

Teacher Morale and Job Satisfaction in the Special Education Environment

By Shoshana Fader

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## **Abstract**

“Morale and attitude are the fundamentals to success” (Bud Wilkinson, 1916-1994). When you consider morale, some concepts that come to mind are positive culture, collaboration, teamwork, efficiency, balance, progress, respect, training concerns, mentorship, compensation, and improvement. These are all of key importance to increase morale in the workplace. This research was conducted to gain a deeper understanding of the importance of morale and the benefits for teachers, students, and the educational workplace when high positive morale and job satisfaction are reached and maintained. The null hypothesis of this action proposed that there is no single contributor to low morale and job dissatisfaction that seems to be more prevalent than others. In addition, this research also examines whether the key contributors to low morale and job dissatisfaction vary depending on demographics, such as number of years of teaching or age of the individual. A statistical analysis was conducted which resulted in identifying Dissatisfaction with Teacher Salary and Lack of Community Support of Education as the two factors that seem to have the greatest negative effect on morale. An analysis of the demographic differences showed there were statistical differences in morale scores, as well. Due to the Covid-19 pandemic, there were limited number of subjects studied which made it challenging to obtain more definitive results.

# **CHAPTER I**

## **INTRODUCTION**

### **Overview**

There are many contributors to morale, both positive and negative, in the workplace. Korsak (2017) found that when individuals are happy in their workplace, they are both more productive and proficient at work than those who are unhappy. A large contributor to happiness in individuals is their attitude toward their work. According to Blanchard (2000), an expert in leadership, work occupies 75% of an individual's waking time including preparing for work, travel to and from work, planning for work, thinking about work, and actually working. Blanchard surmises that if much of an individual's day is spent with activities related to work, he or she should enjoy it and be energized by it. From the research, the inference can be made that it is important and beneficial for both employees and their workplaces that high morale and job satisfaction are reached and maintained. Rowland (2018) asserts that when individuals in educational leadership positions are aware of, and respond to, factors that affect teacher morale, a positive impact on students' achievement, as well as teacher morale and job satisfaction, result.

In her role as a special educator for over ten years, this researcher became interested in learning more about how workplace morale can impact both educators and student achievement. Many of the researcher's colleagues have entered the field of education and special education exhibiting excitement, dedication, and enthusiasm. Over time, a large number of these individuals have lost their enthusiasm for their work. Their morale plummets, they become dissatisfied with their jobs, and they often move on to multiple other jobs in education or leave the profession entirely. Professionals left behind are affected by this attrition, as it makes their jobs more difficult and results in lower morale for those individuals who stay. This action

research is an attempt to provide greater insight into the problem and suggest some tools to improve morale in the workplace.

### **Statement of the Problem**

Workplace morale is a topic of interest for many researchers. Quite a bit of research has been conducted on morale in the education arena, and specifically in special education. Some of this research is highlighted in Chapter II of this paper. The research indicates that the problem of low morale and lack of job satisfaction in education, and specifically among special educators, is quite common. The reasons for this problem are varied. The literature indicates that high attrition rates are not unusual for special educators. According to Wong, Ruble, Yu, and McGrew (2017), 13% of special educators leave their positions yearly, and 25% leave their positions within the first three years. Although it may appear that low compensation for the nature of the work done was the greatest contributor to low morale and lack of job satisfaction, the literature suggests that there are many contributors that influence morale. These factors include, but are not limited to poorly defined job descriptions, excessive paperwork, minimal positive feedback, limited advancement, and lack of support.

The literature also suggests that the low morale and job dissatisfaction experienced by general educators, special education teachers, assistants, and paraprofessionals have far reaching effects. Besides affecting the individuals themselves, low morale and job dissatisfaction affect the support staff, administration, and most of all, the students. No one factor is emphasized as being more prevalent than any of the others in causing low morale and job dissatisfaction. The intent of this action research is to determine whether there is any one contributor to low morale and job dissatisfaction that seems to be more prevalent than others. In addition, this research also

examines whether the key contributors to low morale and job dissatisfaction vary depending on demographics, such as number of years of teaching or age of the individual.

### **Hypothesis**

The null hypothesis is that there is no one factor of teacher morale which contributes more than others to low morale and job dissatisfaction among special education teachers. All factors of teacher morale contribute equally to educator professionals' morale or lack thereof. In addition, demographic differences do not influence morale.

### **Operational Definition**

This study investigates which, if any, factors that influence teacher morale have the greatest effect on the negative morale and job dissatisfaction of education professionals. The study utilizes the Purdue Teacher Opinionnaire instrument developed by Bentley and Rempel (1968). The factors included in this survey are teacher rapport with the principal, satisfaction with teaching, rapport among teachers, salary, workload, curriculum issues, status, community support, school facilities and services, and community pressure.

For purposes of this study, the operational definitions below were used.

*Teacher attrition* refers to teachers who leave their current school or leave the classroom entirely to enter a profession outside of education.

The *independent variable* in this study included demographics.

*Demographics* refers to characteristics of human populations (such as age or years of teaching) used to identify a group of special education professionals.

The *dependent variables* in this study was identified as employee morale and job satisfaction.

*Employee morale* describes the overall outlook, attitude, satisfaction, and confidence that employees feel at work. When employees are positive about their work environment and believe



that they can meet their most important career and vocational needs, employee morale is positive or high.

*Job satisfaction* is defined as the extent to which an employee feels self-motivated, content and satisfied with his or her job. Job satisfaction occurs when an employee feels he or she is experiencing job stability, career growth, and a comfortable work life balance.

## **CHAPTER II**

### **REVIEW OF THE LITERATURE**

This literature review focuses on research findings regarding the effects of morale and feelings of job satisfaction in the workplace, with emphasis on the educational environment, and in particular, the special education environment. The review first defines morale, job satisfaction, and burnout. Part two of the review discusses the importance of morale in the workplace, including the effect on professionals and students. Negative and positive impacts related to morale are described in part three. Finally, part four offers research-based suggestions for improving morale.

Much of the research that has been conducted related to morale in the special education environment has relied on utilizing self-reported surveys (Emery & Vandenberg, 2010). Emery and Vandenberg (2010) suggest that special educators begin their careers with much enthusiasm, a positive attitude, and a desire to help the students with whom they work. However, these researchers conclude that, over time, many special educators lose their initial enthusiasm, burn out, and often leave the profession.

Based on her review of research related to morale in the special education environment, Pendino (2012) advises that there are several steps that can be taken to increase the morale of special educators. Among the steps recommended are treating staff members well, including staff members in decision-making, and recognizing and rewarding staff members. This literature review examines steps such as those recommended by Pendino.

### **Definition of Morale**

Morale and job satisfaction, though strongly linked, are not entirely similar. Burnout, as described by Emery and Vandenberg (2010), is related to negative morale and job dissatisfaction. This literature review includes a discussion of morale, job dissatisfaction, and burnout.

Hacker (1997) describes morale as an individual's attitude toward their general environment, their work environment including their managers, and their business. According to Hacker, high morale is priceless, and conversely, low morale creates tremendous cost.

Lasseter (2013) in his research states that job satisfaction has two aspects, cognitive and affective. Cognitive aspects of job satisfaction are defined as thoughtful comparison of outcomes to expectations. Affective aspects of job satisfaction refer to the emotional reaction which follows after the outcomes to expectations.

Emery and Vandenberg (2010) describe burnout as a condition that is characterized by symptoms such as emotional exhaustion, depersonalization, and reduced personal accomplishment. These researchers associate burnout with job dissatisfaction. Bousquet (2012) suggests that educators experiencing burnout exhibit low morale, low self-esteem, and physical exhaustion.

Pendino (2012) emphasizes the close relationship between job satisfaction and employee morale, explaining that these entities continually interact and therefore present the illusion of being identical. She explains that employee morale determines employee motivation and has a

direct impact on their performance. She concludes that the literature suggests that job satisfaction affects the morale of employees and their motivation in their workplace.

### **The Importance of Morale in the Workplace**

The importance of morale in the workplace is a focus of the literature examined for this study. In the section that follows, research related to the impact of morale in the workplace will be discussed in terms of the general effect of morale on all employees, the impact of morale on paraeducators, the effect of morale on students, and the impact of morale on teachers and administrators.

#### **General Impacts of Morale on Employees**

Morale impacts organizations in a powerful way. It impacts all employees as a group, and it impacts employees as individuals. Korsak (2017) explains that morale matters because when people are happy, they display an amazing ability to proficiently accomplish more work than an unhappy team. Giangreco, Edelman, and Broer (2001) suggest that workers who experience positive job satisfaction are more productive. Conversely, Pendino (2012) describes how low morale can lead to negative characteristic within the culture of a school.

Employees of organizations in general, and educational organizations in particular, who have high employment morale, exhibit positive characteristics (Pendino, 2012). Pendino (2012) advises that in the workplace, positive morale is very important because it supports employees who are loyal to an organization, who feel they have meaningful goals, and who work together. The subsequent work environment is one of confidence, high self-esteem, and a positive attitude. Further, Pendino states that environments with low morale result in high turnover, employees

who are not interested in their work, and decreased performance, concluding that characteristics of low morale are undesirable in any work environment.

