were explored as a function of a specific type of peer coworker relationship. Essentially, these indices were used to explore whether a primarily instrumental relationship could also potentially have traces of expressive relationship characteristics or vice versa. Other indices considered whether there was overlapping interdependent expressive and instrumental relationship characteristics within the actions of sharing resources, providing empathy, and engaging in work-based discussions.

The same indicators were used to develop each variable, but from the perspective of the function of sharing resources, providing empathy, and engaging in work-based discussions. The indices ranged from fairly strong to somewhat weak, with work-based discussion showing the strongest reliability factors with Cronbach’s Alpha scores from .720 to .812 and social support showing the lowest with Cronbach’s Alpha scores from .564 to .730. Resource sharing indices had Cronbach’s Alpha scores ranging from .547 to .712.
Table 1: Independent Variable Indices

<table>
<thead>
<tr>
<th>Variable</th>
<th>Function of Peer Coworker Relationship</th>
<th>Indicators</th>
<th>Cronbach’s Alpha</th>
</tr>
</thead>
<tbody>
<tr>
<td>Resource Sharing</td>
<td>Instrumental Relationship</td>
<td>Completion of difficult tasks&lt;br&gt;Help to get the job done&lt;br&gt;Easy to find&lt;br&gt;Seen as part of daily routine</td>
<td>.712</td>
</tr>
<tr>
<td>Resource Sharing</td>
<td>Expressive Relationship</td>
<td>Ability to cheer up&lt;br&gt;Someone who is understanding&lt;br&gt;Someone who is trustworthy&lt;br&gt;Would call person a friend</td>
<td>.704</td>
</tr>
<tr>
<td>Resource Sharing</td>
<td>Instrumental and Expressive Relationships</td>
<td>Ability to cheer up&lt;br&gt;Someone who is understanding&lt;br&gt;Someone who is trustworthy&lt;br&gt;Would call person a friend</td>
<td>.547</td>
</tr>
<tr>
<td>Social Support</td>
<td>Instrumental Relationship</td>
<td>Ability to cheer up&lt;br&gt;Someone who is understanding&lt;br&gt;Someone who is trustworthy&lt;br&gt;Would call person a friend</td>
<td>.642</td>
</tr>
<tr>
<td>Social Support</td>
<td>Expressive Relationship</td>
<td>Ability to cheer up&lt;br&gt;Someone who is understanding&lt;br&gt;Someone who is trustworthy&lt;br&gt;Would call person a friend</td>
<td>.730</td>
</tr>
<tr>
<td>Social Support</td>
<td>Instrumental and Expressive Relationships</td>
<td>Ability to cheer up&lt;br&gt;Someone who is understanding&lt;br&gt;Someone who is trustworthy&lt;br&gt;Would call person a friend</td>
<td>.564</td>
</tr>
<tr>
<td>Work-based discussion</td>
<td>Instrumental Relationship</td>
<td>Completion of difficult tasks&lt;br&gt;Help to get the job done&lt;br&gt;Ability to cheer up&lt;br&gt;Someone who is understanding&lt;br&gt;and sympathetic&lt;br&gt;Allows to vent&lt;br&gt;Have a lot in common&lt;br&gt;Talk with to discuss work-related issues&lt;br&gt;Trust enough to share personal information with&lt;br&gt;Highly trust and consider a close, personal friend&lt;br&gt;Works nearby and is easy to find&lt;br&gt;Seen as part of daily routine</td>
<td>.755</td>
</tr>
<tr>
<td>Work-based discussion</td>
<td>Expressive Relationship</td>
<td>Ability to cheer up&lt;br&gt;Someone who is understanding&lt;br&gt;and sympathetic&lt;br&gt;Allows to vent&lt;br&gt;Have a lot in common&lt;br&gt;Talk with to discuss work-related issues&lt;br&gt;Trust enough to share personal information with&lt;br&gt;Highly trust and consider a close, personal friend&lt;br&gt;Works nearby and is easy to find&lt;br&gt;Seen as part of daily routine</td>
<td>.812</td>
</tr>
<tr>
<td>Work-based discussion</td>
<td>Instrumental and Expressive Relationships</td>
<td>Completion of difficult tasks&lt;br&gt;Help to get the job done&lt;br&gt;Ability to cheer up&lt;br&gt;Someone who is understanding&lt;br&gt;and sympathetic&lt;br&gt;Allows to vent&lt;br&gt;Have a lot in common&lt;br&gt;Talk with to discuss work-related issues&lt;br&gt;Trust enough to share personal information with&lt;br&gt;Highly trust and consider a close, personal friend&lt;br&gt;Works nearby and is easy to find&lt;br&gt;Seen as part of daily routine</td>
<td>.720</td>
</tr>
</tbody>
</table>

The Context of Social Interactions

Studies do not often differentiate between expressive and instrumental relationships. Most often, studies focus more on the influence of expressive relationships over instrumental relationships. Additionally, studies that collapse expressive and instrumental relationships misrepresent or cannot full represent the influence of two interdependent yet independent domains (Ducharme & Martin, 2000). This study will fill such a gap by considering instrumental and expressive relationships as separate yet interacting entities.
Limitations of the Study

Survey design.

Although the survey was piloted and reviewed, there was some demographic information improperly omitted. The survey was distributed across the continental United States, but the survey did not track respondents by state or region. It is unknown whether this sample population is appropriately varied by region. In future use, this survey should be adjusted to provide comprehensive demographic information.

Decontextualized relationships.

The survey was designed to evaluate the characteristics of peer coworker relationships at three gradations on the continuum set up by Kram and Isabella (1985). Participants were asked to consider three peers with whom they have social relationships in the workplace. The survey responses do not make clear the context in which these relationships operate. The study of relationships is often conducted without consideration of the social contexts of the field (Bridge & Baxter, 1992). This study also does not consider the context of the social interactions surveyed. This limits the ability of this study to attribute findings to specific outcomes or actions, because it is not clear who exactly or why the participants pinpointed specific coworkers in responding to the survey. There may be disconnect between the operational and conceptual definitions leading to unclear results.

Significance of the Study

In the framework provided by Kram and Isabella (1985), three gradations of peer coworker relationships were found. In connecting that continuum to the two broader categories of Instrumental and Expressive Relationships, some questions of applicability arise. Is the
Collegial Peer the “sweet spot” of ideally interdependent and overlapping relationship styles? Or perhaps is it more imperative that a worker develop a wide range of relationships all along the continuum? Considering recent pushes in education for a more collaborative, team-oriented work force in addition to calls for complex change, which type of relationship has a stronger correlation to innovation? This study is a first step to consider these questions in the hope of better targeting teams of educators with the communication channels in place to adjust to risk and uncertainty in an era of complex change.

