

Teachers' Unions and Administrators' and Teachers' Morale: Perceived Effects

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Abstract

In Ontario, Canada, the government passed Bill 160, the Education Quality Improvement Act in December of 1997. It removed administrators from teachers' federations in Ontario, thereby provoking a crisis. An unhealthy gap was set between administrators and teachers, causing a lowering of morale for both. The purpose of this study was to determine if there is a relationship between perceived effects of teachers' union actions on administrators' and teachers' roles and administrators' and teachers' morale. Learning and organizational theories provided a theoretical framework for this quantitative study. Questionnaires were used to address three hypotheses. Two-sample t-test, Pearson's correlation coefficient, and multiple regression analysis were used to analyze the data gathered. The most significant finding from the data analysis indicated that learning environment scores affected administrators' morale.

Introduction

Labor relations provide a significant perspective on educational change (Wang, 2004). Differences exist between American and Canadian labor relations in the field of education (Litzcke, 2001). In Canada, throughout the 20th century, there have been periods of collaboration between administrators and teachers' unions, as well as periods of unrest. Adversarial collective bargaining has been the norm of the relationship between teachers' unions and administrators in the United States for three decades, and the traditional industrial union model has been seen as promoting a competitive scenario where there is no collaboration between the constituents (Urbanski, 2003, as cited in Quinn, 2003). Another difference between the two countries is that membership in a teachers' union is mandatory in Canada, whereas in the United States membership is optional. With the introduction in Ontario, Canada, of Bill 160 (1997), the Education Quality Improvement Act, administrators became managers; they no longer belonged to the teachers' union (Trute, 1999). Changing the roles and responsibilities of administrators may have altered unique relationships in education in the province.

Historical Perspectives

The history of teachers' unions in Canada has been documented in great detail (Smaller, 1998). In Canada, educational structures developed similarly to how they developed in the United States. Initially, as the community took responsibility for education, teachers were not protected by any collective agreements. In the middle of the 19th century, schools were governed by locally elected trustees responsible for only one school. Later on, centralized control, which included control over operational issues such as curriculum and funding, became the norm. During this same period, elementary and secondary school teachers' associations evolved, similar to the National Education Association (NEA) in the United States. Material interests of classroom teachers were not a priority; rather, the focus was on dedication to the profession.

At the beginning of the 20th century, Canadians experienced social and economic disruption, as well as the First World War. During this time frame, independent local and provincial teachers' associations developed across Canada. Parallel to the American Federation of Teachers (AFT), these independent teachers' associations focused on the improvement of teachers' conditions. However, politically, the comparison with AFT stops there; in Canada principals focused on managing schools rather than on improving teachers' conditions. As a result, the independent teachers' associations also resembled the American National Education Association (NEA), whose focus was on dedication to the profession (Smaller, 1998).

The overall goal of these associations, however, was to improve conditions for teachers. Superintendents were no longer eligible to be part of the association and principals took on responsibilities. The members of these new associations worked collaboratively to promote education and the image of the professional teacher. Relations between the unions and the local/provincial state officials remained positive, and in the 1920s and 1930s, teachers' associations in Ontario shared office space with the organization representing the school trustees. In addition, union leaders preferred centralization to decentralization (Smaller, 1998).

Regional differences existed. Until the mid-1930s, in Western Canada, confrontational stances were taken, necessitating the need for strike funds in case relationships between the union and provinces deteriorated (Smaller, 1998). In British Columbia, teachers were affiliated with the national Trades and Labor Congress in 1934. Their gains included standardized teachers' contracts and minimum salary wages (Smaller, ¶ 7). Unfortunately, there was no such progress in other areas of Canada. As a result, teachers in other areas became more agitated and politically active, endeavouring to create a potential crisis (Smaller, ¶ 12).

As a result of political activism and to avert a possible crisis, union leaders, trustees, and politicians across Canada considered actions that would ensure an amicable relationship between the parties. They drafted legislation that was unique in the Western World – the Teaching Profession Act (1990), which was introduced in the 1930s and subsequently passed in every province by the end of the 1940s.

First implemented in Saskatchewan in 1935, it required every teacher to belong to a teachers' union; however, the government determined the political framework (Smaller, 1998). Teachers had no control over determining training, certification, or teaching practices of their members (Smaller, ¶ 13). As well, teachers could not make decisions relating to matters affecting everyday practices of teaching and learning (Smaller, ¶ 13). Moreover, teachers had no collective bargaining privileges.

Legislation required that teachers' associations establish a discipline committee to hear charges of professional misconduct against teachers, and to impose sanctions in order to abolish unprofessional conduct (Smaller, 1998). For several decades following the provincial enactments of this legislation in the 1930s and 1940s, relations with local and provincial governments remained or returned to that of a collaborative nature (Smaller, ¶ 17). These relations and discipline committees worked to ensure appropriate teacher behavior.

As a result of these controls over teachers, 30 years passed before teachers began to assert themselves again and ask for the right to bargain collectively. However, conditions improved for teachers during the 1970s and 1980s (Smaller, 1998, ¶ 19), beginning in December, 1973, when teachers in Ontario closed schools for one day to stress the importance of collective bargaining.

Across Canada, as part of radical restructuring, the late 1980s and 1990s showed renewed political attention to professionalism among teachers along with increasing structural control over teachers' work (Smaller, 1998). One form this control took was the establishment of provincially legislated Colleges of Teachers; British Columbia's version became effective in 1988 and Ontario's in 1996. The Conservative governments in both British Columbia and Ontario introduced these Colleges of Teachers as a means of returning to "back-to-basics" governments (Smaller, ¶ 20). The Colleges' focus was on standards of practice, investigation, and disciplining committees (Smaller, ¶ 20).

In Ontario, the College of Teachers was promoted to the public as a new way to enforce standards of practice for teachers and ensure proper teacher behavior in the classroom (Smaller, 1998, ¶ 21). Teachers viewed the College of Teachers as a way to have some professional self-control and professional autonomy (Smaller, ¶ 21). The Minister of Education could overrule any action of this board (Smaller, ¶ 22).

Teachers' unions in Canada have undergone restructuring throughout the decades in order to establish an identity for their members. The College of Teachers introduced a sense of professional self-control and professional autonomy in an attempt to balance the power of the teachers' unions.

Political Perspectives

During the 1990s, Ontario underwent political restructuring. At that time, Ontario had three political parties, each with different ideas about education: "the centralist Liberals; moderately left-wing New Democrats; right-wing, business-oriented Conservatives" (Majhanovich, 2002, ¶ 4). The perception was that each government wished to undo what the previous government had instituted. The Conservative government of the time criticized the teachers, unions, and the results of public education.

Whatever educational restructuring had been taking place, another broader agenda, dealing with the reduction of government support for social services (Majhanovich, 2002, ¶ 6) and possible privatization, was the priority. John Snobelen, the Conservative Minister of Education, wanted to "create a crisis" by indicating that teachers and their unions were responsible for the dysfunctional public education system (Majhanovich, ¶ 6). In September 1997, Snobelen introduced new legislation that would restructure education with respect to curriculum and administration: Bill 160 (1997), the Education Quality Improvement Act (as cited in Majhanovich, ¶ 6). The government introduced amendments in November of that year; final passage of the Bill took place in March, 1998. The Bill's features included:

1. Centralization of funding – government, and not local boards, now controlled

- funding for school districts; local authorities could no longer levy taxes for educational purposes;
2. Setting of average class sizes for elementary and secondary school classes – now, possibly, there might be greater numbers of students in various classrooms throughout both elementary and secondary schools, with the further implication that inequities might be created in certain districts;
 3. Removal of administrators from the union – administrators were now to be designated as managers rather than curriculum leaders in the school;
 4. Reduction of paid preparation time and increase in number of classes taught per day by secondary school teachers;
 5. A clause nullifying all existing contracts between teachers and the boards (local school districts). (Majhanovich, ¶ 10)

In the fall of 1997, in protest to Bill 160, teachers engaged in a two-week work stoppage. The stoppage resulted in a strike in which 126,000 Ontario teachers and their principals walked off the job – the largest teachers' strike ever in North America. The teachers mounted a publicity campaign to inform parents of just what the parents would lose in their neighborhood schools under the restructuring. The parents supported the teachers. The teachers could not maintain solidarity because of the make-up of the federations. After two weeks the elementary teachers returned to the classroom. Shortly afterward, and reluctantly, the secondary school teachers also returned.

At that time, there were five separate teachers' federations in Ontario: public secondary school (OSSTF), English Catholic secondary school (OECTA), public male elementary-school teachers (OPSTF), a larger group of public female elementary-school teachers (FWTAAO), and francophone teachers (AEFO), plus the umbrella Ontario Teachers' Federation (OTF) (Majhanovich, 2002, ¶ 13). In 1998, the new elementary teachers' federation of Ontario (ETFO) was formed, thereby ending the separate men's and women's federations on the elementary school level.