### **Impacts of Morale on Paraeducators (Paraprofessionals)**

Morale and job satisfaction issues are of importance to all who are involved in the education environment, including paraeducators. Giangreco et al. (2001), advise that morale and job satisfaction issues of paraeducators (also referred to paraprofessionals) often have been deemphasized. Initial research related to the morale of paraprofessionals/paraeducators primarily was focused on role clarification and paraeducator interaction with students. Giangreco et al. explain that this focus has changed since paraeducators increasingly have become integrated within the educational setting. These researchers assert that issues of respect, appreciation, and acknowledgement for paraeducators, which are major contributors to their morale, now are being addressed. This focus attempts to identify and improve the atmosphere of the low job satisfaction rate of the paraeducators and to explore solutions that would reduce the attrition rate of the paraeducators. According to Giangreco et al., issues related to lack of respect, training, and support that lead to low morale among paraeducators result in challenges for schools regarding hiring and retraining paraeducators. Negative aspects of job satisfaction such as poorly defined job description, low pay and benefits, limited opportunities for advancement, and undesirable and stressful working conditions are all contributors to the difficulty in finding and retaining good paraeducators. Additionally, Giangreco et al. state that paraeducators are being asked to increase their instructional responsibilities without concomitant compensation. Interestingly, Giangreco et al. note that paraeducators who come from a disadvantaged socio-economic background have high job satisfaction and take pride in their work because of the common background of struggles they have with their students.

In their research, Giangreco et al. (2001) found that although it could be argued that their increasing numbers are an indicator of their perceived importance, as a group, paraeducators may be among the most marginalized employees in schools. This conclusion is supported by findings from the researchers' studies on respect and appreciation. They note findings that many paraprofessionals continue to express feelings of isolation and disrespect. The researchers explain that these feelings are exacerbated by low compensation and expectations that many paraeducators are asked to assume teacher duties without adequate preparation, training, direction, or supervision. Factors can lead to low morale and job dissatisfaction, as well as difficulty in retaining paraeducators. In contrast, Giangreco et al. assert that paraprofessionals who are satisfied with their work and exhibit positive morale offer a positive contribution to an organization as it promotes constructive working relationships, allows for more strategic staffing decisions, and provides continuity for students.

### **Impacts of Morale on Students**

According to Pendino (2012), the morale of teachers has an effect on students. Pendino argues that the attitudes, feelings, and actions of adults within the school affect students in both a positive and negative manner. Pendino asserts that teachers who have positive attitudes about themselves and their work are more effective in meeting the academic and behavioral needs of their students. According to Bousquet (2012) teacher morale has a direct effect on student achievement. As teacher morale increases, student achievement also increases. The higher the teacher morale, the more a student achieves. The teacher's emotional attitude sets the tone for the class.

Jones, Young, and Frank (2013) observe that low morale in novice teachers results in decreased commitment in teachers and impacts the academic achievement of students in a negative way. These researchers assert that teachers who exhibit a lower level of commitment may also demonstrate less effort related to student achievement and overall school goals. Giangreco et al. (2010) observe that staff turnover due to low morale may have a negative effect on student achievement. Wong, Ruble, Yu, and McGrew (2017) state that stress is a main factor in teacher burnout, and that it negatively effects students as well, reducing the quality of engagement between and among teachers and students. Further, these researchers cite emotional exhaustion and depersonalization among teachers as having a negative effect on students and affecting their IEP outcomes.

### **Impacts of Morale on Teachers/Administration**

Pederson (2012) explains that low teacher morale can affect the school culture in a negative manner, with teachers' frustration being a notable factor. Other characteristics demonstrated by teachers with low morale are fear of supervision, insecurity, confusion, futility, lack of confidence, resistance to change, and teacher absences (Pendino, 2012). Pendino (2012) observed that low teacher morale created behavioral reactions such as spitefulness, infighting, bitterness and anger, formation of cliques, lack of consideration for others, and high turnover rate. The teachers who participated in this study by Pendino expressed that the better they were treated, and the more recognition they received, the higher their morale would be.

First-year special education teachers were 2.5 times more likely to leave the profession as teachers in general education (Jones, Young, & Frank, 2013). These researchers noted that committed teachers, those with high morale and job satisfaction, are more likely to stay in their

schools than teachers with lower morale and job satisfaction. Jones et al. (2013) conclude that the lower the morale of the teacher, the less likely that teacher is to stay committed, and the more likely he or she is to leave the teaching position.

Special education teachers experiencing low morale often respond by leaving their jobs (Cancio et al., 2018). Cancio et al. (2018) claim that teachers in the United States are about two times more likely to leave their jobs than other high achieving countries such as Finland, Singapore, and Canada. They report that two-thirds of the teachers who left the teaching profession did so because of job dissatisfaction. The three-year attrition rate for special educators is 25%, and the annual rate of attrition for special educators is twice that of general educators according to Wong et al. (2017). Cancio et al. report that the special educators who decided to remain in their schools were those who had a higher level of job satisfaction as well as time and energy to complete paperwork.

Teachers with low morale have an indirect effect on school administrators in that administrators must address their concerns and respond to ways in which the teachers' low morale affects the school. Emery and Vandenberg (2017) address issues related to the ongoing limited availability of special educators. Among these issues is the problem of attrition (Wong et al., 2017). Wong et al. (2017) cite the expenses associated with teacher attrition as a major problem. In addition to attrition, there is also the issue of absenteeism, reduced job commitment, and decreased job performance (Emery & Vandenberg, 2010). Pendino (2012) also identifies the relationship of low morale in the workplace to excessive employee absences.

## **Issues that Affect Morale in the Workplace**

### **Positive Effects on Morale**



Researchers such as Pittenger et al. (2014), Albrecht, Johns, Mounstevan, and Olorunda, (2009), and Bousquet (2012) have identified some positive elements contributing to high morale in the educational workplace. Pittenger et al. identify one of these positive elements of high morale and job satisfaction as the feeling that comes from taking care of the educational and behavioral needs of children with disabilities. Emery and Vandenberg (2010) state that making a difference in the lives of children with special needs prompted them to become special educators. Teachers who indicated positive job satisfaction, and a commitment to staying in the field, attributed their response to enjoyment in working with students, and working in a positive school climate (Albrecht et al., 2009). Another positive effect on the morale of special educators that has proven effective is the support received from co-workers (Pittenger et al., 2014). The value of a support system has a positive effect on morale and is likely to reduce attrition (Albrecht et al., 2009). When novice educators feel that they are part of their school's professional community, they are more likely to access important resources among their colleagues, which fosters job satisfaction (Jones et al., 2013). Other positive effects on morale that have been experienced by novice educators are access to the materials that are needed, feelings of appropriate level of responsibilities, and belief that the environment was a safe one in which to work (Pittenger et al., 2014). Bousquet (2012) suggests that student progress provides a more powerful reinforcement for positive teacher morale than salary.

### **Negative Effects on Morale**

According to researchers such as Pendino (2012) and Pittenger et al. (2014), among the negative contributors to the morale of special educators and paraprofessionals are lack of respect, lack of support, and workload. Although financial factors are a contributor, they do not appear to be the key factors as reported by Korsak (2017). One negative contributor to special educators'

morale that was identified by Pittenger et al. as a contributor to job dissatisfaction and lower morale is perceived lack of respect received from supervisors. Another contributor to lower morale identified by the researchers was that school administrators were not approachable and were not perceived as being helpful. In contrast to the positive impact of job satisfaction related to supportive environments described above, Albrecht et al. (2009) state that environments which lack support for teachers have a negative effect on morale. Results from surveys of teacher-given reasons for leaving the profession have identified themes such as workload volume and complexity, excessive paperwork, and a negative school climate, as having a great influence on job satisfaction.

Wong et al. (2017) refer to student discipline problems, poor teacher-student relationships, lack of student progress, and diversity of student needs as contributors to low teacher morale, teachers changing jobs, or abandoning the profession entirely. According to research reported by Emery and Vandenberg (2010), increasing workload, broad ranges of disabilities, and fear of physical and verbal abuse are major contributors to low morale and low job satisfaction, contributing to burnout and attrition. Poor student achievement and inappropriate student behavior are cited by Bousquet (2012) as additional factors contributing to low morale and chronic stress. Additionally, Bousquet states that environmental factors such as lack of the proper teaching tools, lack of technology, crumbling buildings, lack of proper heating and cooling may also contribute to teacher burnout and low morale.

Pedino (2012) found that although teachers in their study enjoyed their job, a source of stress and dissatisfaction was lack of feedback and communication, inequity in workload, increasing demands, lack of respect for teachers' time, lack of fun, and lack of opportunities for creativity. Other contributors to negative morale and job dissatisfaction in Pedino's study were

lack of recognition of accomplishments, lack of encouragement of creativity, and staff-member input, lack of team-building activities, and a focus on the negative rather than the positive. Research conducted by Albrecht et al. (2009) indicates that the amount of paperwork to be done was reported as a critical factor in the employment decisions of special education teachers to leave their positions.

Jones et al. (2013) offer additional insight regarding factors contributing to negative morale and low job satisfaction among special educators. These factors include the perception that the messages educators received regarding their instructional practices often were ambiguous. In their study, Jones et al. stated that little guidance is received as to how the teachers should manage daily routines and tasks specific to special education. In addition, completing administrative paperwork such as IEPs for special education students, takes much more time than is allotted and is a major factor in special education teachers leaving the profession. These factors and others reduce the commitment special education teachers, especially novice teachers, have for their institutions.