Summary

This study was organized to explore the relationship between gradations of coworker relationships and an innovative culture. A convenience sample was collected using a survey. The survey was reviewed and piloted prior to distribution. Following collection, the data was analyzed using OLS Regression. The models were run using SPSS version 19. In the next chapter, findings from the data analysis will be discussed.
CHAPTER V: Analysis and Discussion

Study Design

This study was designed to address the potential relationship between peer coworker relationships and an innovative environment. The research question that guided this study centered on how expressive and instrumental relationships help to cultivate a culture of innovation in K-12 schools. The framework of peer coworker social relationship types by Kram and Isabella (1985) was connected to the broader domains of social relationships. The function of different types of social relationships can rely more heavily on either the instrumental or expressive domains or include a fusion of both. In order to discover which gradation of independent or interdependent relationship domains best influence an innovative environment, an online survey was used to collect a convenience sample and an OLS regression analysis was performed. This chapter will present the full range of findings from this study and specifically address the role of interdependent social relationships that draw on both instrumental and expressive relationship characteristics, the lack of findings in regards to the role of an independent expressive domain, and the influence of the control variable grade level at which the participants primarily teach.

Demographic Information.

The study recruited participants who were active classroom teachers in public, private, parochial, or charter schools at the K-12 grade levels. Of the 91 valid respondents, 71 were female and 20 were male. This skewed sample population is in line with the 2011 National Center for Education Information’s Profile of Teachers in the U.S which found education is still a predominantly female occupation, at about 84% female and 16% male (Feistritzer, 2011).
sample then was somewhat representative of gender within the teacher population. The age of the participants ranged from 22 to 65 with a mean of 41. Participants reported the primary grade level taught, with 38% of the sample working in grades K-5. 33.7% of the sample worked in grades 6-8 and 28.3% of the sample worked in grades 9-12. Years of experience in a consistent work environment, i.e. the current school where the teacher was employed, had 59.3% of the responses at 5 years or less with 25.3% reporting eleven or more years in the same school.

Analysis

OLS regression variables.

Ordinary Least Squares regression was the appropriate technique for this analysis because this study involved complex relationships between more than two variables (Allen, Titsworth, & Hunt, 2009). In considering the possible influence of relationship domains that conceptually overlap as seen when instrumental and expressive relationship domains are connected to the framework provided by Kram & Isabella in terms of types of office relationships, OLS regression allows for a comparison of the strength of influence of many independent variables upon the dependent variable, Innovation, and considers the level of variance associated with each criterion.

The dependent variable, Innovation, is an index built from seven survey questions discussed in the methodology section of this study. Essentially, Innovation is a measure of respondents’ perceptions that the organizational structures of their schools allow for behaviors typically connected with an innovative environment. These characteristics are listed in Table 2.
Table 2: Description of Dependent Variable

<table>
<thead>
<tr>
<th>Variable</th>
<th>Characteristics</th>
</tr>
</thead>
</table>
| Innovation | willing to try new ideas  
|           | interested in learning how to implement new ideas  
|           | continuously developing better approaches to learning for students  
|           | constantly trying to improve their teaching practices  
|           | willing to take risks to make this school better  
|           | have a positive ‘can-do’ attitude  
|           | encouraged to go as far as possible when developing a new approach to a problem |

Three peer coworker social interactions were considered by respondents when taking the survey. The first type of social interaction was the act of sharing resources with a peer or a predominantly instrumental act. The second type of social interaction was the act of providing social support with a peer or a predominantly expressive act. The final type of social interaction was the act of participating in discussions surrounding work-based issues which contains elements of both the instrumental and expressive domains. However, just because a social interaction stems from a primary relationship domain, this does not mean that the social relationship cannot stem from the other relationship domain. Therefore, the independent variables were considered from the point of view that each social act could come from the instrumental domain, the expressive domain, or an interdependent combination of both. A total of nine variables were built using indices described in the methodology section of this study by considering the three major types of social interactions from the potential that they stem from either an instrumental, expressive, or interdependent domain. A description of the independent variables follows in Table 3.
Table 3: Description of Independent Variables

<table>
<thead>
<tr>
<th>Variable</th>
<th>Relationship Domain</th>
<th>Characteristics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Resource Sharing (IR)</td>
<td>Instrumental</td>
<td>Completion of difficult tasks</td>
</tr>
<tr>
<td>Social Support (IR)</td>
<td></td>
<td>Help to get the job done</td>
</tr>
<tr>
<td>Work Discussions (IR)</td>
<td></td>
<td>Easy to find</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Seen as part of daily routine</td>
</tr>
<tr>
<td>Resource Sharing (ER)</td>
<td>Expressive</td>
<td>Ability to cheer up</td>
</tr>
<tr>
<td>Social Support (ER)</td>
<td></td>
<td>Someone who is understanding</td>
</tr>
<tr>
<td>Work Discussions (ER)</td>
<td></td>
<td>Someone who is trustworthy</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Would call person a friend</td>
</tr>
<tr>
<td>Resource Sharing (B)</td>
<td>Interdependent</td>
<td>Completion of difficult tasks</td>
</tr>
<tr>
<td>Social Support (B)</td>
<td></td>
<td>Help to get the job done</td>
</tr>
<tr>
<td>Work Discussions (B)</td>
<td></td>
<td>Ability to cheer up</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Someone who is understanding and sympathetic</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Allows to vent</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Have a lot in common</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Talk with to discuss work-related issues</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Trust enough to share personal information with</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Highly trust and consider a close, personal friend</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Works nearby and is easy to find</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Seen as part of daily routine</td>
</tr>
</tbody>
</table>

Three control variables were also utilized to determine if they had an effect on developing an innovative environment. The control variables were not attached to any particular hypothesis. Their presence in the model was to explore whether these variables affected the dependent or independent variables. The control variables, age, gender, and grade level taught, are described in Table 4.