Bill 160 prevented teachers from negotiating working conditions; teachers thus saw the Bill as an attack on teachers' rights to bargain collectively. Local school boards had been reduced in number (from 129 to 72) previously, under the earlier Fewer School Boards Act (Bill 104, a Bill introduced to amend the Education Act). Now, Bill 160 rendered school boards virtually powerless to influence education. But Bill 160 equalized grants across the province without consideration for different costs of living, or different populations in different geographical settings across the province (Majhanovich, 2002, ¶ 12).

The new Minister of Education, Dave Johnson, continued to attack the teachers and the unions (Majhanovich, 2002, ¶ 14). Further lockouts and strikes took place in 1998. Bitter feelings resulted as a consequence of these measures and actions. Teachers began to follow strict guidelines of the collective agreement, which meant that they would arrive at a designated time in the morning and leave the building at a designated time. For the next two years, they refused to participate in extracurricular activities.

After they took power in 1997, the Ontario Conservative government removed \$1 billion from the education budget as part of their plan to create a crisis, all the while publicly promising only to reduce bloated administrations – not to cut money from classrooms (Majhanovich, 2002). Schools now had to manage their budgets with less money and fewer teachers.

In addition to the government's plan to create a crisis, another variable contributed to the upset in public education. According to Majhanovich (2002), many feared that the real agenda of this government, backed by big business and transnational corporations, was to destroy public education in order to provide privatized technological schools. As a result of centralized control, the Ministry of Education then restructured curriculum, focusing on what students could do at the end of a program, with standardized testing (Majhanovich, 2002). Guidance teachers focused on preparation for the workplace and career counseling. The Ministry rewrote curriculum documents based on a uniform template. According to Majhanovich, teachers were not happy.

Further problems continued to develop from under-funding. The government provided a tax credit of up to \$3,500 (Canadian) per year, per child, for parents who wished to enroll their own children in private schools (Majhanovich, 2002). The justification for such a tax credit was to provide parents with greater choice; but the teachers' unions and other parent associations pointed out that every tax credit of \$3,500 for private schools would remove the same amount of grant money from the public system, further impoverishing the struggling public schools. As a result of the government's top-down restructuring, teachers needed time to understand the impact of the changes on curriculum. They required curriculum resources in order to support changes in curriculum.

In 1999, the Conservative government was elected again. In May 2000, the government introduced Bill 74 (2000), the Education Accountability Act, 2000, which tightened Bill 160. Bill 74 defined the number of courses a high school teacher could teach, legislated a new average class size in elementary and high schools, and established requirements for teachers' participation in extracurricular activities as well as other mandates. Bill 74's changes affected principals as well as teachers. Principals became even more unhappy about their role as manager that had been created by Bill 160 (Majhanovich, 2002). One example of their discontent involved the power that they now had to assign extra duties to teachers. Overall, controversies surrounding the legislation (Bills 160 and 74) that centralized the power for decision-making over education to the provincial Ministry of Education and Training and away from school boards and teachers certainly illustrate how control over teachers and what they teach had been tightened.

Over the next five years controversies continued to emerge. In June 2006, a newly elected Liberal government passed Bill 78 (2006), the Student Performance Bill. It encouraged consultation with boards and other partners to determine clear educational outcomes for all constituents (Blazina & Despault, 2006). As well, in 2006/2007, as part of a recruitment initiative for new teachers, the Liberal government introduced the New Teacher Induction Program (NTIP) in order to demonstrate support to new teachers. The Ontario College of Teachers Act, 1996 (1996) underwent changes to ensure that the College would be self-regulated by the teachers, by stipulating a majority of classroom teachers on its council. These amendments supported the government's *Excellence for All* commitment that set the highest standards for teachers so that they could earn respect.

Motivation for the Study

The motivation of this quantitative survey study was to determine if there is a relationship between perceived effects of teachers' union actions on administrators' and teachers' roles (independent variables) and administrators' and teachers' morale (dependent variable).

Theoretical Base

The theoretical base for this study focused on three theorists: Schön's (1987) learning, reflection, and change theory; Argyris' (1999) organizational learning theory; and Senge's (2006) systems theory. As this study dealt with hypotheses about perceived effects of teachers' union actions on administrators' and teachers' roles and administrators' and teachers' morale, Argyris' and Schön's double-loop theory as well as Senge's (2006) systems thinking served as theoretical frameworks in understanding the relationship between administrators and teachers' unions.

Organizational evolutionary theory discusses incremental change in learning as "single-loop learning" wherein change occurs within unquestioned assumptions (Argyris, 1999). In Argyris' (1999) and Schön's (1987) double-loop learning, the focus is on solving complex problems by attempting to change underlying values and assumptions. This learning theory questions and changes assumptions, which results in different ways of doing things. It is a theory of personal change that focuses on professional education, especially leadership in organizations.

Schön (1987) developed two theories of action congruent with Argyris' doubleloop learning theory. *Theories-in-use* describes theories implicit in what we do as practitioners, while *espoused theories* describes the words we use to convey what we do, or what we would like others to think we do. Interaction and relationships with others are necessary to identify this distinction. The action theory learning process involves four steps: researchers attempt to discover existing theories, invent new meanings, produce new actions, and generalize the results. In double-loop learning the researcher applies each of these steps, detects errors, and corrects them, so that an organization's underlying norms, policies, and objectives are modified. The end result should be increased effectiveness in decision-making, through what Schön discussed as *reflection-in-action* and *reflection-on-action*. The former is thinking on one's feet, where the latter enables the learner to reconstruct past events.

While both Argyris (1999) and Schön (1987) focused on learning theories, Peter Senge (2006) focused on systems thinking in a learning organization. Systems' thinking addresses the whole versus the individual parts of the organization and focuses on the long-term view. Senge discussed four other disciplines: personal mastery, mental models, building shared vision, and team learning. Personal mastery promotes life-long learning. Mental models are ingrained assumptions and images that influence how we understand the world; building shared vision encourages innovation and promotes a shared picture of the future. Team learning builds on personal mastery and shared vision. Dialogue is critical to promote Senge's effective system thinking.

The theoretical frameworks of Argyris (1999), Schön (1987), and Senge (2006) provided the foundation to explore the relationship between perceived union interference and morale. Both administrators and teachers work in an organization where learning to work effectively together is critical.

Hypotheses

Three hypotheses were tested for this study:

Null Hypothesis 1

H₀: The average morale score (MOR) is the same for teachers and administrators (ROLE).

Null Hypothesis 2

H₀: There is no correlation between the morale score (MOR) and the learning environment score (LES).

Null Hypothesis 3

H₀: When controlling for the learning environment (LE), there is no difference in the level of morale (MOR) between teachers and administrators (ROLE).

Statistical Measures

Independent Variables. *Role (ROLE)*. This was measured on a categorical scale. The study participant's academic role was recorded as either teacher or administrator.

Perceived union impact (PUI). This score was measured on a continuous scale with a range of 1–4. The score was computed as the average of questions 1–20 on the Learning Environment (LE) questionnaire. The researcher chose to label the questionnaire “Learning Environment” in order to keep the questionnaire more neutral, as labeling the questionnaire “Perceived Union Impact” might evoke biased responses to it.

Union impact refers to any condition which exists as a result of the teachers' union actions that might adversely impact the learning environment. Lower scores indicated an academic staff member who perceived less union impact while higher scores indicated an academic staff member who perceived more union impact.

Dependent Variable. *Morale (MOR)*. This score was measured on a continuous scale with a range of 1–4. The score was computed as the average of questions 1–61 on the Teacher/Administrator Morale questionnaire. Questions 1, 4, 5, 7, 9, 13, 18, 22, 23, 25, 30, 32, 40, 44, 52, and 54 will be reverse-scored prior to calculation of the morale score. Lower scores indicated an academic staff member with low morale while higher scores indicated an academic staff member with high morale.

Methodology

Quantitative inquiry was selected for this study as it provided a numeric description of some portion of the population, sampled through the data collection method of asking people questions. This was the best choice of design for the following reasons:

1. Questionnaires are preferred for a quantitative study of organizational outcomes because they are unbiased (Wysong, 2000).
2. Questionnaires allow for generalization of findings to a larger population than the one from which the sample was drawn (Hartford, 2000).
3. Questionnaires are able to identify attributes of a larger population from a smaller group of individuals (Fowler, 2001).
4. Questionnaires provide numeric data that allow for correlation of two databases.
5. Questionnaires provide a rapid turnover in completion so that the researcher is able to gather the data in a timely manner.