Job burnout is another major factor in job satisfaction and morale. Pittenger et al. (2014) suggest that some impacts to burnout and stress are a practitioner's lack of knowledge, limited involvement in decision making, inadequate access to resources, and a lack of clarity of a practitioner's role. This research identified the major-contributor to low morale as the lack of incentives provided throughout the school year and the inability to achieve professional goals. Bousquet (2012) reflects that the inability to achieve professional goals may result in feelings of career incompetence and personal value among educators.

### **Strategies to Improve Morale**

As discussed above, morale and job satisfaction have a major impact on the day-to-day school environment, especially in the special education environment. Studies such as those reported by Korsak (2017), Pendino (2012), and Bousquet (2012) have incorporated strategies to improve morale and offer results for consideration. The literature offers suggestions on ways to improve morale such as those reported below.

In the literature reviewed, limited financial compensation, although it affects morale negatively, is not included as a key factor as a way of improving morale. Korsak (2017) states that though people may think that money is a powerful reward, it is not as powerful a reward as we would imagine. Pittenger et al. (2014) suggest that the most desired incentives to job satisfaction are more socially directed. Some suggestions they provide for socially directed incentives are social activities, staff recognition events, and special treats such as free lunches on particularly difficult days. Pendino (2012) reflects that educational staff are interested in social activities as ways to improve morale. Bousquet (2012) recommends providing opportunities for socializing that can support development of a sense of community, noting that novice teachers who feel that they are part of their school's professional community are more likely to reach out to their colleagues for support. In addition, if there is collective responsibility, there seems to be more commitment to the school (Jones et al., 2013).

In Pendino's (2012) research, the staff suggested activities that promoted socialization and comradery among staff, fun activities, activities centered around food, and recognition activities. Some staff activity suggestions were to emphasize the positive rather than the negative within the building, providing more opportunities for teachers to observe other teachers in the classroom, creating fun and motivational activities for the staff, and rewarding staff members. The staff also suggested student centered activities such as adding fun assemblies and special

programs for students as well as improving the student reward and recognition system. Another demonstration that social activities are critical is the finding reported by Jones et al. (2013) that strong work relationships among colleagues, as well as school organizational norms experienced, are critical for the beginning teachers.

Korsak (2017) advises that to maximize productivity, increase morale, and bring order to chaos, school direction should include the need to clearly define the organizational tasks and who is going to accomplish them. Korsak states that this also can result in ensuring the work is timely accomplished by the appropriate person. Additionally, Korsak reflects that administrators can offer verbal praise that is specific, candid, and timely.

With regard to moral issues related to paraprofessionals, research reported by Giangreco et al. (2010) indicates areas to address which would provide feelings of value, positive job satisfaction, and high morale. These areas are signs of appreciation not related to compensation, being given important instructional and non-instructional responsibilities, the feeling of being listened to, orientation and support, and adequate compensation. Giangreco et al. reflect that paraprofessionals are seeking respect, appreciation, and recognition of what they contribute.

A key factor in positive morale in the workplace is strong leadership. Strong leadership helps to create and maintain environments that foster positive morale. Leaders of an organization can take positive steps to attain and maintain positive morale. Some of these steps are for leaders to be decisive, manage relationships, establish structure, and balance risk (Korsak, 2017).

## **Conclusion**

Individuals who choose special education as a career, whether teachers, assistants, or paraprofessionals, do so with great anticipation. These individuals plan to help their students'

progress and thrive. Unfortunately, many of these professionals lose their enthusiasm and burn out quickly. This lack of enthusiasm and decline in morale is due, to a great extent, not because of the direct experience with the students, but rather because of the non-student related aspects of the job, and the attitudes of the administrators around them. Decline in morale of the educators and paraprofessionals has a direct effect on the students as well as the organization. With some adjustments in organizational environments, morale of the educators and their assistants can be improved, resulting in a happier educational environment, more successful students, and a more efficiently managed organization.

## **CHAPTER III**

### **METHODS**

#### **Design**

The purpose of this study was to determine whether any particular contributing factor to teacher morale affects special education professionals more than others. In addition, the study was also conducted to determine whether the demographics of an individual contribute to teacher morale. The independent variable in the study was teacher demographics, and the dependent variable was factors contributing to teacher morale. The research considered ten different factors which are described below. Initially, the study was intended to be conducted with participants who are special education professionals working in one school but later was adjusted due to the time constraints needed to obtain permission to survey the professionals in that school.

This is a descriptive study as it reflects the current perceptions of the study participants. The research used self-report data obtained through use of a survey. The survey was a paper and pencil instrument that was completed by students enrolled in special education courses in a graduate school classroom setting. The survey used was the Purdue Teacher Opinionnaire (PTO), with some added demographic identifiers (see Appendix I). The study was conducted in late February and early March of 2020. The number of participants was limited due to the outbreak of Covid-19 and the closure of the schools.

The results of the research will be used to determine which factors related to morale might be addressed first in the researcher's work environment for purposes of improving the morale of the special education professionals in that environment.

## **Participants**

The participants in this study were all graduate school students at one university in Maryland. In total there were 23 participants. There were 18 female respondents and five male respondents. Of the respondents, 14 were age 34 or younger, and nine were 35 or older. There were 18 participants who taught in a public-school setting, while one participant taught in both public and private school settings, and four taught in a non-school setting. Of the participants, nine were novice teachers with less than three years of teaching experience, while 14 were experienced teachers with three or more years of teaching experience. As mentioned above, the students were chosen based on the graduate classes in which they were enrolled. The study participants were identified using a convenient sampling technique. However, the actual number of surveys administered was reduced due to the closure of the school due to the Covid 19 epidemic. The recommendations of which classes to include in the study were made by the Special Education Department Chair of the institution in which students were enrolled. All of the participants surveyed were in a face-to-face classroom setting, not in an independent study or online class setting.

## **Instrument**

The instrument used in the study was the Purdue Teacher Opinionnaire with some demographic questions added (see Appendix I). The Purdue Teacher Opinionnaire is a validated survey and is included and reviewed in the Mental Measurement Yearbook (1972). The reviewers discuss its reliability (adequate and fair) and validity (needs stronger support). Since its development in the 1960s, the Purdue Teacher Opinionnaire has been used extensively over many years, in many studies, including in doctoral research by such researchers as Hunter-Boykin and Evans in 1995, Bhella in 2001, and Houchard in 2005 (Rowland, 2008). Permission



is no longer needed to use the PTO because the copyright protection has expired (Houchard, 2005). This instrument was chosen to measure the factors which contribute to teacher morale. There are 100 items in the Purdue Teacher Opinionnaire, surveying ten different dimensions that contribute to morale. The following is a brief description by Bentley and Rempel (1980) of these ten dimensions. Questions within the survey related to these to dimensions.

1. Teacher Rapport with Principal deals with the teacher's opinion about the principal, whether the teacher feels that the principal is competent, is interested in his/her staff and their work, is a good communicator, and has good human relations skills.
2. Satisfaction with Teaching deals with a teacher's feelings of satisfaction with teaching and the teacher's relationships with students. This factor indicates that a high morale teacher feels competent in doing the job, enjoys the job and believes in the future of teaching as an occupation.
3. Rapport among Teachers focuses on the relationship between teachers. The questions related to this factor ask a teacher's opinion regarding the teacher's peers. Questions are related to cooperation, preparation, ethnics, influence, interests, and competency of other teachers s/he works with.
4. Teacher Salary primarily deals with how a teacher feels about salary policies and actual salaries. Questions consider fairness of teacher policy administration, teacher participation in the development of policies, whether compensation is based on competency, and whether compensation comparable to that of other school systems.

5. Teacher Load deals with activities outside of the actual classroom. These activities include record-keeping, clerical administrative work, "red tape," extra-curricular and community expectations on a teacher's time, and professional continuing education.
6. Curriculum Issues seeks teacher opinions as to whether or not the school program is adequate and appropriate for the needs of the students. Questions relate to whether or not the school program allows for individuality and if it prepares students to become active and effective members of society.
7. Teacher Status focuses on prestige of the teaching profession and how teachers are accepted within the community. It emphasizes feelings of prestige, security, and benefits afforded by teaching.
8. Community Support of Education deals with the willingness of the community to support a practical and reliable educational program.
9. School Facilities and Services relates to whether teachers feel they have adequate facilities to do their job, whether they have enough supplies, the proper equipment, and if the procedures to obtain the equipment, materials, and services are efficient.
10. Community Pressures focuses on community expectations and restrictions of teachers' personal standards and behavior. It includes participation in outside-school activities, and the freedom to discuss controversial issues in the classroom.

The questions within the PTO instrument are in no particular order and are not grouped by factors. Table 14 in Appendix I indicates the correlation between the questions and the dimensions listed above.

The PTO uses a four-point Likert-type scale. The scale measures whether the participant (1) disagrees, (2) probably disagrees, (3) probably agrees, or (4) agrees with the statement. The statements have been worded in such a way that disagreement (1) with the statement represents low morale and agreement (4) with the statement represents high morale. Scores for each factor were created by adding all of the responses to the items within a factor (as described in Appendix I Table 14).

As stated above, the PTO is reviewed in the Mental Measurement Yearbook (1972). Total score reliability is reported as .87, while individual factor scores have reliabilities ranging from .62 (community pressures) to .88 (teacher rapport with principal). The median reliability coefficient for the 10 factor scores is approximately .80.