Table 4: Description of Control Variables

<table>
<thead>
<tr>
<th>Variable</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>Teacher’s age in years</td>
</tr>
<tr>
<td>Gender</td>
<td>Teacher identifies as male or female</td>
</tr>
<tr>
<td>Grade Level Taught</td>
<td>Teacher identifies primary grade level currently teaching by range: K-5, 6-8, or 9-12.</td>
</tr>
</tbody>
</table>
Correlations.

A correlation matrix was used to determine basic relationships between the dependent, independent and control variables as shown in Table 5. The dependent variable, Innovation, was most strongly correlated to the grade level control variable with a Pearson correlation of -.436. This suggests that teachers at the lower grade levels are more likely to perceive their work environment as innovative. Innovation also showed weaker correlations with work discussion (B) at r=.32, work discussion (IR) at r=.23, resource sharing (B) at r=.28, and social support (B) at r=.28. It was of interest that Innovation was most correlated to relationship variables that incorporated the interdependent relationship domains. However, it was determined that Innovation was not highly correlated to any of the independent variables.

As seen in the description of the independent variables, conceptually, there is overlap between the independent variables because they shared relationship characteristics. Because of this conceptual overlap, it seemed probable that there should be high correlation between the independent variables. As Table 5 shows there was very high correlation between the three variables as functions of instrumental relationships. Resource Sharing (IR) was highly correlated with Social Support (IR) at r=.88 and with Work Discussion (IR) at r=.93. There was also very high correlation between variables as functions of expressive relationships. Resource Sharing (ER) was highly correlated with Social Support (ER) at r=.89 and with Work Discussion (ER) at r=.95. There was also very high correlation between the three variables as functions of interdependent social relationships. Resource Sharing (B) was highly correlated with Social Support (B) at r=.86 and with Work Discussion (B) at r=.90.
Table 5: Correlation Matrix

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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Innovation</td>
<td>-</td>
<td><strong>d</strong></td>
<td>-</td>
<td><strong>d</strong></td>
<td>-</td>
<td><strong>d</strong></td>
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<td><strong>d</strong></td>
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<td><strong>d</strong></td>
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<td><strong>d</strong></td>
<td>-</td>
</tr>
<tr>
<td>2. Resource Sharing (ER)</td>
<td><strong>d</strong></td>
<td>-</td>
<td><strong>d</strong></td>
<td>-</td>
<td><strong>d</strong></td>
<td>-</td>
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<td><strong>d</strong></td>
<td>-</td>
<td><strong>d</strong></td>
<td>-</td>
<td><strong>d</strong></td>
</tr>
<tr>
<td>3. Resource Sharing (IR)</td>
<td><strong>d</strong></td>
<td><strong>d</strong></td>
<td>-</td>
<td><strong>d</strong></td>
<td>-</td>
<td><strong>d</strong></td>
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<td><strong>d</strong></td>
<td>-</td>
<td><strong>d</strong></td>
<td>-</td>
</tr>
<tr>
<td>4. Resource Sharing (B)</td>
<td><strong>d</strong></td>
<td><strong>d</strong></td>
<td><strong>d</strong></td>
<td>-</td>
<td><strong>d</strong></td>
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<td><strong>d</strong></td>
<td>-</td>
<td><strong>d</strong></td>
</tr>
<tr>
<td>5. Social Support (IR)</td>
<td><strong>d</strong></td>
<td><strong>d</strong></td>
<td><strong>d</strong></td>
<td><strong>d</strong></td>
<td>-</td>
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<td>-</td>
</tr>
<tr>
<td>6. Social Support (ER)</td>
<td><strong>d</strong></td>
<td><strong>d</strong></td>
<td><strong>d</strong></td>
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<td><strong>d</strong></td>
</tr>
<tr>
<td>7. Social Support (B)</td>
<td><strong>d</strong></td>
<td><strong>d</strong></td>
<td><strong>d</strong></td>
<td><strong>d</strong></td>
<td><strong>d</strong></td>
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<td><strong>d</strong></td>
<td>-</td>
</tr>
<tr>
<td>8. Work Discussion (IR)</td>
<td><strong>d</strong></td>
<td><strong>d</strong></td>
<td><strong>d</strong></td>
<td><strong>d</strong></td>
<td><strong>d</strong></td>
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<td>-</td>
<td><strong>d</strong></td>
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<td><strong>d</strong></td>
</tr>
<tr>
<td>9. Work Discussion (ER)</td>
<td><strong>d</strong></td>
<td><strong>d</strong></td>
<td><strong>d</strong></td>
<td><strong>d</strong></td>
<td><strong>d</strong></td>
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<td>-</td>
<td><strong>d</strong></td>
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<td><strong>d</strong></td>
<td>-</td>
</tr>
<tr>
<td>10. Work Discussion (B)</td>
<td><strong>d</strong></td>
<td><strong>d</strong></td>
<td><strong>d</strong></td>
<td><strong>d</strong></td>
<td><strong>d</strong></td>
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<td><strong>d</strong></td>
<td>-</td>
<td><strong>d</strong></td>
<td>-</td>
<td><strong>d</strong></td>
</tr>
<tr>
<td>11. Age</td>
<td><strong>d</strong></td>
<td><strong>d</strong></td>
<td><strong>d</strong></td>
<td><strong>d</strong></td>
<td><strong>d</strong></td>
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<td><strong>d</strong></td>
<td>-</td>
<td><strong>d</strong></td>
<td>-</td>
</tr>
<tr>
<td>12. Gender</td>
<td><strong>d</strong></td>
<td><strong>d</strong></td>
<td><strong>d</strong></td>
<td><strong>d</strong></td>
<td><strong>d</strong></td>
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<td><strong>d</strong></td>
<td><strong>d</strong></td>
<td>-</td>
<td><strong>d</strong></td>
</tr>
<tr>
<td>13. Career Level</td>
<td><strong>d</strong></td>
<td><strong>d</strong></td>
<td><strong>d</strong></td>
<td><strong>d</strong></td>
<td><strong>d</strong></td>
<td><strong>d</strong></td>
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<td><strong>d</strong></td>
<td><strong>d</strong></td>
<td><strong>d</strong></td>
<td><strong>d</strong></td>
<td>-</td>
</tr>
</tbody>
</table>