Scientific research attempts to be logical (Babbie, 1990). As such, it attempts to guide the understanding of human behavior by seeking a general understanding. This research was an examination of perceptions about whether there was a relationship between perceived effects of

teachers' union actions on administrators' and teachers' roles (independent variables) and administrators' and teachers' morale (dependent variable) This information comprised attitudes, beliefs, and values – all characteristics that could not be obtained by observation. The questionnaire was a logical choice to learn how administrators and teachers perceived their relationship, as well as perceptions about whether there was a relationship between perceived effects of teachers' union actions on administrators' and teachers' roles (independent variables) and administrators' and teachers' morale (dependent variable).

Sample

The purpose of sampling is to estimate some unknown characteristics of the population. Through sampling, the researcher is able to gather information quickly, cut costs, and reduce the labor needed to conduct research (Zikmund, 2003).

The sampling frame was the members of the Canadian Education Association as well as members of Ontario Principals' Council. The sample consisted of those teachers and administrators who chose to participate from both associations. Volunteers were invited to participate in an anonymous survey on the Survey Monkey Web site at www.surveymonkey.com. The invitations were issued to administrators and teachers through the Canadian Education Association's newsletter and through Ontario Principals' Council's newsletter. On that site, the first page participants saw was the implied informed consent form. At the bottom of the letter was a button to click, with a statement that read: "By clicking the button below, you are providing consent to participate in the study." Clicking the button directed the study participant to the survey.

When at least 50 teachers and 50 administrators completed the survey, the survey was closed. If fewer than 50 administrators or 50 teachers completed the survey, then a second sample was selected, possibly from another association, and they were invited to participate in the study. This procedure continued until at least 50 teachers and 50 administrators completed the survey.

Sample Size Justification. The power calculations were performed using PASS (statistical software). Hypothesis 1 was tested using a two-sample t-test. The dependent variable (MOR) has a theoretical range of possible values of 1–4. Assuming a normal distribution, 99.7% of the data lie within ± 3 standard deviations of the mean. Therefore, the standard deviation might be estimated by the range divided by 6. Thus, an estimate of the standard deviation is $4/6 = 0.67$. According to Cohen (1988), small, medium, and large effect sizes for a two-sample t-test are $d=0.2$, $d=0.5$, and $d=0.8$, respectively. A sample size of 100 (50 teachers and 50 administrators) would achieve 80% power to detect an effect size of 0.57 (a medium effect size) with estimated group standard deviations of 0.67 and 0.67 and with a significance level (alpha) of 0.05 using a two-sided two-sample t-test. For example, if the population average MOR score for teachers was 3.00 and the population average MOR score for administrators was 2.62; this would correspond to an effect size of 0.57. This study would have an 80% chance of detecting this difference at the 0.05 level of significance.

Hypothesis 2 was tested using Pearson's correlation coefficient. According to Cohen (1988), small, medium, and large effect sizes for hypothesis tests about the Pearson correlation coefficient (r) are $r=0.1$, $r=0.3$, and $r=0.5$, respectively. A sample size of 100 produces 80% power to detect an effect size of 0.28, which is a medium effect size. For example, an effect size of 0.28 corresponds to a comparison of the null hypothesis that $r=0.0$ versus the alternative hypothesis that $|r| \geq 0.28$. If the true population correlation between MOR and LES was 0.28 or greater, this study would have an

80% chance of detecting this correlation (i.e., achieving statistical significance) at the 0.05 level of statistical significance.

Hypothesis 3 was tested using multiple linear regression analysis. Power analysis for multiple linear regression is based on the amount of change in R-squared attributed to the variable of interest. According to Cohen (1988), small, medium, and large effect sizes for hypothesis tests about R-squared are $R\text{-squared}=0.0196$, $R\text{-squared}=0.13$, and $R\text{squared}=0.26$, respectively. A sample size of 100 achieves 80% power to detect an $R\text{squared}$ of 0.067 (which is a medium effect size) attributed to 1 independent variable (ROLE), after controlling for two covariates (LES) using an F-Test with a significance level (alpha) of 0.05. Thus, a sample size of 100 is justifiable for detecting medium effect sizes for hypotheses 1–3.

Description of the Treatment

The treatment consisted of two questionnaires administered online to the sample group of administrators and teachers. Each participant received an electronic implied informed consent form as part of the introduction to the survey on Survey Monkey. Participants were assured that their names would remain confidential and their surveys were anonymous.

The study formally began after approval and notification through the Canadian Education Association newsletter to both administrators and teachers, in August 2008. The questionnaires were entered online, completing the treatment, and submitting responses. By August 11, 2008, the online survey was closed and data was downloaded from the server and imported into the SPSS software for data analysis. The data analysis procedures are discussed below.

Instrumentation and Materials

A popular instrument to measure factors that affect teacher morale is the Purdue Teacher Opinionaire, which Houchard (2005) implemented in her study. Houchard (p. 49) described the Purdue Teacher Opinionaire instrument (from which the Teacher-Administrator Morale instrument is adapted) as one that is designed to help break down teacher morale into 10 specific dimensions for more meaningful discoveries and is designed to estimate individual, school, and system-wide morale. The instrument is composed of 100 questions that can be divided up into 10 different dimensions. The dimensions of teacher morale included teacher rapport with principal, satisfaction with teaching, rapport among teachers, teacher salary, teacher load, curriculum issues, teacher status, community support of education, school facilities and services, and community pressures. Information from Purdue University relayed that permission was no longer needed to use the PTO because the copyright protection had expired.

One of the questionnaire instruments used in this study was an adaptation of the Purdue Teacher Opinionaire, entitled Teacher-Administrator Morale Questionnaire. This modified instrument was designed to provide the participant with the opportunity to express opinions about the work and various school problems in the participant's particular school situation. It was based on a Likert scale with the following criteria: disagree, probably disagree, probably agree, and agree.

One other survey instrument was administered, entitled Learning Environment Questionnaire. This instrument was adapted from practices in the Elementary Teachers Federation of Ontario handbook (2007). The handbook is for members of ETFO in one district of Ontario. It is meant to address frequently asked questions by its members. Senior superintendents vetted the handbook as a quick reference for teachers. Teachers are encouraged to consult the Collective Agreement and Board Policies/Procedures for further details. In the Learning Environment Questionnaire, participants

commented about the impact of certain expectations on the learning environment for educators. e.g. annual learning plans, arrival/departure times, field trips. The instrument implemented a Likert scale based on the following criteria: very negative, negative, positive, and very positive.

Validity

Validity is the strength or accuracy of conclusions or inferences. According to Cook and Campbell (1979, as cited in Trochim, 2006) validity is the “best available approximation to the truth or falsity of a given inference, proposition or conclusion.” There are four types of validity common to social research: (a) conclusion validity, (b) internal validity, (c) construct validity, and (d) external validity. Face validity demonstrates construct validity; it shows if there is a relationship between how the researcher operationalized concepts in the study and the actual causal relationship. “Face validity refers to the subjective agreement among professionals that a scale logically appears to reflect accurately what it purports to measure” (Zikmund, 2003, p. 302).

To establish the validity of the learning environment and morale scale scores, a panel of three to five experts in the field of education was consulted. In order to ensure validity, readability, clarity, and ease of administration, the panel was asked to review the learning environment and morale questionnaires for face validity, that is, to establish whether or not the learning environment and morale scale scores are valid for measuring what they were intended to measure. The panel scrutinized the questionnaires for both content and format. The panel suggested revisions, additions, or deletions to items on the survey. All such changes were documented and reported.

The Purdue Teacher Opinionnaire, 1970, is a revision of the Purdue Teacher Morale Inventory of 1961 (Bentley & Rempel, 1980). According to Rosner (cited in Gore, 1983, p. 35), the PTO “appears to be a carefully constructed research instrument” in that it gives an estimate of the individual teacher, school, or system-wide morale. The ten sub-scores, or factors, provide an insight into teacher reaction to components of teacher morale. Blackburn and Wilkes (1997) indicated that the PTO validity was established using peer judgment. In her dissertation, Gore (1983) reported that the *Manual for the Purdue Teacher Opinionnaire* stated that there is “no relevant criterion on which to judge the validity of an instrument of this nature, except, to some extent, the performance of teachers” (pp. 36–37).

As for the validity of the Learning Environment instrument, there was feedback from the panel of three to five experts with regard to face validity. The overall comments from the panel were that some of the statements appeared “overly negative” and the panel suggested that the researcher reverse some of the statements so that they became more positive statements. Otherwise, validity was established by the feedback from the experts, and some questions were altered to promote a positive sense.