To the Perdue Teacher Opinionnaire, the researcher added demographic questions, the independent variables, in order to facilitate the grouping of the respondents.

### **Procedure**

The pool of participants for this study was identified by the head of the Special Education Department of the university in which the study was conducted. The head of the Special Education Department provided the researcher with a list of classes which were possible candidates for the survey. The researcher contacted the teacher in each of the classes requesting permission to survey the class. For those classes where permission was granted, an appointment was made for the researcher's visit. The researcher visited each classroom approximately 30 minutes before the end of class, quickly introduced the survey as a research study for a Masters' of Teaching (MAT) graduate paper and asked the students to complete the survey to the best of their ability. She told the students that she did not want to provide any more information because she wanted them to be objective, and she told them that the survey was anonymous. The

researcher intentionally did not tell the participants the nature of her research, her hypothesis, or her problem statement, as she did not want to influence the participants in any way. Participants who were enrolled in more than one of the classes surveyed, took the survey only once. The students then were given a hard copy of the survey and given as much time as needed to complete the survey. Following completion of the survey, participants returned the questionnaire to the researcher and left the class. On average, each participant took approximately 15-20 minutes to complete the survey.

## **CHAPTER IV**

### **RESULTS**

#### **Overview**

As stated in the earlier chapters, the purpose of this study was to determine whether any particular contributing factor to teacher morale affects special education professionals more than others. The morale factors examined in this study were outlined in Chapter III. The research also attempted to study whether the demographics of an individual have an effect on which morale factors may contribute more or less to that individual's teacher morale. The demographics studied were age, gender, race, level taught, years teaching, type of school, type of program, and individual job category. The results of the survey are presented in this chapter. First, the results will be presented without taking demographics into account, and then the results will be presented by looking at each of the demographic categories studied.

The results include the total respondents who answered all of the questions for a factor, the mean for the factor, and the standard deviation. There was a total of 23 participants in the study. If the factor being studied had ten questions and only 20 respondents answered all ten questions, then only 20 responses were considered for that factor. Each survey was compiled and entered into a statistical software for analysis. Each factor has a potential mean range score of one to four. Table 1 shows the mean score of Teacher Morale and its definition, as it is used in this research paper.

Table 1

*Guideline for Understanding the Means of Teacher Morale Factors for the PTO*

<b>Mean Score of Teacher Morale</b>	<b>Teacher Morale Definition</b>
1.00 – 1.25	Very Low Teacher Morale
1.26 – 1.75	Low Teacher Morale
1.76 – 2.25	Moderately Low Teacher Morale
2.26 – 2.75	Moderate Teacher Morale
2.76 – 3.25	Moderately High Teacher Morale
3.26 – 3.75	High Teacher Morale
3.76 – 4.00	Very High Teacher Morale

**Purdue Teacher Opinionnaire (PTO): Measuring Teacher Morale**

The respondents, mean, and standard deviation for the PTO, not separated by demographics, are presented in Table 2. In the total score for each factor, Factor 2: Satisfaction with Teaching, returned the highest score, 3.16, with 18 individuals responding to all of the questions related to that factor. For all demographics, this factor also demonstrated the most consistency, as it had the smallest standard deviation, .38. Factor 4: Teacher's Salary, returned the lowest mean score, 2.24, with 19 respondents to all of the questions in that factor. Factor 6: Curriculum Issues, with 21 respondents demonstrated the largest discrepancy among responses, with a standard deviation of .79.

Table 2

*Purdue Teacher Opinionnaire Demographics Not Considered*

<b>Factor</b>	<b>Fac 1</b>	<b>Fac 2</b>	<b>Fac 3</b>	<b>Fac 4</b>	<b>Fac 5</b>	<b>Fac 6</b>	<b>Fac 7</b>	<b>Fac 8</b>	<b>Fac 9</b>	<b>Fac 10</b>
<b>Respondents</b>	19	18	17	19	15	21	20	20	21	20
<b>Mean</b>	2.81	3.16	2.96	2.24	2.59	2.45	2.61	2.36	2.69	2.71
<b>SD</b>	0.58	0.38	0.56	0.56	0.65	0.79	0.54	0.68	0.59	0.49

**PTO: Measuring Teacher Morale by Age**

The respondents, mean, and standard deviation for the PTO which compare morale by age group are presented in Table 3. The scores are broken down by factor, for those respondents who are under 35 and those respondents 35 and older. There was a total of 14 individuals surveyed who were under 35 years of age and nine who were 35 or older, but not all respondents answered all of the questions for each factor. For those in the under 35 age group, Factor 2: Satisfaction with Teaching, returned the highest mean score, 3.11, with 11 individuals responding to all of the questions related to that factor. For this group, this factor also had the highest consistency among scores, with a standard deviation of .28. For those in the 35 or over age category, Factor 3: Rapport Among Teachers, had a slightly higher morale score of 3.29 than Factor 2: Satisfaction with teaching, 3.24. The factor with the most consistency among scores for the 35 and over respondents was Factor 7: Teacher Status, with a standard deviation of .33. For this group, Teacher Status was sixth in morale score scale. Factor 4: Teacher's Salary, returned the lowest mean score, for both age groups, 2.23 for the under 35 age group, and 2.27 for the 35 and over age group. The consistency measure was slightly lower for the over 35 age group, with a standard deviation of .65 as compared to the under 35 age group with a standard deviation of .52.

Table 3

*Purdue Teacher Opinionnaire Demographics by Age of Participant*

<b>Factor</b>	<b>Fac 1</b>	<b>Fac 2</b>	<b>Fac 3</b>	<b>Fac 4</b>	<b>Fac 5</b>	<b>Fac 6</b>	<b>Fac 7</b>	<b>Fac 8</b>	<b>Fac 9</b>	<b>Fac 10</b>
<b>&lt; 35</b>										
<b>Respondents</b>	12	11	11	12	9	13	12	12	13	13
<b>Mean</b>	2.81	3.11	2.79	2.23	2.44	2.40	2.57	2.40	2.72	2.68
<b>SD</b>	0.62	0.28	0.58	0.52	0.69	0.84	0.66	0.66	0.59	0.44
<b>= &gt; 35</b>										
<b>Respondents</b>	7	7	6	7	6	8	8	8	8	7
<b>Mean</b>	2.81	3.24	3.29	2.27	2.82	2.53	2.66	2.30	2.62	2.77
<b>SD</b>	0.56	0.51	0.36	0.65	0.55	0.74	0.33	0.76	0.61	0.60

**PTO: Measuring Teacher Morale by Sex**

The respondents, mean, and standard deviation for the PTO which compare morale by sex are presented in Table 4. The scores are broken down by factor, by sex (male and female). There was a total of five males and 18 females who participated in the survey, but only the respondents who answered all of the questions were counted. Factor 2: Satisfaction with Teaching returned the highest score for both males and females, 3.23 and 3.14 respectively, with four males and 14 females responding to all of the questions related to this factor. For the females, this factor also had the highest consistency among scores, with a standard deviation of .36. For males, the highest consistency was Factor 3: Rapport among Teachers, where the standard deviation was .12, though the morale score for this factor was lower than three other



morale factors. Factor 4: Teacher's Salary, returned the lowest mean score, for females, 2.18, but Factor 5: Teacher Load returned the lowest mean score for males.

Table 4

*Purdue Teacher Opinionnaire Demographics by Sex of Participant*

<b>Factor</b>	<b>Fac 1</b>	<b>Fac 2</b>	<b>Fac 3</b>	<b>Fac 4</b>	<b>Fac 5</b>	<b>Fac 6</b>	<b>Fac 7</b>	<b>Fac 8</b>	<b>Fac 9</b>	<b>Fac 10</b>
<b>Male</b>										
<b>Respondents</b>	4	4	4	4	4	4	4	4	4	4
<b>Mean</b>	3.19	3.23	2.95	2.46	2.36	2.50	2.91	2.75	3.15	2.90
<b>SD</b>	0.45	0.48	0.12	0.76	0.77	0.53	0.66	0.34	0.44	0.48
<b>Female</b>										
<b>Respondents</b>	15	14	13	15	11	17	16	16	17	16
<b>Mean</b>	2.71	3.14	2.97	2.18	2.68	2.44	2.53	2.26	2.58	2.66
<b>SD</b>	0.58	0.36	0.64	0.50	0.61	0.85	0.51	0.72	0.57	0.49

**PTO: Measuring Teacher Morale by Race**

The respondents, mean, and standard deviation for the PTO which compare morale by race are presented in Table 5. The scores are broken down by factor, by race, Caucasian and other (other races were grouped together because the sampling was small). There was a total of 16 individuals surveyed who were white and seven who fell into the other category (two Hispanic/Latino, and five African American), but not all respondents answered all of the questions for each factor. For all of the respondents, Factor 2: Satisfaction with Teaching returned the highest score, 3.18 for the Caucasians, with 14 individuals responding to all of the questions related to that factor, and 3.09 for all of the other respondents, with four individuals

responding. This factor also had the highest consistency among scores, with a standard deviation of .40 for Caucasians and .31 for the other responders. Factor 4: Teacher's Salary, returned the lowest mean score for the Caucasian group, 2.26, and Factor 8: Community Support of Education, returned the lowest mean score for the other group, 2.17.