**Note:** The symbols **d** and **d** indicate the level of correlation. The number of asterisks before the symbol indicates the strength of the correlation.
Although each function considers a different type of social interaction from an instrumental, expressive, or interdependent domain, these variables overlap one other. This overlap violates one of the assumptions of regression in that multicolinearity should be kept at a minimum (Allen, Titsworth, & Hunt, 2009). That is not the case in this study, as the independent variables are in fact highly correlated. To continue with the analysis and to clearly understand each variable’s individual influence, multiple OLS regression equations were run using SPSS with one independent variable, the three control variables, and the dependent variable as shown in the following models:

\[
\text{Innovation} = a + b_1X_{\text{resourcesharing(IR)}} + b_2X_{\text{age}} + b_3X_{\text{gender}} + b_4X_{\text{gradelevel}} \\
\text{Innovation} = a + b_1X_{\text{resourcesharing(ER)}} + b_2X_{\text{age}} + b_3X_{\text{gender}} + b_4X_{\text{gradelevel}} \\
\text{Innovation} = a + b_1X_{\text{resourcesharing(B)}} + b_2X_{\text{age}} + b_3X_{\text{gender}} + b_4X_{\text{gradelevel}} \\
\text{Innovation} = a + b_1X_{\text{Socialsupport(IR)}} + b_2X_{\text{age}} + b_3X_{\text{gender}} + b_4X_{\text{gradelevel}} \\
\text{Innovation} = a + b_1X_{\text{Socialsupport(ER)}} + b_2X_{\text{age}} + b_3X_{\text{gender}} + b_4X_{\text{gradelevel}} \\
\text{Innovation} = a + b_1X_{\text{Socialsupport(B)}} + b_2X_{\text{age}} + b_3X_{\text{gender}} + b_4X_{\text{gradelevel}} \\
\text{Innovation} = a + b_1X_{\text{Workdiscuss(IR)}} + b_2X_{\text{age}} + b_3X_{\text{gender}} + b_4X_{\text{gradelevel}} \\
\text{Innovation} = a + b_1X_{\text{Workdiscuss(ER)}} + b_2X_{\text{age}} + b_3X_{\text{gender}} + b_4X_{\text{gradelevel}} \\
\text{Innovation} = a + b_1X_{\text{Workdiscuss(B)}} + b_2X_{\text{age}} + b_3X_{\text{gender}} + b_4X_{\text{gradelevel}}
\]

Because of the uniformity of the variables as well as the fact that all variables came from within the same sample, it was possible to compare using the standardized beta coefficient to determine the accurate influence of each variable despite the multicolinearity present between the independent variables.
**Instrumental relationships as a function of peer coworker relationships.**

The first hypothesis explored the influence of the instrumental relationship. Resource sharing as a function of an independent instrumental relationship (IR) was compared to resource sharing as a function of an independent expressive relationship (ER) and resource sharing as an interdependent function of both types of relationships (B). The following hypothesis considered whether a social relationship that includes collaboration by sharing resources draws more from the instrumental or expressive domains.

**H1:** Resource sharing as a function of instrumental relationships is more likely than resource sharing as a function of expressive relationships or resource sharing as a function of interdependent instrumental and expressive relationships to cultivate an innovative environment.

Given that the sharing of resources involves a task oriented, information based social interaction, it is proposed that resource sharing will draw from solely the instrumental domain. That is, the relationship type most likely to result in resource sharing will be a primarily dominant instrumental relationship. The findings associated with hypothesis 1 are summarized in Table 6.

Resource sharing (B) had a moderate influence on the innovative environment. Resource sharing (ER) was not statistically significant. Resource sharing (IR) had a moderate, yet weaker influence compared to resource sharing (B). In this series of regression models, the adjusted $R^2$ accounted for between 18% and 23% of the variance, with resource sharing (B) explaining the largest percentage and resource sharing (ER) explaining the lowest. Hypothesis 1 was not supported.
Expressive relationships as a function of coworker relationships.

The second hypothesis explored the influence of the expressive relationship as an independent domain. Here social support as a function of instrumental relationships, expressive relationships, and both were compared in terms of their influence on an innovative culture.

When peer coworkers are able to empathize with each other and discuss non-work related issues such as personal distress, the social relationship may draw solely from the expressive domain as expressed in the following:

H$_2$: Social support as a function of expressive relationships is more likely than social support as a function of instrumental relationships or social support as a function of interdependent instrumental and expressive relationships to cultivate an innovative environment.

The findings associated with hypothesis 2 are found in Table 7. Again, the variable, in this case social support, which acted as a function of interdependent expressive and instrumental relationships had the strongest influence on an innovative environment. In this section, both social support (ER) and social support (IR) were not statistically significant. Here
too, the adjusted $R^2$ indicated between 17% and 23% of the variance was explained. However, this hypothesis also was not supported.

**Table 7: Social Support by Relationship Domain**

<table>
<thead>
<tr>
<th>DV: Innovation</th>
<th>Social Support (IR)</th>
<th>Social Support (ER)</th>
<th>Social Support (B)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Function of Peer Coworker Relationships</td>
<td>beta = .117</td>
<td>beta = .079</td>
<td>beta = .255**</td>
</tr>
<tr>
<td>Age</td>
<td>beta = .099</td>
<td>beta = .078</td>
<td>beta = .098</td>
</tr>
<tr>
<td>Gender</td>
<td>beta = -.013</td>
<td>beta = -.011</td>
<td>beta = .015</td>
</tr>
<tr>
<td>Grade Taught</td>
<td>beta = -.450***</td>
<td>beta = -.452***</td>
<td>beta = -.423***</td>
</tr>
<tr>
<td>Model Statistics</td>
<td>Adjusted $R^2$ = .205</td>
<td>Adjusted $R^2$ = .175</td>
<td>Adjusted $R^2$ = .234</td>
</tr>
<tr>
<td>p = .000 F = 6.659</td>
<td>p = .000 F = 5.674</td>
<td>p = .000 F = 7.722</td>
<td></td>
</tr>
<tr>
<td>n =</td>
<td>89</td>
<td>89</td>
<td>89</td>
</tr>
</tbody>
</table>

* $p=.10$  ** $p=.05$  *** $p=.01$

**Interdependent expressive and instrumental relationships.**

The final hypothesis explored the influence of work discussions as a function of instrumental relationships, expressive relationships, and both with the following hypothesis:  

H₃: Work-related discussions as a function of interdependent instrumental and expressive relationships are more likely than work-related discussion as a function of instrumental relationships or work-related discussion as a function of expressive relationships to create an innovative environment. 