One expert suggested that the Likert scale reflect consistency similar to the Teacher-Administrator instrument by modifying the choices to “very negative, somewhat negative, somewhat positive, and very positive.” However, the qualifiers were kept as such, as it would not impact heavily on the study. One of the experts needed clarification in question 7 regarding the concept of mentoring and to whom, so a question was rephrased in a positive manner, by implementing the word “encouraging.” One of the experts regarded question 9 as somewhat of a “motherhood statement” and suggested “allowing teachers to resolve disputes among themselves informally without a formal mechanism.” The question was changed and took out “without a formal mechanism” in order to create a positive comment. Question 18 appeared to be unclear to one of the members who did not

understand the concept of “efficient procedures.” The question was changed the sentence to reflect the role of the administrator as one of curriculum leader with regard to timetabling. Therefore, the experts reviewed the Learning Environment questionnaire for content and format. Based on the feedback from the panel of experts, all revisions were accomplished. These changes have been documented and reported in the validity of the Learning Environment instrument.

Reliability

According to Trochim (2006), reliability is the repeatability of a measurement – the degree to which an instrument measures the same way each time it is used under the same conditions with the same subjects. “Reliability applies to a measure when similar results are obtained over time and across situation. Broadly defined, reliability is the degree to which measures are free from error and therefore yield consistent results” (Zikmund, 2003, p. 300). There are two methods to establish reliability: (a) test/retest and (b) internal consistency. Internal consistency involves one administration of an instrument that estimates reliability by grouping questions in a questionnaire that measures the same concept. “The test-retest method of determining reliability involves administering the same scale or measure to the same respondents on two separate times to test for stability. If the measure is stable over time, the test, administered under the same conditions each time, should obtain similar results” (Zikmund). A pilot study of 15 teachers and administrators was conducted to measure the internal consistency reliability of the learning environment and morale scale scores.

According to Houchard’s dissertation (2005, p. 41), Bentley and Rempel (1968) reported that the Purdue Teacher Opinionaire’s test-retest correlation for the total score was .87 with the correlations for the 10 subscales ranging from .62 to .88. However, 9 of the 10 subscales had test-retest correlations greater than .75 with the weakest correlation of .62 for the Community Pressure subscale. In order to determine reliability for the Purdue Teacher Opinionaire, Table 1 shows the Cronbach’s alpha reliability coefficients for the Purdue Teacher Opinionaire. The closer the coefficient is to 1.0, the higher the reliability.

Table 1. *Cronbach’s Alpha Reliability Coefficients for Seven Purdue Teacher Opinionaire Factors*

Cronbach’s Alpha

1. Teacher Rapport with Principal .96
2. Satisfaction with Teaching .88
3. Rapport among Teachers .94
4. Teacher Salary .74
5. Teacher Load .79
6. Curriculum Issues .73
7. Teacher Status .82

Note. Houchard, 2005, p. 49

As well, according to Blackburn & Wilkes (1987), the PTO indicated an internal consistency reliability coefficient of .96. Furthermore, Gore (1983) reported in her dissertation that Coughlan and Froemel (as cited in Gore, p. 36) found the PTO to be in the “acceptable range of reliability.” Reliability in Gore’s study of 3,000 teachers provided data for test-retest reliability estimates. “Reliability of the total score was .87. Scores on individual factors ranged in reliability from .62 (community pressures) to .88 (teacher rapport with principal). Approximately .80 was the median reliability coefficient for the ten factor scores” (Gore, p. 36).

Each of the 15 study participants completed the learning environment questionnaire and the teacher-administrator morale questionnaire. Cronbach's alpha was used to measure the internal consistency reliability of the morale (MOR) and learning environment (LE) scale scores. If Cronbach's alpha was greater than 0.7 for both scale scores, then the learning environment and morale questionnaires would be considered reliable. Otherwise, an item analysis would be conducted in an attempt to maximize the internal consistency reliability of the scale scores.

Data Analysis

The questionnaire data was analyzed using several techniques. All statistical analyses were performed using SPSS for Windows (SPSS 16.0). All of the analyses were two-sided, with a 5% alpha level. Cronbach's alpha was used to measure the internal consistency reliability of the morale (MOR) and learning environment (LE) scale scores. Hypothesis 1 was tested using a two-sample t-test. If the t-test were statistically significant, then it would be concluded that the average morale score (MOR) was different for teachers and administrators. The size of the difference between teachers and administrators would be demonstrated by reporting the average and standard deviation morale scores separately for teachers and administrators.

Hypothesis 2 was tested using Pearson's correlation coefficient, which measures the strength and direction of linear relationship between two measures. If the Pearson correlation coefficient were statistically significantly different than zero, then the null hypothesis would be rejected and it would be concluded that there was a relationship between level of morale (MOR) and the learning environment (LE). If the sign of the correlation coefficient was positive, then it would be concluded that higher MOR scores were associated with higher LE scores, while lower MOR scores were associated with lower LE scores. If the correlation coefficient were negative, then it would be concluded that higher MOR scores are associated with lower LE scores while lower MOR scores are associated with higher LE scores.

Hypothesis 3 was tested using multiple linear regression. The dependent variable in the regression model would be the morale score (MOR). The independent variables were academic role (ROLE) and learning environment (LE). Both independent variables were entered into the model simultaneously. The equation of the model was reported and the statistical significance of the model parameters evaluated. If the regression coefficient for ROLE were statistically significant, then the null hypothesis would be rejected and it would be concluded that even after controlling for learning environment (LE) there was a difference in the average morale score (MOR) between teachers and administrators. Statistically significant regression coefficients would be interpreted. The R-square for the final model would be presented and interpreted.

Results

Results of Data Analysis of Hypothesis 1

It was hypothesized that the average morale score would be the same for teachers and administrators. In order to test hypothesis 1, the researcher implemented an error bar chart (a natural choice when comparing two means) and a two-sample t-test. Figure 1 is an error bar chart, indicating a 95 percent confidence interval (which indicates how confident the true population mean is compared to the sample mean). The error bar chart shows the mean morale score for administrators and teachers individually. If the p-value from the t-test was less than .05, then the null hypothesis would be rejected. At first glance, the graph seems to indicate that the teachers' group had a lesser mean than

the administrators' group. However, tables 2 and 3 show no statistically significant difference in the average morale score between the two groups. The mean score for the administrators was 3.02 with a standard deviation of 0.38. In comparison, the mean score for the teachers was 2.88 with a standard deviation of 0.44. When the t-test for equality of means was conducted (in other words, the null hypothesis) the morale score indicated that, according to the formula, the degrees of freedom were equivalent to $df=118$ and the final result for the t-test was $t(118)=1.81$ with a p-value of 0.073. Therefore, the null hypothesis was not rejected and it was concluded that there was no difference in the average morale score between teachers and administrators.

Figure 1. Academic role.