Table 5

*Purdue Teacher Opinionnaire Demographics by Race*

<b>Factor</b>	<b>Fac 1</b>	<b>Fac 2</b>	<b>Fac 3</b>	<b>Fac 4</b>	<b>Fac 5</b>	<b>Fac 6</b>	<b>Fac 7</b>	<b>Fac 8</b>	<b>Fac 9</b>	<b>Fac 10</b>
<b>White</b>										
<b>Respondents</b>	14	14	13	14	12	15	14	14	15	15
<b>Mean</b>	2.84	3.18	2.93	2.26	2.51	2.37	2.55	2.44	2.69	2.60
<b>SD</b>	0.63	0.40	0.62	0.46	0.59	0.88	0.49	0.68	0.66	0.41
<b>Non- White</b>										
<b>Respondents</b>	5	4	4	5	3	6	6	6	6	5
<b>Mean</b>	2.74	3.09	3.05	2.20	2.94	2.63	2.73	2.17	2.67	3.04
<b>SD</b>	0.48	0.31	0.38	0.84	0.86	0.48	0.69	0.71	0.37	0.59

**PTO: Measuring Teacher Morale by Grades Being Taught**

The respondents, mean, and standard deviation for the PTO which compare morale by the grades being taught are presented in Table 6. The scores are broken down by factor, for those respondents who teach lower grades (elementary and middle school) and those respondents who teach upper grades (high school). There was a total of 13 individuals surveyed who taught lower grades (seven in elementary and six in middle school) and ten respondents who worked with high school students, but not all respondents answered all of the questions for each factor. Factor

2: Satisfaction with Teaching, returned the highest score for both groups, 3.25 for those teachers working in lower schools, with ten individuals responding, and 3.06 for those teachers working in upper schools, with eight individuals responding. This factor also had the highest consistency among scores, with a standard deviation of .37 for the lower school teacher respondents and .38 for the upper school teacher responders. Factor 4: Teacher's Salary, returned the lowest mean score, for the upper school group, 2.02. Factor 8: Community Support for Education returned the lowest mean for the lower school group, 2.33, with Factor 4: Teacher's Salary, second lowest with a mean of 2.40.

Table 6

*Purdue Teacher Opinionnaire Demographics by Grade Taught*

<b>Factor</b>	<b>Fac 1</b>	<b>Fac 2</b>	<b>Fac 3</b>	<b>Fac 4</b>	<b>Fac 5</b>	<b>Fac 6</b>	<b>Fac 7</b>	<b>Fac 8</b>	<b>Fac 9</b>	<b>Fac 10</b>
<b>Lower (Elementary + Middle School)</b>										
<b>Respondents</b>	11	10	9	11	7	12	11	11	12	12
<b>Mean</b>	2.80	3.25	2.98	2.40	2.60	2.63	2.67	2.33	2.58	2.68
<b>SD</b>	0.61	0.37	0.70	0.46	0.54	0.89	0.59	0.68	0.65	0.56
<b>Upper (High School)</b>										
<b>Respondents</b>	8	8	8	8	8	9	9	9	9	8
<b>Mean</b>	2.82	3.06	2.95	2.02	2.59	2.20	2.53	2.40	2.82	2.75
<b>SD</b>	0.58	0.38	0.40	0.63	0.76	0.58	0.50	0.72	0.49	0.40

**PTO: Measuring Teacher Morale by Experience**

The respondents, mean, and standard deviation for the PTO which compare morale by the number of years a participant had been teaching are presented in Table 7. The scores are broken

down by factor, for those respondents who have been teaching for less than three years (novices), and respondents who have been teaching for three years or more (experienced). There was a total of nine individuals surveyed who have been teaching for fewer than three years and 14 individuals who had been teaching for three years or more. Not all respondents answered all of the questions for each factor. Factor 2: Satisfaction with Teaching, returned the highest score for both groups, though the mean for the novice teachers, with six responding, was significantly lower, at 2.98, than the mean for the experienced teachers, with 12 responding, at 3.25. This factor had the highest consistency among both groups, with a standard deviation of .30 for the novice teachers and .39 for the experienced teachers. Factor 4: Teacher's Salary, returned the lowest mean score for the experienced teachers, 2.23. Though the mean score for Factor 4 for the novice teachers was not much higher, 2.27, Factor 6: Curriculum Issues had the lowest mean score for the novice teachers, at 2.17, and Factor 8: Community Support for Education had the next lowest with a mean score of 2.23. Curriculum Issues had the highest standard deviation of .98, which may imply that one or two individuals could have significantly reduced the mean. Factor 8: Community Support of Education had the next lowest mean score for the experienced teachers, with a mean score of 2.41 with 14 respondents.

Table 7

*Purdue Teacher Opinionnaire Demographic by Number of Years in Education*

<b>Factor</b>	<b>Fac 1</b>	<b>Fac 2</b>	<b>Fac 3</b>	<b>Fac 4</b>	<b>Fac 5</b>	<b>Fac 6</b>	<b>Fac 7</b>	<b>Fac 8</b>	<b>Fac 9</b>	<b>Fac 10</b>
<b>Novice (&lt;3 Years)</b>										
<b>Respondents</b>	7	6	6	7	5	7	7	6	7	7
<b>Mean</b>	2.67	2.98	2.81	2.27	2.47	2.17	2.54	2.23	2.63	2.74
<b>SD</b>	0.60	0.30	0.72	0.46	0.88	0.98	0.70	0.63	0.74	0.43
<b>Experienced (&gt;= 3 Years)</b>										
<b>Respondents</b>	12	12	11	12	10	14	13	14	14	13
<b>Mean</b>	2.89	3.25	3.05	2.23	2.65	2.59	2.64	2.41	2.71	2.69
<b>SD</b>	0.58	0.39	0.47	0.62	0.54	0.67	0.47	0.72	0.52	0.53

**PTO: Measuring Teacher Morale by Type of School**

The respondents, mean, and standard deviation for the PTO which compare morale by the type of school a participant teaches in are presented in Table 8. The scores are broken down by factor for those respondents who teach in public schools and those who teach in other environments. There was a total of 18 individuals surveyed who teach in public schools and five who teach in other environments. Not all respondents answered all of the questions for each factor. Factor 2: Satisfaction with Teaching, returned the highest score for those teaching in public schools, with a mean of 3.24, 13 respondents, and a high consistency, with the lowest standard deviation of, .39. Factor 9: School Facilities and Services, returned the highest score for those teaching in other schools, with a mean of 3.24, 5 respondents, and a high consistency, with the lowest standard deviation of, .26. Factor 4: Teacher's Salary, returned the lowest mean

score, for both groups, 2.33 for respondents who teach in public school, and 2.00 for teachers who teach in other environments. Factor 6: Curriculum Issues, had the next lowest mean score for the public school teachers, with a mean score of 2.58 and 16 respondents, while Factor 8: Community Support of Education, had the next to lowest mean score for teachers who work in non-public school environments, with a mean score of 2.24 and 5 respondents.

Table 8

*Purdue Teacher Opinionnaire Demographics by Type of School*

<b>Factor</b>	<b>Fac 1</b>	<b>Fac 2</b>	<b>Fac 3</b>	<b>Fac 4</b>	<b>Fac 5</b>	<b>Fac 6</b>	<b>Fac 7</b>	<b>Fac 8</b>	<b>Fac 9</b>	<b>Fac 10</b>
<b>Public</b>										
<b>Respondents</b>	14	13	13	14	11	16	15	15	16	15
<b>Mean</b>	2.84	3.24	2.99	2.33	2.60	2.38	2.67	2.40	2.51	2.69
<b>SD</b>	0.56	0.39	0.59	0.56	0.58	0.79	0.54	0.68	0.55	0.49
<b>Other</b>										
<b>Respondents</b>	5	5	4	5	4	5	5	5	5	5
<b>Mean</b>	2.74	2.96	2.86	2.00	2.57	2.68	2.40	2.24	3.24	2.76
<b>SD</b>	0.69	0.29	0.51	0.51	0.90	0.81	0.55	0.74	0.26	0.54

**PTO: Measuring Teacher Morale by Type of Program**

The respondents, mean, and standard deviation for the PTO which compare morale by the type of program a participant teaches in, are presented in Table 9. The scores are broken down by factor, for those respondents who teach in a general education program and those who teach in a special education program. There was a total of 13 individuals surveyed who teach in a general education program and ten individuals who teach in a special education program. Not all

respondents answered all of the questions for each factor. Factor 2: Satisfaction with Teaching, returned the highest score for those teaching in a general education program, with a mean of 3.29, 11 respondents, and a high consistency, with the lowest standard deviation of, .37. Factor 9: School Facilities and Services, returned the highest mean score for those teaching in special education programs, with a mean of 2.98 and 8 respondents. Factor 2: Satisfaction with Teaching, came in at a very close second for this group, with a mean score of 2.96 and 7 respondents. Factor 4: Teacher's Salary, returned the lowest mean score, for those teachers in special education programs, with a mean of 2.16. This factor's mean score was only slightly higher, at 2.30 than Factor 6: Curriculum Issues at 2.29 for respondents who teach in general education programs. Factor 8: Community Support of Education, had the next lowest mean score for teachers who work in a special education program, with a mean score of 2.30 and eight respondents.