When peer coworkers engage in a discussion surrounding work matters they might engage in both expressive and instrumental relationship characteristics such as empathy and information sharing. The findings associated with hypothesis 3 are summarized in Table 8.
Table 8: Work-Related Discussion by Relationship Domain

<table>
<thead>
<tr>
<th>DV: Innovation</th>
<th>Work Discussion (IR)</th>
<th>Work Discussion (ER)</th>
<th>Work Discussion (Both)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Function of Peer Coworker Relationships</td>
<td>beta = .213**</td>
<td>beta = .113</td>
<td>beta = .299**</td>
</tr>
<tr>
<td>Age</td>
<td>beta = .099</td>
<td>beta = .095</td>
<td>beta = .107</td>
</tr>
<tr>
<td>Gender</td>
<td>beta = -.019</td>
<td>beta = -.008</td>
<td>beta = .026</td>
</tr>
<tr>
<td>Grade Taught</td>
<td>Beta = -.419***</td>
<td>Beta = -.446***</td>
<td>Beta = -.410***</td>
</tr>
<tr>
<td>Model Stats</td>
<td>Adjusted R² = .213, p = .000, F = 6.960</td>
<td>Adjusted R² = .181, p = .000, F = 5.859</td>
<td>Adjusted R² = .258, p = .000, F = 8.639</td>
</tr>
</tbody>
</table>

n = 89

* p = .10  ** p = .05  *** p = .01

Although work discussion (ER) was not statistically significant, this hypothesis was supported. Work discussion (B) had a moderately strong influence upon an innovative environment as did work discussion (IR). However, work discussion (B) had a slightly higher beta coefficient. In this comparison, there was a range of 18% to 25% of the variance explained with work discussion (B) offering the highest percentage.

Influence of control variables

Of the control variables, only grade level taught was statistically significant. Age and gender were never statistically significant. Grade level also had the strongest influence of any variable in the model, with a range of beta coefficients from -.410 to -.452.

Discussion of Findings

Interdependent expressive and instrumental relationships.

Consistently within this analysis, variables that considered the social relationship domains as interdependent produced the strongest influence of all the social relationship variables on cultivating an innovative environment. Interdependent relationships encompass a wide variety of instrumental and expressive characteristics. This makes it difficult to surmise
what level of influence each domain has or how these two domains are interacting. Although many studies do collapse the instrumental and expressive domains to study as a single variable, doing so means it can only be said that the two variables have an interdependent level of influence (Ducharme & Martin, 2000). However, the consistent strength of the beta coefficients does suggest that social relationships encompassing instrumental and expressive relationship characteristics are the most effective type of social relationship when it comes to building an innovative culture in K-12 schools.

In considering the influence of the work discussion variable, it is significant that this variable consistently explained the largest amount of variance at statistically significant levels. When two peers met to discuss work-related matters, they may do so because their coworker is trustworthy and because they share a common viewpoint. They may also feel their coworker is someone who gets the job done efficiently and has extensive knowledge and know-how. This is where the expressive and instrumental domains overlap. In schools where teachers are typically expected to collaborate with peers who work at the same grade level, subject matter, or a combination of both, there is no guarantee that these coworkers are the ones with whom effective working relationships that take advantage of instrumental and expressive relationship characteristics have been developed. In cases where collaboration between teachers is proving problematic, it may be because a relationship element is missing.

It therefore falls to the organizational structure of the school to ensure formal and informal encouragement for peer coworkers to have the opportunity to develop expressive and instrumental characteristics within their relationship. In doing so, the organizational structure may be more likely to withstand the uncertainty and risk associated with change. Proposed
innovations may be more successful. When teachers have channels of communication in place to absorb and deconstruct the reforms and new implementations they daily face, they will be more likely to embrace the reforms for long-lasting change (Hoy & Woolfolk, 1993; Moolenaar & Sleegars, 2010).

**Social support as a non-finding.**

The expressive relationship variables did not yield any statistically significant findings. In Moolenaar and Sleegar’s (2010) study, they also found that expressive relationship variables did not produce statistically significant results. Given that this study found expressive relationships have a degree of influence in conjunction with instrumental relationships, it is worth pondering why expressive relationships as an independent variable yielded so little in terms of results. Expressive relationships clearly do play a role, but this study is inconclusive as to what extent that role is.

Despite the lack of statistically significant beta coefficients that mean the level of variance in the model due to expressive domain variables cannot be explained, the correlations matrix in Table 5 points to an embedded role for the expressive domain. Respondents identified expressive relationship characteristics in all three social interactions. To some degree, expressive relationship characteristics play a role in resource sharing, social support, and work-based discussions between teachers.

Within the context of the workplace, expressive relationship characteristics are known to affect work attitudes, job satisfaction, levels of stress, and even burnout (Fritz, 2002; Kahn, Schneider, Jenkins-Henkelman & Moyle, 2006; Odden & Sias, 1997). However, these findings come from studies that explored the expressive domain exclusively. When considered within the
full range of relationship domains, it seems the influence of the expressive relationship becomes more difficult to pinpoint (see Moolenaar & Sleegars, 2010).

In further studies, it may be beneficial to consider the instrumental and expressive domains as a pair of interaction terms, where their combined influence is considered in addition to the individual influence of independent expressive and instrumental relationship characteristics. In fact, given the strength of influence of the interdependent relationship domains, a new conceptual definition to frame this overlap for further study is called for. A separate identity will allow for study of a region currently overshadowed in extant literature where the individual effect of the expressive domain is well documented, but appears invisible when considered in conjunction with the instrumental domain. For practical application in the workplace, organizational structures designed to encourage channels of communication between peer coworkers should not dismiss the power of the expressive relationship. For teachers, this means developing social relationships that do have expressive relationship characteristics with fellow colleagues.

**Influence of grade level.**

By far, the strongest variable within this study was the grade level at which the teachers primarily taught. Elementary teachers, or grades K-5, were more likely to work in an innovative environment. However, the survey connected with this study evaluated teachers’ perceptions of how innovative their particular school is. Is there some characteristic of the way teachers interact at grades K-5 that leads them to perceive their work environment as more innovative?

The structure of an elementary school can differ, sometimes greatly, from the institutions housing grades 6-12. For instance, a group of four third grade teachers who are incorporating a
unified curriculum with only one area of the student population will collaborate with different ends and views in mind than a high school math department where perhaps only two teachers might teach at the same grade level further divided by one teacher per subject. Although all schools departmentalize to some extent, stratification of grade level and subject matter are unique to the higher grades. This may play a role in explaining why grade level had a strong influence in creating an innovative environment.