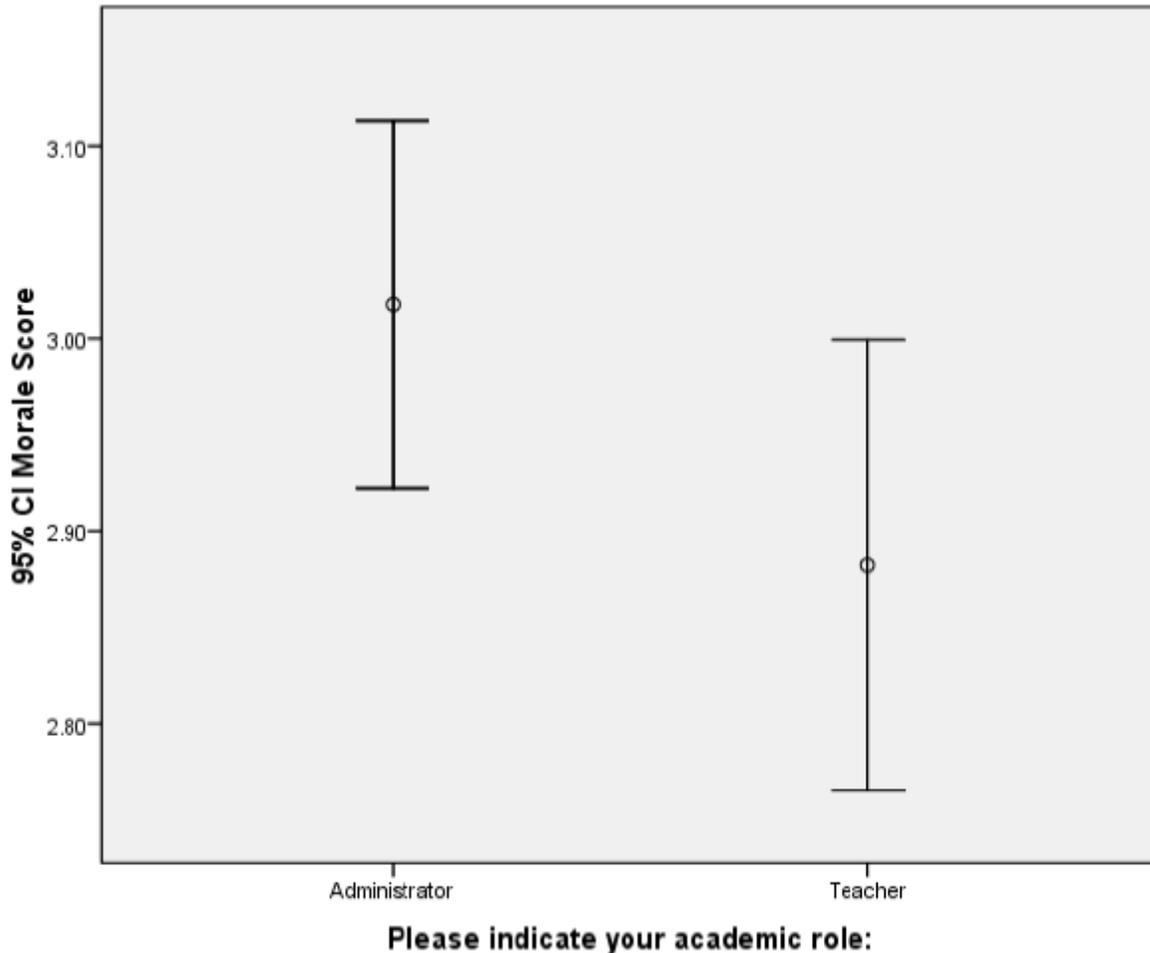


Table 2: Group Statistics

Please indicate your academic role:		N	Mean	Std. Deviation	Std. Error Mean
Morale Score	Administrator	63	3.0177	.37884	.04773
	Teacher	57	2.8824	.44101	.05841

Table 3: Independent Samples Test

	t-test for Equality of Means		
	t	df	Sig. (2-tailed)
Morale Score	1.808	118	.073

Results of Data Analysis for Hypothesis 2

It was hypothesized that there was no correlation between the morale score and the learning environment score. In order to test hypothesis 2, the Pearson’s correlation test was implemented, which measures the direction and degree of linear (straight line) relationship between two variables (in this case, the learning environment score and the morale score) as depicted by a scatter plot. Figure 2 is a scatter plot which graphically displays the relationship between the morale score and the learning environment score. The strength and direction of a linear relationship can be represented graphically by means of a trend line. The scatter plot does not indicate a trend line which might indicate a sloping in an upward or downward direction. Data are distributed throughout the scatter plot and there is one horizontal line. Table 4 shows that, according to the test, that the correlation between the morale and learning environment scores was not statistically significant; the correlation was -0.007 with a p-value of 0.94. Thus, the null hypothesis was not rejected since the p-value was not less than .05. It was concluded that there was no correlation between the morale score and the learning environment score.

Figure 2. Learning environment score.

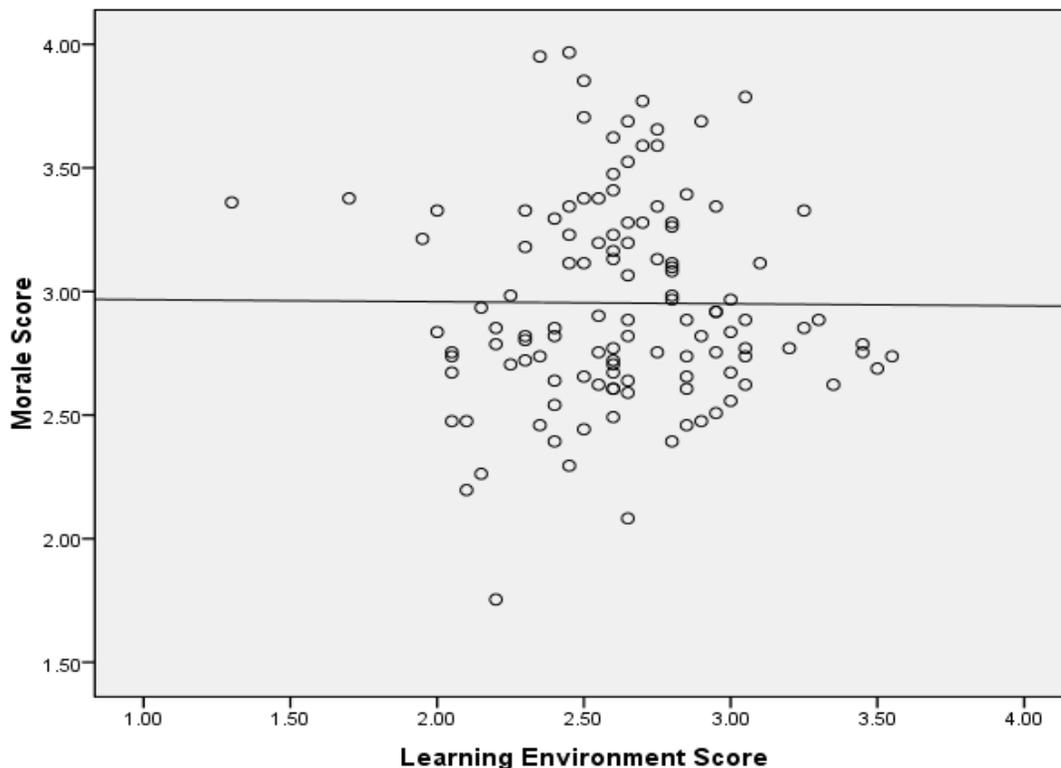


Table 4. Correlations

		Learning Environment Score
Morale Score	Pearson Correlation	-.007
	Sig. (2-tailed)	.935
	N	120

Results of Data Analysis for Hypothesis 3

It was hypothesized that, when controlling for the learning environment score, there would be no difference in the level of morale between teachers and administrators. In order to test hypothesis 3, multiple linear regression analysis was implemented. Table 5 shows that when it was controlled for the learning environment score, there was a statistically significant difference in the mean morale score between teachers and administrators wherein the p-value was 0.028. Consequently, the null hypothesis was rejected. Also, when it was controlled for the learning environment score, on average, teachers had a lower morale score than administrators.

After the learning environment score was controlled, the mean morale score was expected to be 0.20 points lower for teachers as compared to administrators. This was determined by the mathematical equation of the line, which was $Morale = 3.65 - 0.16 * LES - 0.20 * Role$ (Administrator=1; Teacher=2). Table 6 shows that the adjusted R-square, which was a measure of effect size that determines what portion of the variability in the scores could be accounted for by the treatment effect, was only 0.024. The effect size is a measurement of how different the two groups are and more specifically how different the means are between the two groups. The adjusted R-square demonstrates how useful the model of multiple linear regression analysis was for this study. The usual adjusted R-square varies from 0–1. The closer the score to 1, the better a predictor the model is. Thus, the score of 0.24 was closer to 0 than 1 and was therefore not considered a reliable predictor. Therefore, the combination of the learning environment and role scores accounted for only 2.4 percent of the total variance in morale scores. Hence, the multiple linear regression model is not regarded as a highly accurate model for prediction purposes.

Table 5. Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients		
	B	Std Error	Beta	t	Sig.
1 Constant	3.653	.405		9.014	.000
Learning Environment Score	-.155	.120	-.139	-1.287	.201
Please indicate your academic role:	-.198	.089	-.241	-2.222	.028

a. Dependent Variable: Morale Score

Table 6. Model Summary

Model	Adjusted R Square
1	.024

b. Dependent Variable: Morale Score

Three Further In-Depth Analyses

There appeared to be no conclusive difference in morale between teachers and administrators except for the rejection of null hypothesis three, wherein it was controlled for the learning environment. Additional information was needed, apart from the data analysis of the three hypotheses. It was necessary to gain a deeper understanding of the relationships between morale, learning environment, and role. Thus three further in-depth analyses were conducted.

In the first in-depth analysis, an error bar chart and a two-sample t-test to compare the mean learning environment score between teachers and administrators was implemented. In the second, scatter plots and Pearson's correlations compared the morale and learning environment scores separately for teachers and administrators. In the third, a multiple linear regression analysis tested for an interaction effect between the learning environment score and role.

First In-Depth Analysis

As reported, in hypothesis 1 there was no statistically significant difference in morale between teachers and administrators without controlling for the learning environment score. However, in hypothesis 3, when the learning environment score was controlled, the analysis indicated that there was a statistically significant difference in morale between teachers and administrators. Therefore, further in-depth analyses were needed in order to clarify the relationships between morale, learning environment, and role. An effort was made to establish how the learning environment score might be different for teachers and administrators, and so conducted a two-sample t-test to compare the average learning environment score between teachers and administrators.