Table 9

*Purdue Teacher Opinionnaire Demographics by Type of Program*

<b>Factor</b>	<b>Fac 1</b>	<b>Fac 2</b>	<b>Fac 3</b>	<b>Fac 4</b>	<b>Fac 5</b>	<b>Fac 6</b>	<b>Fac 7</b>	<b>Fac 8</b>	<b>Fac 9</b>	<b>Fac 10</b>
<b>General Ed</b>										
<b>Respondents</b>	11	11	10	11	10	13	12	12	13	12
<b>Mean</b>	2.88	3.29	3.03	2.30	2.59	2.29	2.62	2.40	2.51	2.67
<b>SD</b>	0.59	0.37	0.66	0.62	0.61	0.85	0.53	0.71	0.59	0.50
<b>Special Education (Other)</b>										
<b>Respondents</b>	8	7	7	8	5	8	8	8	8	8
<b>Mean</b>	2.72	2.96	2.87	2.16	2.60	2.70	2.58	2.30	2.98	2.78
<b>SD</b>	0.59	0.32	0.41	0.49	0.79	0.63	0.60	0.68	0.47	0.49

### **PTO: Measuring Teacher Morale by Job Classification**

The respondents, mean, and standard deviation for the PTO which compare morale by the type of job category a participant teaches in, are presented in Table 10. The scores are broken down by factor, for those respondents who are general education teachers and those who are special education teachers. There was a total of 11 individuals surveyed who are general education teachers and 12 individuals who are special education teachers. Some of the special education teachers teach in general education programs. Not all respondents answered all of the questions for each factor. Factor 2: Satisfaction with Teaching returned the highest score for both groups of teachers. The general education teachers, with 11 respondents, returned a mean score of 3.29 and a standard deviation of .37, which was the lowest standard deviation for all factors, for this group. The special education teachers, with seven respondents, returned a mean score of 2.96 and a standard deviation of .32, which was also the lowest standard deviation for all factors, for this group. Factor 9: School Facilities and Services, had the second highest mean score for special education teachers, with a mean score of 2.90, with ten respondents, while Factor 3: Rapport Among Teachers, had the second highest mean score for general education teachers, with a mean score of 3.03, with ten respondents. Factor 4: Teacher's Salary, returned the lowest mean score, for special education teachers, with a mean of 2.16. This factor's mean score was only slightly higher, at 2.30 than Factor 6: Curriculum Issues, at 2.22 and Factor 8: Community Support of Education, at 2.24 for general education teacher respondents. Factor 8: Community Support of Education, had the next lowest mean score for special education teachers, with a mean score of 2.48 and ten respondents.



Table 10

*Purdue Teacher Opinionnaire Demographics by Job Classification*

<b>Factor</b>	<b>Fac 1</b>	<b>Fac 2</b>	<b>Fac 3</b>	<b>Fac 4</b>	<b>Fac 5</b>	<b>Fac 6</b>	<b>Fac 7</b>	<b>Fac 8</b>	<b>Fac 9</b>	<b>Fac 10</b>
<b>General Ed</b>										
<b>Respondents</b>	11	11	10	11	10	11	11	10	11	11
<b>Mean</b>	2.88	3.29	3.03	2.30	2.59	2.22	2.61	2.24	2.49	2.64
<b>SD</b>	0.59	0.37	0.66	0.62	0.61	0.91	0.55	0.64	0.64	0.51
<b>Special Ed</b>										
<b>Respondents</b>	8	7	7	8	5	10	9	10	10	9
<b>Mean</b>	2.72	2.96	2.87	2.16	2.60	2.70	2.60	2.48	2.90	2.80
<b>SD</b>	0.59	0.32	0.41	0.49	0.79	0.58	0.56	0.73	0.45	0.47

**Summary**

The results presented in this chapter from the surveys collected from the teachers attending various classes in the university graduate program provided some insight into the areas that the teachers are satisfied with and those areas that need to be addressed in order to raise their morale and create a more content and satisfying working environment. All 16 demographic groups in the survey consider that their satisfaction with teaching contributes a sense of, at a minimum, a moderately high morale (between 2.96 and 3.25) at work. Of those 16 demographic groups, two groups, those who are general education teachers and those who teach in general education programs (most of the same respondents) consider satisfaction with teaching a higher contributor to their morale at work. Teachers 35 years or older consider their positive relationships and cooperation with their peers to be a high contributor to their positive morale.

Teachers teaching in a non-public school environment, and teachers who are special education teachers consider school facilities and access to supplies the factor that has the most positive affect on their morale, and provides them with a sense of moderately high teacher morale.

Though all of the demographic groups in the survey express feelings that their salary and their school salary policies contribute negatively to teacher morale, ten demographic groups in the survey considered this factor the greatest contributor to low morale. For these ten groups Teacher Salary had the lowest mean score of all other factors. Of all of the demographic groups, eight groups had a mean score for this factor that equated to a moderately low teacher morale category (between 2.00 and 2.23), and eight demographic groups had a mean score for this factor that equated to the lower end of the moderate teacher morale category (between 2.26 and 2.46). No PTO morale factors had mean scores that equated to very low and low teacher morale, however two other factors had mean scores for some demographic groups that equated to moderately low teacher morale. These factors were Factor 6: Curriculum Issues which had two groups that provided moderately low moral mean scores, and Factor 8: Community Support of Education, which had four groups that provided moderately low moral mean scores.

Though the standard of deviation was under 1.0 for all factors for all demographic categories (between .98 for Factor 6: novice teachers and .12 for Factor 2: males), Table 11 which provides a summary of the minimum and maximum scores for each factor, indicates that as individuals, there was a wide variance between the maximum morale score and the minimum morale score for many of the factors.

Table 11

*Purdue Teacher Opinionnaire Minimum and Maximum Scoring*

<b>Factor</b>	<b>Fac 1</b>	<b>Fac 2</b>	<b>Fac 3</b>	<b>Fac 4</b>	<b>Fac 5</b>	<b>Fac 6</b>	<b>Fac 7</b>	<b>Fac 8</b>	<b>Fac 9</b>	<b>Fac 10</b>
<b>Respondents</b>	19	18	17	19	15	21	20	20	21	20
<b>Mean</b>	2.8	3.2	3.0	2.2	2.6	2.4	2.6	2.4	2.7	2.7
<b>SD</b>	0.6	0.4	0.56	0.6	0.6	0.8	0.5	0.7	0.6	0.5
<b>Min</b>	1.9	2.6	1.4	1.0	1.3	1.0	1.6	1.0	1.6	1.6
<b>Max</b>	3.6	3.8	3.7	3.3	3.8	4.0	3.6	3.6	3.6	3.4

## **CHAPTER V**

### **DISCUSSION**

#### **Overview**

The purpose of this study was to determine whether any particular contributing factor to teacher morale affects education professionals more than others. The morale factors examined in this study were the ten factors identified by the Purdue Teacher Questionnaire (PTO) which are listed in Chapter III. These morale factors are a good indicator of teacher morale as they are the focus of many discussions in the literature that was reviewed for this paper. In addition, this research attempted to identify demographic areas that might have an effect on the morale factors. This research study identified two null hypotheses. The first null hypothesis states that there is no one factor of teacher morale which contributes more than others to low morale and job dissatisfaction among teachers. The second null hypothesis states that demographic differences have no influence on morale factors for teachers. As the results identified in Chapter IV, in both cases, the null hypotheses were not supported.

#### **Implications of Results**

Though it is clear from Chapter IV which factors seem to have the highest and lowest scores for teacher morale, because there were a relatively small number of participants and large samples are characteristically more reliable, *t*-tests were executed to validate that the scores had statistical significance, and the null hypothesis can be rejected between factors. Alpha = .05 was used for the test for the overall population to minimize the false positives to less than 5%. The results of these *t*-tests are included in Appendix II. Table 12 is the summary of the findings of the *t*-tests.

Table 12

*Table of Paired t-tests Among the Ten Morale Factor Means (alpha = .05)*

	Mean->	2.8	3.2	3.0	2.2	2.6	2.4	2.6	2.4	2.7	2.7
Mean	Factor	TRP	ST	RAT	TS	TL	CI	TST	CS	SFS	CP
2.8	Teacher Rapport with Principal (TRP)		SIG		SIG		SIG		SIG		
3.2	Satisfaction with Teaching (ST)	SIG		SIG	SIG	SIG	SIG	SIG	SIG	SIG	SIG
3.0	Rapport Among Teachers (RAT)		SIG		SIG	SIG	SIG	SIG	SIG		
2.2	Teacher Salary (TS)	SIG	SIG	SIG				SIG		SIG	SIG
2.6	Teacher Load (TL)		SIG	SIG							
2.4	Curriculum Issues (CI)	SIG	SIG	SIG							
2.6	Teacher Status (TST)		SIG	SIG	SIG				SIG		
2.4	Community Support of Education (CS)	SIG	SIG	SIG				SIG		SIG	SIG
2.7	School Facilities and Services (SFS)		SIG		SIG				SIG		
2.7	Community Pressure (CP)		SIG		SIG				SIG		

SIG=paired difference between factor means was statistically significant at alpha=0.05

Based on the analysis of the data for this research, the implication comparing the factor mean results is that Teacher Salary provides one of the largest contributions to the lack of morale when compared with all other factors. The *t*-value between Teacher Salary and six of the other factors (1-Teacher Rapport with Principal, 2-Satisfaction with Teaching, 3-Rapport Among Teachers, 4-Teacher Status, 5-School Facilities and Services, and 6-Community Pressure) range between 6.6 and 2.2. It can be considered that the results for these factors are statistically significant, and the null hypothesis between these factors and Teacher Salary can be rejected.