In addition, the teaching profession is as a whole predominantly a female profession (Feistritzer, 2011) with a general observation that the lower grade levels are even more predominantly female than are grades 6-12. Women are more likely than men to develop friendships with peer coworkers (Sias, 2009). Gender does play a role in the type of relationships developed in the workplace. Given that elementary school teachers are typically female, the informal and formal organizational structure of the elementary school may be more open to allowing for expressive relationship characteristics to be made manifest in the workplace. When schools have more male teachers, they may need to adjust informal and formal structures to allow for the way relationships are developed by gender. Further consideration of the inherent differences in the structural make up of the lower and upper grade institutions and in gender differences could lead to a greater understanding of why grade level was the strongest variable within this study.

**Relation to conceptual framework.**

When the framework provided by Kram and Isabella (1985) is connected to the broader domains of expressive and instrumental relationships, as seen in figure 2, the three gradations of relationships all contain elements of both domains. Conceptually, even in a relationship at the
level of Information Peer, there should still be some minimal levels of expressive relationship characteristics. In reverse, the Special Peer relationship that primarily functions through expressive relationship characteristics should still retain some instrumental relationship characteristics. In all three gradations, there is some overlap with a relationship domain in primary use.

Interdependent social relationships that consistently had the strongest statistically significant influence of the social variables points to a correspondence with the Collegiate Peer level of relationships. When peer coworkers consider who they collaborate with by sharing resources, empathize with in times of personal distress, and engage in discussions centered on work-related issues, they appear to mostly be functioning at the Collegiate Peer level. That is, these types of social interactions require a mix of expressive and instrumental characteristics. Again, what is not clear is to what extent.

In reconsidering table 5, both work discussion (IR) and work discussion (B) had statistically significant moderate levels of influence in creating an innovative environment. Even though the interdependent relationship domains had the stronger influence, the instrumental domain still had an individual influence only slightly smaller. In considering larger implications, it is unclear whether the instrumental relationship characteristics solely are sufficient or if an expressive relationship influence is what accounts for the .086 difference in beta coefficients between work discussion as a function of an instrumental relationship and work discussion as a function of both expressive and instrumental relationships. Given that it is unclear how the two domains interact, but it is clear that they do seem to interact, and also given the strength of the
interdependent variables in all equations, the Collegiate Peer relationship appears to be the “sweet spot” of cultivating an innovative environment.

**Leveraging Social Relationships in Educational Settings**

A school will be better positioned to implement innovative practices if organizational structures encourage teachers to develop positive and interdependent social relationships centers on the Collegial Peer level of the framework set up by Kram & Isabella (1985). There are many ways a school can encourage such relationships. One example, shared as an anecdote by a professional colleague and shared here with permission, serves to illustrate the power of interdependent social relationships.

A group of four teachers at an urban high school meet once or twice a month during a common preparatory period on Fridays. They bring breakfast and spend the period engaged in conversation. They discuss the business of their work, their frustrations, and their triumphs. There is also joking, discussion of current events, and discussion of shared interests outside of work. Some members of this group meet outside of work to pursue shared interests while some only have a social relationship on school grounds. They serve as trusted counselors, advisors, and collaborators as the occasion calls.

In this anecdote, there is no official mandate to meet. It could be wondered if conversation and breakfast are appropriate uses of time during preparatory periods. However, the organizational structure of the school allows for such informal meetings. From this practice, these teachers have developed strong relationships at the Collegial and Special Peer level. They share essential strategies and innovative practices in the interest of being more effective teachers.
This anecdote serves as an example of one way a school can informally encourage effective social relationships among coworkers.

A school may also use more formal structures to embed innovative practices within social norms. In this instance, weekly department meetings and other administrative meetings may allow teachers to interact. When teachers are pursuing similar goals in the same work environment, but remain unconnected, it may be in the principal’s best interest to find and help teachers to make these connections. Bruce and Ricketts (2008) conducted a qualitative study which connected together educators working in the same type of program, but on separate teams. When these teams interacted, interviewed participants noted they were able to offer improved programmatic offerings, locate fresh ideas and increase resources, and also to feel a sense of shared workload that resulted in stress relief. However, this study also cited lack of time as the largest reason not to collaborate. In this sense, again, it is up to the organizational structure of the school to provide time, both formal and informal, for the sake of building relationships among peer coworkers.

When we consider that the behaviors and relationships described in these two case studies can have a direct influence on how teachers operate in the classroom (Chuan, 2007; Hoy & Woolfolk, 1993) it is clearly in the best interest of a school to encourage strong and positive social relationships among teachers as leverage in producing innovative changes that will affect students and promote learning.

For this purpose, the ultimate big picture extrapolation from this study is to reimagine the role of the educational leader as a builder of relationships and connector of people. If new knowledge and ideas are best spread through the Collegiate Peer relationship, the potential for
innovative practices to be spread successfully from both a bottom up and top down approach increases when educational leaders have taken the steps to ensure peer coworkers have effective social relationships built with other key coworkers.

Summary

This study considered a possible correlation between social relationships and innovative practices in K-12 schools. Of the three hypotheses considered, only hypothesis 3 was supported. Interdependent social relationships encompassing the expressive and instrumental domains have the most influence on the work environment in terms of innovation. However, grade level taught was the strongest variable in terms of creating an innovative environment, suggesting elementary grade teachers are more likely to work in an innovative environment. Expressive relationships as an independent domain did not yield statistically significant findings. Instrumental relationships as an independent domain only occasionally yielded significant findings. The next chapter will conclude this thesis by summarizing key elements of the study and proposing a direction for future research.
CHAPTER VI: Conclusion

Innovation in Education

Education as a field is in a rocky state of transition. New technologies are continually reshaping educational practices. The rise of data mining and data management systems, as well as the concept of data-driven best practices, are restructuring the role of the teacher in the classroom. The wealth of information available through web 2.0 has reshaped the role of the student and the teacher-student relationship. The last three decades worth of emphasis on standardization and assessment has remade educational objectives and what is considered success in learning. For classroom teachers, these larger cultural transitions translate to continual and complex change as they work to implement new practices in line with current ideals.

With change come elements of risk and uncertainty. Educators may implement a new strategy, but they might also remain unconvinced the newest initiative rolled out by administration is beneficial to students or will deliver the promised benefits. In many cases, new initiatives fail to return on promised rewards and are promptly discarded as quickly as they were acquired. There is a cost to continual upheaval where workers function in an environment of risk and uncertainty associated with change.