Figure 3 is an error bar chart which illustrates the mean learning environment score (and 95 percent confidence interval) separately for administrators and teachers. The chart demonstrates a higher average among administrators. Tables 7 and 8 indicate a statistically significantly higher average learning environment score among administrators versus teachers. The mean learning environment score for the administrators was 2.82 with a standard deviation of 0.32, as compared to the mean learning environment score for teachers, which were 2.41 with a standard deviation of 0.31. When the t-test was conducted for equality of means, the results showed $t(118)=7.12$ with a p-value of less than 0.001. Therefore, the null hypothesis was rejected. Thus, it was found that administrators have a statistically significantly larger average learning environment score than teachers. As a measure of the strength of the relationship between the learning environment score and role, the effect size was 1.32, which is a large effect size.

Figure 3. Academic role.

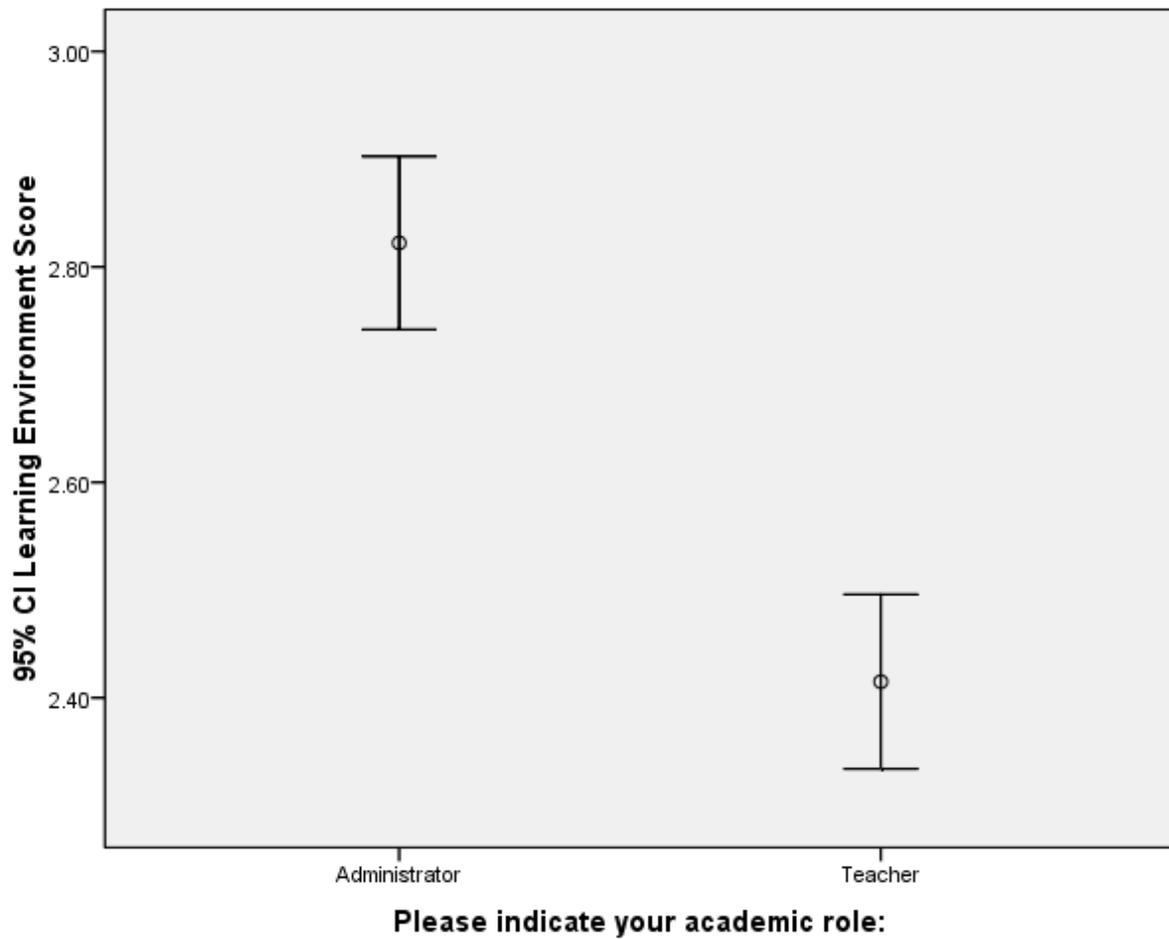


Table 7. Group Statistics

Please indicate your academic role:		N	Mean	Std. Deviation	Std. Error Mean
Learning Environment Score	Administrator	63	2.8222	.31925	.04022
	Teacher	57	2.4149	.30545	.04046

Table 8. Independent Samples Test

	t-test for Equality of Means		
	t	df	Sig. (2-tailed)
Learning Environment Score	7.124	118	.000

Second In-Depth Analysis

In the second in-depth analysis, scatter plots and Pearson’s correlations compared the morale and learning environment scores separately for teachers and administrators. In light of the fact that administrators had a larger mean learning environment score than the teachers and that this difference clarified the discrepancy in morale between administrators and teachers, it was decided to

investigate the rationale to explain how the relationship between morale and learning environment scores was different for administrators and teachers.

Figure 4 is a scatter plot which illustrates the relationship between the morale score and the learning environment score for administrators only. The graph indicates a negative trend. Table 8 shows there was a statistically significant and moderately strong negative correlation between the morale and learning environment scores for administrators with a correlation of $r(63) = -0.33$ and a p-value of 0.008. The results indicated a tendency for administrators who view the learning environment factors as impacting negatively on the learning environment to have lower morale. Figure 5 does not illustrate any trend between the morale and learning environment scores for teachers.

Table 9 shows there was no statistically significant correlation between the morale and learning environment scores for teachers. The final result of the Pearson correlation was $r(57) = 0.094$ and the p-value was 0.49. Therefore, it was evident that there is no relationship between the morale and learning environment scores for teachers.

Figure 4. Scatter plot for administrators.

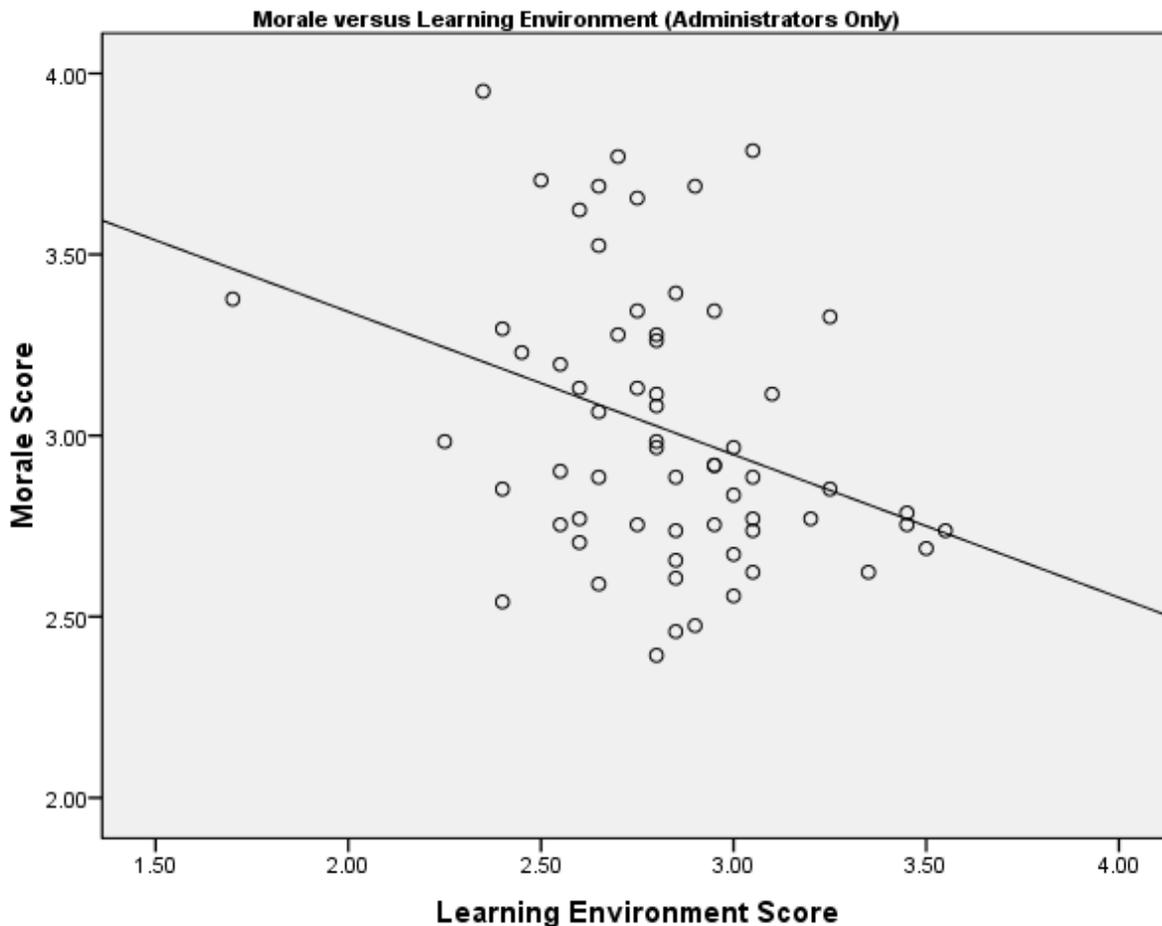


Figure 5. Scatter plot for teachers.