Because the  $p$ -value between Teacher Salary and these other six factors range between  $< .0001$  and  $.04$ , the null hypothesis can be rejected with a relatively small risk of a false positive, despite the small samples.

With respect to the other three factors in this study (1-Teacher Load, 2-Curriculum Issues, and 3-Community Support of Education), only one, Community Support of Education, shares differences of statistical significance with all of the same factors as Teacher Salary. The  $t$ -value and  $p$ -value between Community Support of Education and the six other factors range between  $4.6$  to  $2.2$  and  $.0003$  to  $.04$  respectively. This morale factor may share the position as the most influential factor that causes low teacher morale with Teacher Salary since there is no measurable statistical significance between the two factors and there is a similar measurable statistical significance between these factors and the other six. The other two factors (Teacher Load and Curriculum Issues) share differences of statistical significance with only up to three of the same factors as Teacher Salary; therefore, the research concludes that these two factors do not have the same effect on lowering morale. To summarize, the hypothesis that there is no one factor of teacher morale which contributes more than others to low morale and job dissatisfaction among teachers is rejected. This research has identified that Teacher Salary and possibly lack of Community Support of Education are the key contributors to low morale and job dissatisfaction.

Though this was not the focus of the study, this research indicates that Satisfaction with Teaching must be the strongest positive contributor to teacher morale among the factors studied. Table 12 documents that the results of the  $t$ -test between Satisfaction with Teaching and all of the other factors studied is statistically significant. Satisfaction with Teaching has a higher mean than all of the factors. If the  $t$ -test results are statistically significant to all factors, Satisfaction with Teaching must be the strongest positive contributor to teacher morale.

This research has been expanded to test the null hypothesis that demographic differences have no influence on morale factors for teachers. Analysis of the findings identified in Chapter IV indicate that this null hypothesis is also false. The *t*-tests with an  $\alpha=.1$  have been conducted against all demographic pairs.  $\alpha=.1$  was used because the sample in demographic comparisons is much smaller than the sample of the entire population due to omitted questions. Appendix III contains the *t*-test detail results for two of the demographic groups, Number of Years in Education (Table 7) and Job Classification (Table 10). Table 13 indicates where statistically significant differences have been identified. There are a number of areas where this is the case. For example, it appears that male educators have a better rapport with their principals and with the community than female educators and are more tolerant of their school facilities. The reason for this may be that as a group, women value relationships more, and therefore these factors are more important to them, and if there is no rapport with the principals the mean will be lower. Older teachers seem to have a better rapport with their peers than younger teachers. Possibly this may be due to older teachers working in their environment for longer, and therefore, having built a deeper relationship with their peers. Another reason for this may be that older teachers are more confident, as they have more experience, and therefore do not feel threatened by their peers.

Table 13

*Two-Group t-test Mean Factor by Demographic Category ( $\alpha = .1$ )*

Factor	Age <35 v >=35	Gender M v F	Race White v NonWhite	Level EM v HS
Teacher Rapport with Principal (TRP)		M > F		
Satisfaction with Teaching (ST)				
Rapport Among Teachers (RAT)	Older > Younger			

Factor	Age <35 v >=35	Gender M v F	Race White v NonWhite	Level EM v HS
Teacher Salary (TS)				EM > HS
Teacher Load (TL)				
Curriculum Issues (CI)				
Teacher Status (TST)				
Community Support of Education (CS)		M > F		
School Facilities and Services (SFS)		M > F		
Community Pressure (CP)			Nonwhite > White	

Table 13 (Cont.)

*Two-Group t-test Mean Factor by Demographic Category*

Factor	Years Experience <3 v >=3	School Type Public v Other	Prog Type GenEd v Other	Job Class. GenEd v Special Ed
Teacher Rapport with Principal (TRP)				
Satisfaction with Teaching (ST)	Experience > Novice	Public > Other	Gen Ed > Other	Gen Ed > SpEd
Rapport Among Teachers (RAT)				
Teacher Salary (TS)				
Teacher Load (TL)				
Curriculum Issues (CI)				SpEd > Gen Ed
Teacher Status (TST)				
Community Support of Education (CS)				
School Facilities and Services (SFS)		Other > Public	Other > Gen Ed	SpEd > GenEd
Community Pressure (CP)				

Another observation, gleaned from examining Table 7, Number of Years in Education in Chapter IV and the Years Experience column in Table 13, relates to the differences in morale scores between novice and experienced teachers. Table 7 details that in all but two factors (Teacher Salary and Community Pressure), the mean score for Novice Teachers is lower than the mean scores for Experienced Teachers. The mean score of Satisfaction with Teaching is



significantly lower for Novice Teachers, even though this factor seems to contribute most positively overall to teacher morale. The reason for the disparity between Novice Teachers and Experienced Teachers may be that a large percentage of teachers leave the profession within the first three years; therefore, those that remain are significantly more satisfied with teaching.

Another observation derived from looking at the comparison by demographics in Table 13 between Special Education Teachers and General Education Teachers (column Job Classification) is that Special Education Teachers are statistically less satisfied with teaching than their General Education counterparts, even though Satisfaction with Teaching has the most overall positive affect on teacher morale. This might be because this factor pertains to teacher relationships with students and a teacher's sense of competence. Since progress is not as easily realized or measured for special education students, it may be difficult for teachers to feel a sense of improvement or accomplishment in their students. According to the literature reviewed (Wong et al., 2017), special educators are twice as likely to leave the teaching profession as general educators. Table 13 also indicates two other areas where there is a statistical significance between the morale scores of General Education Teachers and Special Education Teachers. Special Education Teachers seem to have fewer Curriculum Issues and School Facilities and Services issues than their General Education peers. A possible reason for this might be that special education is much more individualized and students have IEPs specific to them, so fewer curriculum issues arise. In addition, special education students may have specific facility requirements mandated by law which need to be addressed right away so facilities issue corrections tend not to be delayed.

To summarize, the examination of the results of this research imply that both null hypotheses proposed here can be rejected. There is statistical significance to identify one or two

of the factors that contribute most to teacher low morale and job dissatisfaction. There are also statistically significant differences between groups of demographic pairs to distinguish differences of effect on factors of morale.

### **Theoretical Consequences**

A significant concern that was identified by this research is that not one of the ten factors in this study had an overall mean score of “high” or “very high” teacher morale. Only three of the 160 (10 factors \* 16, 8 demographic pairs) possible demographic factors had a mean score of “high” teacher morale. None had a mean score of “very high” teacher morale. This implies that as a group, teachers are not very happy in their profession. Satisfaction with Teaching has the highest mean score, and that correlates to only “Moderately High Teacher Morale”. As was highlighted in the literary research, teacher low morale affects students, peers, and administration. Teachers have a very significant role in the future of our society as they are key to molding our children into the adults of tomorrow. Ways must be found to raise the morale of teachers in multiple areas. Demographic groups must be addressed uniquely, according to their needs. To be a thriving, happy society, we must have excellent teachers who are happy doing what they are doing, who are respected, supported, and compensated for their efforts and results.

### **Threats to Validity**

The selection of participants for this study was modified after the initial planning for the study. The focus was originally intended to study special education professionals from one institution. The participants in this research study were all university students working on their master’s degrees in various educational fields from one small liberal arts college in the Mid-Atlantic region. More than half of the participants (12) were general education teachers, and the rest were grouped as special education teachers (11). This study was interrupted by the COVID-

19 pandemic situation, resulting in the inability to survey additional participants, including those that were more heavily involved in special education. The results of this study could have been more special education focused. Though it is unlikely that a more diverse group of participants would have provided a different overall result, the study might have had more statistically significant results, and more may have been learned regarding the differences in factors between demographic groups. Due to the interruption of classroom study by the COVID-19 pandemic, the researcher no longer had access to the students at the college therefore reducing the number and variety of study participants and allowing for only a small sampling for this study.

### **Connections to Previous Studies/Existing Literature**

Pendino (2012), who also used the Purdue Teacher Opinionaire in her research on teacher morale, observed that demographics such as job type and years of experience teaching had an impact on which teacher morale factors had a greater influence. Her findings, similar to the findings in this study, imply that teachers with different job types, experience, age levels, race, and other demographic differentiators may have different needs. This suggests that addressing morale issues needs to take the needs of the individual into consideration, and all educators in an environment may not be able to be treated as one group.

This study corroborates Houchard's findings in his research (2005) that teacher salary had the lowest morale mean scores of all of the Purdue Teacher Opinionaire factors. Surprisingly, some of the literature reviewed for this research such as that by Korsak (2017) and Pittenger (2014) indicate disagreement. These researchers implied that, though financial compensation has a major effect on morale, incentives to job satisfaction are more socially rather than financially directed.

The literature reviewed indicates that novice educators, especially those in special education, have a very high attrition rate, for some groups the rate is as high as 25%. The findings in this study seem to corroborate this. For all but two factors, novice educators have a lower mean morale score than those educators with experience. This indicates that they are less satisfied with their jobs, and therefore more likely to leave. As highlighted in Table 13, Special Educators are significantly less satisfied with teaching than their general education counterparts.