Social Relationships and Innovation

Social relationships among peer coworkers can help to combat risk and uncertainty to make the work environment more open to innovative practices. As peer coworkers interact to socially co-create meaning and understanding of the intended reform they can work through factors that might impede success (Moolenaar & Sleegars, 2010). In the wake of recent
transitions to more collaborative environments that embrace the characteristics of learning organizations, it is also worth noting that “much education policy is predicated on the notion that teachers learn from their peers,” (Jackson & Bruegmann, 2009, p. 3). In this way, social relationships among teachers, fostered by the institutional norms and practices, can help teachers work together to adjust and improve current practices in the classroom and navigate the risk and uncertainty associated with innovation.

For this purpose, this study considered whether social relationships among classroom teachers can influence a culture of innovation. Social interactions are complex and encompass many factors, but are generally divided into two broad categories.

Expressive relationships.

Expressive relationships are defined as “affective relationships between organizational members that are formed to exchange social resources, such as friendship and social support, that are not directly aimed at achieving organizational goals,” (Moolenaar & Sleegers, 2010, p. 100). Expressive relationships include empathy and other means of social support (Chiaburu & Harrison, 2008). Friendship is a word often used to define an expressive relationship where peer coworkers discover they enjoy the company of a peer coworker and have traits or interests in common (Odden & Sias, 1997).

Instrumental relationships.

Instrumental relationships are defined as “relationships in which resources are exchanged that can facilitate achieving organizational goals,” (Moolenaar & Sleegers, 2010, p. 100). Instrumental relationships are information rich and task oriented. These relationships can contain an element of mentorship (Chiaburu & Harrison, 2008). Through these relationships,
peer coworkers discover the social norms and procedures of their organization (Kram & Isabella, 1985).

**Conceptual Framework**

To delineate and focus on specific elements of social relationships, the peer coworker relationships types developed by Kram and Isabella (1985) were connected to the broad categories of instrumental and expressive relationships. The Information Peer is the most common relationship. It is a functional relationship that exists primarily in the instrumental domain. The more rare Special Peer relationship is primarily an expressive relationship marked by high level of trust and friendship. In between, the Collegial Peer relationship contains elements of both expressive and instrumental relationships. Social relationships between peer coworkers function within independent and interdependent social domains. In considering a connection between peer coworker relationships and an innovative culture, the following research question was developed:

RQ: How do instrumental relationships and expressive relationships cultivate a culture of innovation among teachers?

**Study Design**

An online survey was distributed to K-12 classroom teachers in public, private, parochial, and charter schools across the continental United States. This population was reached through contacts in the researcher’s social network. The researcher earned an undergraduate degree in education and taught high school English for three years. Results were analyzed using SPSS version 19. An OLS regression analysis was performed despite the presence of multicollinearity between the variables. Separate analyses were completed with the dependent
variable, innovation, and the control variables paired with one independent variable at a time. Because the analysis was completed within the same sample and the variables were all uniform, the beta scores could be compared across analyses.

**Hypotheses and Findings**

Three hypotheses were developed to consider the role of independent and interdependent expressive and instrumental relationships. The first hypothesis is as follows:

H$_1$: Resource sharing as a function of instrumental relationships is more likely than resource sharing as a function of expressive relationships or resource sharing as a function of interdependent instrumental and expressive relationships to cultivate an innovative environment.

This hypothesis was not supported. Resource sharing as a function of interdependent expressive and instrumental relationships had a stronger influence with a beta score of .255 over resource sharing as a function of instrumental relationships with a beta score of .190.

H$_2$: Social support as a function of expressive relationships is more likely than social support as a function of instrumental relationships or social support as a function of interdependent instrumental and expressive relationships to cultivate an innovative environment.

This hypothesis was not supported. Social support as a function of expressive relationships did not yield statistically significant results. Again, social support as a function of interdependent expressive and instrumental relationships had the strongest influence with a beta of .255.

H$_3$: Work-related discussions as a function of interdependent instrumental and expressive relationships are more likely than work-related discussion as a function of instrumental
relationships or work-related discussion as a function of expressive relationships to create an innovative environment.

This hypothesis was supported. Work discussion as a function of interdependent relationships had the strongest influence with a beta score of .299. Work discussion as a function of instrumental relationships had a slightly weaker influence with a beta score of .213. Work discussion as a function of expressive relationships did not yield statistically significant results.

**Key findings.**

The key findings from this study include the influence of the interdependent relationship domains. Although it is not clear to what extent the instrumental and expressive relationship characteristics influence, they do work together to have the strongest influence on creating an innovative environment. Additionally, the non-finding of social support indicates that while expressive relationship characteristics do play an interdependent role, this study was inconclusive as to what extent social support plays an independent role. Finally, the strongest variable in terms of creating an innovative environment was actually the control variable grade level taught. Elementary teachers are more likely to work in an innovative environment.

**Directions for Future Research**

Key findings for this study included the non-finding of social support, or the lack of statistically significant influence from an independent expressive relationship domain. Yet the strongest influence on an innovative environment came from the interdependent interaction between the instrumental and expressive domains. Expressive relationship characteristics are playing some type of role in developing an innovative culture, but this study was inconclusive in terms of making that role explicit. Many studies find that the expressive relationship is
important for the working environment. For instance, expressive relationships can help workers to develop good attitudes, job satisfaction, motivation to be involved in their work, and commitment to their organization (Chiaburu & Harrison, 2008). Yet if coworkers were only friends, it does not seem likely they would also be effective workers. There is something more going on. Future research into the role of the expressive relationship in conjunction with instrumental relationship characteristics could provide insight into the role of expressive relationship characteristics.

**Mixed-method research.**

The study conducted by Moolenaar and Sleegars (2010), which acted as inspiration for this study, incorporated social network analysis with quantitative methodology. They asked participants two questions to develop social network maps that would show both instrumental and expressive relationships by school:

1. To whom do you turn to in order to discuss your work? (instrumental relationship)
2. Whom do you regard as a friend? (expressive relationship) (p. 103).

However, the two broad categories of “friends” and “coworkers” did not adequately allow for representation of the complex shades of interdependence between instrumental and expressive relationships. Their findings also did not include statistically significant results in the expressive relationship domain. The social network analysis did provide context for understanding the social relationships between peer coworkers in a way absent from this study.