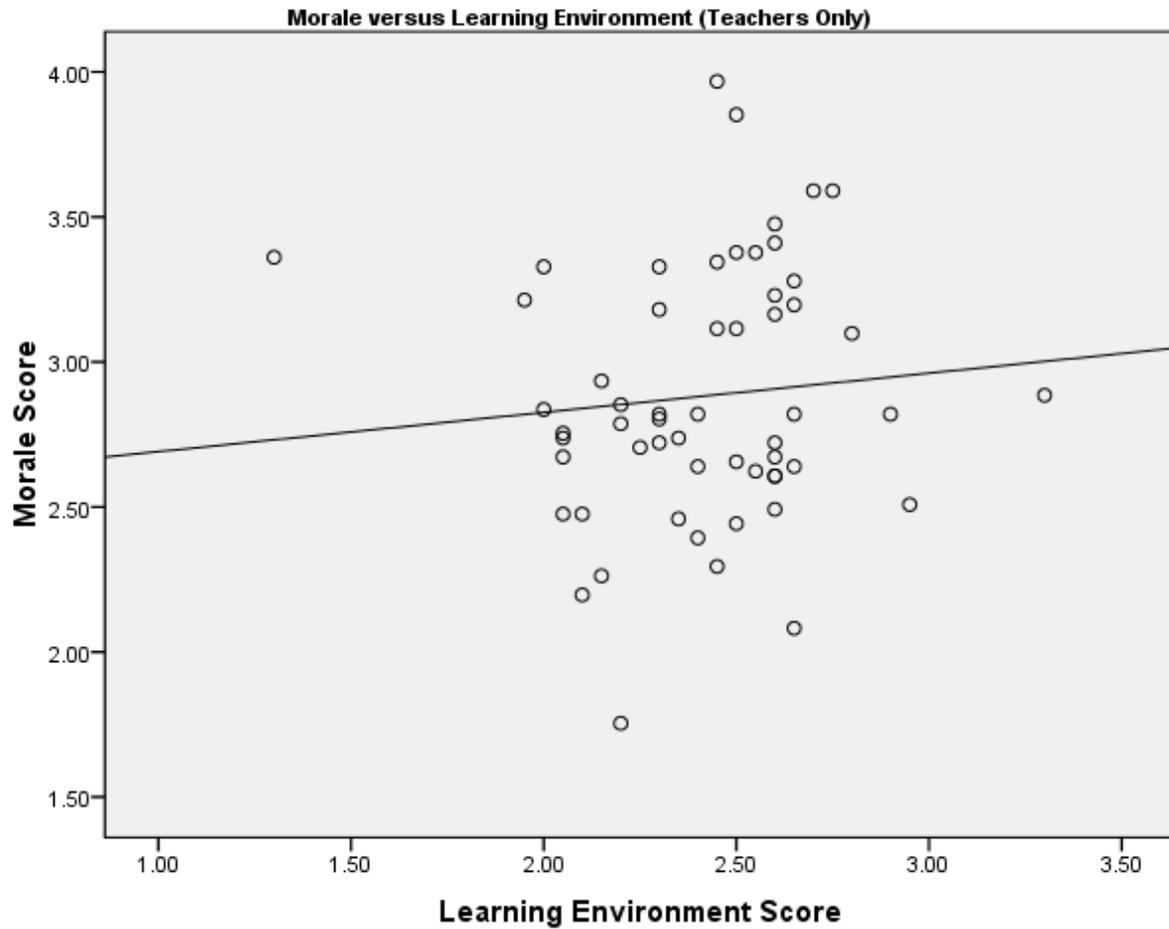


Table 9. Correlations

Please indicate your academic role:			Learning Environment Score
Administrator	Morale Score	Pearson Correlation	-.332
		Sig. (2-tailed)	.008
		N	63
Teacher	Morale Score	Pearson Correlation	.094
		Sig. (2-tailed)	.488
		N	57

Third In-Depth Analysis

In the third in-depth analysis a multiple linear regression analysis tested for an interaction between the learning environment score and role. As indicated in the second in-depth analysis, which showed that administrators had a higher mean learning environment score than teachers, and that there was a correlation between morale and learning environment for administrators but not teachers, therefore, there may be an interaction effect between the learning environment score and role. In other words, the learning environment score may explain the difference in morale between teachers and administrators. It was decided to repeat the regression analysis along with the inclusion of the

interaction between the learning environment score and role. An algebraic equation for the model incorporated the following: $Morale = \text{Morale score} + \text{LES} \times \text{Role}$ (designation for Administrator=1; designation for Teacher=2) $LES \times \text{Role}$ (i.e. the product of LES times ROLE). The model which included the effect of ROLE on morale presented itself as the following algebraic equation: $Morale = 5.71 - 0.92 \times \text{LES} + \text{Role} \times (-1.58 + 0.53 \times \text{LES})$.

Table 10 shows that the learning environment score with $p=0.013$, role with $p=0.013$, and the interaction between the learning environment score and role $p=0.028$, were all statistically significant. In other words, the difference in morale between teachers and administrators depended upon the level of the learning environment score.

Table 10. Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients		
	B	Std. Error	Beta	t	Sig.
1 Constant	5.706	1.003		5.688	.000
Learning Environment Score	-.924	.365	-.833	-2.534	.013
Please indicate your academic role:	-1.575	.623	-1.911	-2.527	.013
LES/Role	.530	.237	1.428	2.231	.028

a. Dependent Variable: Morale Score

Thus, we see that the regression coefficient for ROLE was $(-1.58 + 0.53 \times \text{LES})$ as the regression coefficient for ROLE depended on the value of LES. Basically, if a group of teachers and administrators held an LES score of 1.5, the regression coefficient for ROLE was $(-1.58 + 0.53 \times 1.5) = -0.785$. Therefore if teachers and administrators possessed a learning environment score of 1.5, the mean morale score was expected to be 0.785 points lower for teachers compared to administrators as a result of implementing the designation of 2 for a Teacher. Yet, if a group of teachers and administrators possessed a learning environment score of 3.5, the coefficient for ROLE was $(-1.58 + 0.53 \times 3.5) = 0.275$. Thus, if teachers and administrators held a learning environment score of 3.5, the average morale score would be 0.275 points higher for teachers compared to administrators. (The independent variable of ROLE was increased by one point.)

The model also demonstrates that when the learning environment score was close to 3.0, there was little or no difference in morale between teachers and administrators because when $LES=3.0$, the regression coefficient for ROLE was close to zero, $(-1.58 + 0.53 \times 3.0) = 0.01$. If teachers' and administrators learning environment scores dropped below 3.0, the morale of teachers would become lower than administrators. If the learning environment score of teachers and administrators increased above 3.0, the morale of teachers would become higher than administrators. Table 11 shows that the adjusted R-square was only 0.056. Thus, the learning environment score, role, and the interaction between the learning environment score and role collectively explain only 5.6 percent of the total variance in morale scores.

Table 11. Model Summary

Model	Adjusted R Square
1	.056

a. Dependent Variable: Morale Score

Conclusions

In Canada, throughout the 20th century, there have been periods of collaboration between administrators and teachers' unions, as well as periods of unrest. The Ontario government passed Bill 160, the Education Quality Improvement Act, in December 1997. It removed administrators from teachers' federations in Ontario, Canada, thereby provoking a crisis. An unhealthy gap was set between administrators and teachers, causing a lowering of morale for both. The purpose of this study was to determine if there was a relationship between perceived effects of teachers' union actions on administrators and teachers' roles (independent variables) and administrators' and teachers' morale (dependent variable). Three hypotheses were tested for this study.

The first null hypothesis stated that the average morale score (MOR) is the same for teachers and administrators (ROLE). Hypothesis 1 was tested using a two-sample t-test. The second null hypothesis stated that there is no correlation between the morale score (MOR) and the learning environment score (LES). Hypothesis 2 was tested using Pearson's correlation coefficient. The third null hypothesis stated that when controlling for the learning environment (LE), there is no difference in the level of morale (MOR) between teachers and administrators (ROLE). Hypothesis 3 was tested using multiple linear regression analysis.