For future research, a social network analysis that takes into account the interdependence of the expressive and instrumental domains in conjunction with quantitative methodology may
better define the role of expressive relationship characteristics in peer coworker relationships within a meaningful context.

**Innovation in learning organizations.**

The literature reviewed for this study pointed to a current emphasis on collaboration in the workplace as well as structural changes to make institutions into learning organizations. A learning organization is “a social system whose members have learned conscious, communal processes for continually: generating, retaining, and leveraging individual and collective learning to improve the performance of the organizational system in ways important to all stakeholders; and monitoring and improving performances,” (Teare & Dealtry, 1998, p. 49). For future research, it seems worth considering whether educational institutions that have embraced learning organization structures are fostering the interdependent expressive and instrumental relationships that help to cultivate an innovative environment. Again, a mixed methods study incorporating social network analysis or qualitative methodology with quantitative methodology may allow for better pinpointing of the shades of influence coming from interdependent relationship domains while rooting those relationships in a meaningful context.
Appendix A

Survey

The following questions refer to the general environment you and your fellow classroom teachers work in.

1. Teachers in my school are generally willing to try new ideas

2. Teachers in my school are interested in learning how to implement new ideas

3. Teachers in my school are continuously developing better approaches to learning for students

4. Teachers in my school are constantly trying to improve their teaching practices

5. Teachers in my school are willing to take risks to make this school better

6. Teachers in my school have a positive ‘can-do’ attitude

7. Teachers in my school are encouraged to go as far as they can when developing a new approach to a problem

8. Do you have anything else you would like to say regarding the environment in which you and your fellow classroom teachers conduct your work?

Now please consider one person at work with whom you have traded or shared lesson plan materials or resources in the past year.

9. What kind of relationship best describes your relationship with this person?
   i. A strong, close friendship
   j. A friendship within the workplace
   k. A neutral relationship
   l. A good coworker, but not necessarily friends
   m. A good coworker, but not someone I consider my friend
10. Please check all boxes that describe how you regard this person
   n. This person helps me with difficult tasks
   o. This person helps me to get the job done
   p. This person cheers me up
   q. This person is understanding and sympathetic
   r. This person allows me to vent when I need to
   s. This person and I have a lot in common
   t. This person is someone I only talk with to discuss work-related issues
   u. This person is someone I trust enough to share personal information with
   v. This person is someone I highly trust and consider a close, personal friend
   w. This person works nearby and is easy to find
   x. I often see this person as part of my daily routine

11. How often do you generally trade or share resources with this person?
    1: Almost never 2: Monthly 3: Weekly 4: Daily

12. How likely is it that you would spend time with this person outside of a work
    environment?
    1: Not likely at all 2: Somewhat unlikely 3: neutral 4: somewhat likely 4: very likely

13. How likely is it that you would still trade resources with this person if you felt that you
    did not get along with this person?
    1: Not likely at all 2: Somewhat unlikely 3: neutral 4: somewhat likely 4: very likely

14. Do you have any anything else you would like to say regarding your relationship with a
coworker with whom you share or trade materials and resources?

Now please consider one person at work with whom you had an informal discussion regarding
personal distress or problems in the past year.

15. What kind of relationship best describes your relationship with this person?
    a. A strong, close friendship
    b. A friendship within the workplace
    c. A neutral relationship
    d. A good coworker, but not necessarily friends
    e. A good coworker, but not someone I consider my friend

16. Please check all boxes that describe how you regard this person
    a. This person helps me with difficult tasks
    b. This person helps me to get the job done
    c. This person cheers me up
d. This person is understanding and sympathetic

17. How often do you have discussions centered on personal distress or problems?
   1: Almost never 2: Monthly 3: Weekly 4: Daily

18. How likely is it that you would spend time with this person outside of a work environment?
   1: Not likely at all 2: Somewhat unlikely 3: neutral 4: somewhat likely 4: very likely

19. How likely is it that you would still discuss personal distress or problems with this person if you felt that you did not get along with this person?
   1: Not likely at all 2: Somewhat unlikely 3: neutral 4: somewhat likely 4: very likely

20. Do you have any anything else you would like to say regarding your relationship with a coworker with whom you discuss personal or emotional issues while at work?

Now please consider one person at work with whom you had a discussion relating to professional matters such as procedures, strategies, behavior management, lesson planning, or other work-related matters in the past year.

21. What kind of relationship best describes your relationship with this person?
   a. A strong, close friendship
   b. A friendship within the workplace
   c. A neutral relationship
   d. A good coworker, but not necessarily friends
   e. A good coworker, but not someone I consider my friend

22. Please check all boxes that describe how you regard this person
   a. This person helps me with difficult tasks
   b. This person helps me to get the job done
   c. This person cheers me up
   d. This person is understanding and sympathetic
   e. This person allows me to vent when I need to
f. This person and I have a lot in common
g. This person is someone I only talk with to discuss work-related issues
h. This person is someone I trust enough to share personal information with
i. This person is someone I highly trust and consider a close, personal friend
j. This person works nearby and is easy to find
k. I often see this person as part of my daily routine

23. How often do you have discussions centered on work-related matters with this person?
   1: Almost never 2: Monthly 3: Weekly 4: Daily

24. How likely is it that you would spend time with this person outside of a work environment?
   1: Not likely at all 2: Somewhat unlikely 3: Neutral 4: Somewhat likely 4: Very likely

25. How likely is it that you would still discuss work-related matters with this person if you felt that you did not get along with this person?
   1: Not likely at all 2: Somewhat unlikely 3: Neutral 4: Somewhat likely 4: Very likely

26. Do you have anything else you would like to say regarding your relationship with a coworker with whom you discuss professional matters such as interventions, behavior management, lesson planning, etc.?

Demographics:

27. What is your gender?
   1: Male 2: Female

28. What is your age?

29. What grade level do you primarily teach?
   a. Elementary (grades K-5)
   b. Middle (grades 6-8)
   c. High (grades 9-12)

30. What subject(s) are you currently teaching? Please check all that apply.
   a. Elementary education
   b. Math
   c. Science
   d. English
   e. History
   f. Music
   g. Physical Education
h. Foreign Language
i. Special Education
j. Other (please specify)

31. How many years total teaching experience do you have?

32. How many years have you worked at your current school?
   1: Less than a year 2: One to two years 3: Three to five years 4: Six to ten years 5: over ten years
References