In this quantitative study, the Canadian Education Association as well as the Ontario Principals' Council provided voluntary participants to participate in an anonymous survey on the Survey Monkey Web site. The desired sample was based on obtaining at least 50 administrators and 50 teachers to complete the survey. However, it was fortunate to have gained more participants than was needed. The treatment consisted of two questionnaires administered online to the sample group of administrators and teachers. The Teacher-Administrator Morale questionnaire was adapted from the Purdue Teacher Opinionnaire, which Houchard (2005) implemented in her study. The other survey instrument, the Learning Environment Questionnaire, was adapted from practices in the Elementary Teachers Federation of Ontario (2007) handbook. The researcher established validity and reliability was established for both instruments and a pilot project was conducted.

The findings of the study were as follows: Three hypotheses were tested and analyzed. Hypothesis 1 results suggested that the average morale score was the same for teachers and administrators. Therefore, the null hypothesis was not rejected and it was concluded that there was no difference in the average morale score between teachers and administrators. Hypothesis 2 results indicated that there was no correlation between the morale score and the learning environment score. Therefore, the null hypothesis failed to be rejected. In response to hypothesis 3, which stated that when controlling for the learning environment there was no difference in the level of morale between teachers and administrators, the analysis indicated that it was necessary to take into consideration their perception of learning environment factors. The null hypothesis was rejected and it was concluded that when controlling for the learning environment score, on average teachers tended to have a lower morale score than administrators.

Although three hypotheses were analyzed, it was necessary to seek a deeper understanding of the relationships between morale, learning environment, and role. When morale was compared between teachers and administrators without controlling for the learning environment score, as in hypothesis 1, there was no statistically significant difference in morale between teachers and administrators. Yet, when controlling for the learning environment score, as in hypothesis 3, there was a statistically significant difference in morale between teachers and administrators. The interpretation of these findings indicated that the learning environment score impacted on the difference in morale between teachers and administrators. Further, in-depth analysis indicated that when the researcher compared the learning environment score between teachers and administrators, the learning environment score was statistically significantly higher in administrators. Therefore, administrators generally viewed the learning environment factors as impacting negatively; the teachers did not have this perception. The results of the first analysis, comparing the mean learning environment score between teachers and administrators, indicated that there was a statistically significant larger average learning environment score among administrators versus teachers.

In the second in-depth analysis, a comparison was made between the morale score and the learning environment score separately for teachers and administrators. This was to determine how the relationship between morale and learning environment scores might be different for administrators and teachers. Furthermore, as both administrators and teachers possessed different learning environment scores, it was believed that the correlation between morale and the learning environment score might differ as well. The data analysis indicated a statistically significant and fairly strong correlation between the learning environment score and morale on the part of administrators, yet this correlation was not evident with respect to teachers. Thus, administrators who viewed the learning environment as being negatively impacted by the factors in the survey usually had lower morale. Yet, somehow, even if teachers viewed the factors as negatively impacting the learning environment or not impacting the learning environment, they did not perceive their morale as being affected either in a positive or negative manner.

In the final in-depth analysis, interaction between the learning environment score and role was tested. She discovered that the interaction between the learning environment score and role was statistically significant. The difference in morale between teachers and administrators depended on the level of the learning environment score. Administrators and teachers with a learning environment score near 3.0 possessed no difference in morale. However, it was discovered that, generally, teachers had lower morale than administrators where the learning environment score was below 3.0. Among teachers and administrators who perceived the factors to have a more positive impact on the learning environment, administrators tended to have higher morale than teachers whose learning environment scores were higher than 3.0. Among teachers and administrators who perceived the factors to have a more negative impact on the learning environment, administrators tended to have lower morale than teachers.

Interpretation of the Findings

After the three hypotheses were analyzed and further in-depth analysis was conducted, it was discovered that, overall, the difference in morale between administrators and teachers depended on the level of the learning environment score. Administrators viewed the learning environment factors as impacting more negatively on the environment than did teachers. The relationship between the learning environment score and morale score was different for administrators and teachers; administrators who viewed learning environment factors impacting negatively on the learning environment possessed lower morale, while it appeared that teachers were not affected by these

factors. If teachers and administrators viewed the impact of the learning environment factors as a positive versus negative, administrators possessed higher morale than teachers. However, if the impact of the learning environment factors was viewed as negative by administrators and teachers, administrators possessed lower morale than teachers.

The literature was accessed to assist in gaining an understanding of these findings. The theoretical frameworks for this study focused on three theorists: Schön's (1987) learning, reflection, and change theory; Argyris' (1999) organizational learning theory, and Senge's (2000) systems theory. As this study dealt with hypotheses about perceived effects of teachers' union actions on administrators' and teachers' roles and their morale, Argyris' and Schön's double-loop theory as well as Senge's (2006) systems thinking served as theoretical frameworks in understanding the relationship between administrators and teachers' unions.

According to the double-loop theory model, complex problems can be solved by attempting to change underlying values and assumptions. This learning theory questions assumptions and changes them, resulting in different ways of doing things. As a theory of personal change, it focuses on professional education, especially on leadership in organizations. The researcher reflected on the key words "underlying values and assumptions." As the double-loop theory focuses on different ways of doing things, the researcher questioned what might be necessary on the part of administrators or teachers to improve their morale, especially that of administrators. It appeared that the learning environment impacted on the morale of the administrators and yet did not impact at all times on the morale of teachers.

Senge's (2006) systems thinking in a learning organization focuses on the whole versus the individual parts of the organization as critical. Personal mastery which promotes life-long learning, mental models which are ingrained assumptions that influence how we understand the world, shared vision which encourages innovation, and team learning which builds on personal mastery and shared vision constitute the framework of Senge's learning organization. Senge's theoretical framework, similar to the double-loop theory, focuses on different ways of doing things through innovation in a learning organization such as administrators and teachers are involved in.

Based on the three hypotheses and the in-depth analyses, it is believed that the findings of this study reflect Senge's systems thinking—they can begin to be understood through mental models, team learning, personal mastery, and shared vision. Mental models, similar to the assumptions in Schön's double-loop theory, are significant indicators. Perhaps the perceptions of both administrators and teachers could be investigated as a team, provided there was the willingness to do so. As the learning environment does have an impact on morale of administrators, Schön's (1987) *reflection-in-action* and *reflection-on-action* might influence administrators and teachers as they begin to understand the relationship between morale and the learning environment.

Practically speaking, the researcher would hope that the results of the study could be shared with not only administrators and teachers through the Ministry of Education, Ontario Principals' Council, Canadian Education Association, and Elementary Teachers Federation of Ontario, but also with study participants who were interested in the findings, and boards of education throughout Ontario whose leadership teams promote professional learning. Perhaps there might be a discussion of the results in that the morale of administrators was affected negatively by the learning environment factors and yet the teachers' morale was not affected either way by the learning environment factors.

There might need to be an analysis of the specific items on the questionnaires that caused concern for administrators.

Recommendations

The data collected and analyzed during this quantitative survey study was to determine if there was a relationship between perceived effects of teachers' union actions on administrators' and teachers' roles, and administrators' and teachers' morale. From the analysis, it is evident that there was a relationship between perceived effects of teachers' union action on administrators' and teachers' roles and an effect especially on administrators' morale. The learning environment factors were critical in determining the morale of administrators. If administrators perceived the factors to have a negative impact on the learning environment, their morale tended to be lower. However, if administrators perceived the factors to have a more positive impact on the learning environment, they tended to have higher morale than teachers.

In order to discuss tangible improvements not only for individuals, organizations, and the culture not only of Ontario schools but of Canadian schools generally, it is suggested that those involved in education look at a different way of doing things, à la Argyris and Schön's double-loop theory. Perhaps Ontario and Canadian educational institutions need reform, and not in only elementary schools but also in secondary schools and in the colleges of education where teacher training takes place. Perhaps teacher candidates need to be aware of this study as they enter the field of education.

However, one possibility of improvement might be through Urbanski's work in the United States. Urbanski (2003) studied relationships between administrators and teachers' unions, in situations where administrators were attempting to work with the union, not against it. Collaboration was important, as union leaders attempted to partner with and develop trust in working with administrators. Trust and cooperation needed to replace the mistrust and hostile relationships from the past. Unions and management needed to go beyond the traditional bread-and-butter issues, expanding such areas of school reform as student assessment, professional development, and peer evaluation.

Since there has been no similar significant research in Canada on this topic, researchers will appreciate the significance of the data as it pertains to school districts throughout Canada. The theoretical frameworks—Argyris and Schön's double-loop theory and Senge's systems theory—could help educators (including administrators and teachers) and political leaders understand the importance of relationship in the bigger picture of the learning organization. Globally, these theoretical frameworks can apply to any organization where there needs to be a sense of stability.

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