### **Implications for Future Research**

This research study has outlined the factors that most negatively affect teacher morale. Future research might include interviews or questionnaires administered to the surveyed and other similar populations dealing with finding solutions that would raise the mean for the morale factors to “high” and “very high”. The implementation of some of those solutions would have to be designed and introduced into controlled environments for a specified period of time. The Purdue Teacher Opinionnaire would then be re-administered to determine whether the solutions have had an effect on morale. The solutions could then be tweaked as appropriate. In designing solutions, some points would have to be considered. Solutions can only be designed around conditions over which the designer has influence. The lowest mean factor may not be the most appropriate factor to start with.

### **Conclusion**

This study compared ten common factors of teacher morale intending to determine which, if any, of the factors had the most negative effect on morale. The research identified two factors, Dissatisfaction with Teacher Salary and Lack of Community Support of Education as the two factors that seem to have the greatest negative effect on morale. This study also compared eight pairs of demographic differences to determine whether these differences influence morale factors in a significant way. The study identified multiple areas where there were statistical

differences in morale scores between the demographic pairs. The number of subjects studied was reduced by the restrictions created by the onset of the COVID-19 pandemic. In order to obtain more definitive results, research should be expanded with a larger, more diverse group of subjects.

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## APPENDIX I

This appendix is the survey that was provided to each of the participants. It also includes the correlation between the survey dimensions and the questions listed in the Perdue Teachers Opinionnaire.

To whom it may concern,

Hi. My name is Shoshana. I am currently enrolled in the M.A.T program here at Goucher College. I am working on my research paper for my graduate program. I would appreciate it if you can help me out by answering my survey questionnaire. It is completely confidential and anonymous. This survey is intended to provide you the opportunity to express your experience in teaching. Please answer the survey to the best of your abilities. Thank you so much in advance.

1. What is your age?

- ☐ Under 18
- ☐ 18-25 years old
- ☐ 25-34 years old
- ☐ 35-44 years old
- ☐ 45-54 years old
- ☐ over 55

5. How many years have you been in education?

- ☐ Less than 2 years
- ☐ 3- 5 years
- ☐ 6- 10 years
- ☐ 11-15 years
- ☐ 16-20 years
- ☐ Over 20 years

2. What is your gender?

- ☐ Female
- ☐ Male
- ☐ Other \_\_\_\_\_
- ☐ Prefer not to say

6. What type of school do you teach in?

- ☐ Public
- ☐ Private
- ☐ Other \_\_\_\_\_

3. What is your ethnicity?

- ☐ White
- ☐ Hispanic or Latino
- ☐ Black or African American
- ☐ Native American or American Indian
- ☐ Asian/ Pacific Islander
- ☐ Other \_\_\_\_\_

7. In what type of program do you work?

- ☐ Special Education
- ☐ General Education
- ☐ Other \_\_\_\_\_

4. What grade level do you teach?

- ☐ Elementary School
- ☐ Middle School
- ☐ High School
- ☐ Post High School

8. What is your job title?

- ☐ General Education Teacher
- ☐ Special Education Teacher
- ☐ Para- Professional Teacher
- ☐ Assistant Teacher
- ☐ Other (please specify) \_\_\_\_\_

This survey is intended to provide you the opportunity to express your experience in teaching. Please read each statement carefully. Then indicate whether you (1) disagree, (2) probably disagree, (3) probably agree, (4) agree, with each statement. Circle your answers using the following scale:

**1= disagree      2= probably disagree      3= probably agree      4= agree**

1	Details, "red tape," and requires reports absorb too much of my time.	1	2	3	4
2	The work of individual faculty members is appreciated and commended by our principle.	1	2	3	4
3	Teachers feel free to criticize administrative policy at faculty meeting called by our principal.	1	2	3	4
4	The faculty feels that their suggestions pertaining to salaries are adequately transmitted by the administration to the board of education.	1	2	3	4
5	Our principal shows favoritism in his relations with the teachers in our school.	1	2	3	4
6	Teachers in this school are expected to do an unreasonable amount of record keeping and clerical work.	1	2	3	4
7	My principal makes a real effort to maintain close contact with the faculty.	1	2	3	4
8	Community demands upon the teacher's time are unreasonable.	1	2	3	4
9	I am satisfied with the policies under which pay raises are granted.	1	2	3	4
10	My teaching load is greater than that of most of the other teachers in our school	1	2	3	4
11	The extra- curricular load of the teachers in or school is unreasonable.	1	2	3	4
12	Our principal's leadership in faculty meetings challenges and stimulates our professional growth.	1	2	3	4
13	My teaching position gives me the social status in the community that I desire.	1	2	3	4
14	The number of hours a teacher much work is unreasonable.	1	2	3	4
15	Teaching enables me to enjoy many of the material and cultural things I like.	1	2	3	4
16	My school provides me with adequate classroom supplies and equipment.	1	2	3	4
17	Our school has a well-balanced curriculum.	1	2	3	4
18	There is a great deal of griping, arguing, taking sides and feuding among our teachers.	1	2	3	4
19	Teaching gives me a great deal of personal satisfaction.	1	2	3	4
20	The curriculum of our school makes reasonable provision for student individual differences.	1	2	3	4
21	The procedures for obtaining materials and services are well defined and efficient.	1	2	3	4
22	Generally, teachers in our school do not take advantage of one another.	1	2	3	4

23	The teachers in our school cooperate with each other to achieve common, personal, and professional objectives.	1	2	3	4
24	Teaching enables me to make my greatest contribution to society.	1	2	3	4
25	The curriculum of our school is in need of major revisions.	1	2	3	4
26	I love to teach.	1	2	3	4
27	If I could plan my career again, I would choose teaching.	1	2	3	4
28	Experienced faculty members accept new and younger members as colleagues.	1	2	3	4
29	I would recommend teaching as an occupation to students of high scholastic ability.	1	2	3	4
30	If I could earn as much money in another occupation, I would stop teaching.	1	2	3	4
31	The school schedule places my classes at a disadvantage.	1	2	3	4
32	Within the limits of financial resources, the school tries to follow a generous policy regarding fringe benefits, professional travel, professional study, etc.	1	2	3	4
33	My principal makes my work easier and more pleasant.	1	2	3	4
34	Keeping up professionally is too much of a burden.	1	2	3	4
35	Our community makes its teachers feel as though they are real part of the community.	1	2	3	4
36	Salary policies are administered with fairness and justice.	1	2	3	4
37	Teaching affords me the security I want in an occupation.	1	2	3	4
38	My school principal understands and recognizes good teaching procedures.	1	2	3	4
39	Teachers clearly understand the policies governing salary increases.	1	2	3	4
40	My classes are used as “dumping grounds” for problem students.	1	2	3	4
41	The lines and methods of communication between teachers and principal in our school are well developed and maintained.	1	2	3	4
42	My teaching load at this school is unreasonable.	1	2	3	4
43	My principal shows a real interest in my department.	1	2	3	4
44	Our principal promotes a sense of belonging among the teachers in our school.	1	2	3	4
45	My teaching load unduly restricts my nonprofessional activities.	1	2	3	4
46	I find my contacts with students, for the most part, highly satisfying and rewarding.	1	2	3	4
47	I feel that I am an important part of this school system.	1	2	3	4
48	The competency of the teachers in our school compares favorably with that of teachers in other schools with which I am familiar.	1	2	3	4
49	My school provides the teachers with adequate audio-visual aids and projection equipment.	1	2	3	4
50	I feel successful and competent in my present position.	1	2	3	4
51	I enjoy working with student organizations, clubs, and societies.	1	2	3	4
52	Our teaching staff is congenial to work with.	1	2	3	4
53	My teaching associates are well prepared for their jobs.	1	2	3	4

54	Our school faculty has a tendency to form into cliques.	1	2	3	4
55	The teachers in our school work well together.	1	2	3	4
56	I am at a disadvantage professionally because other teachers are better prepared to teach than I am.	1	2	3	4
57	Our school provides adequate clerical services for the teachers.	1	2	3	4
58	As far as I know, the other teachers think I am a good teacher.	1	2	3	4
59	Library facilities and resources are adequate for the grade or subject area which I teach.	1	2	3	4
60	The “stress and strain” resulting from teaching makes teaching undesirable for me.	1	2	3	4
61	My principal is concerned with the problems of the faculty and handles these problems sympathetically.	1	2	3	4
62	I do not hesitate to discuss any school problem with my principal.	1	2	3	4
63	Teaching gives me the prestige I desire.	1	2	3	4
64	My teaching job enables me to provide a satisfactory standard of living for my family.	1	2	3	4
65	The salary schedule in our school adequately recognizes teacher competency.	1	2	3	4
66	Most of the people in this community understand and appreciate good education.	1	2	3	4
67	In my judgment, this community is a good place to raise a family.	1	2	3	4
68	This community respects its teachers and treats them like professional persons.	1	2	3	4
69	My principal acts interested in me and my problems.	1	2	3	4
70	My school principal supervises rather than “snoopervises” the teachers in our school.	1	2	3	4
71	It is difficult for teachers to gain acceptance by the people in this community.	1	2	3	4
72	Teachers’ meetings as now conducted by our principal waste the time and energy of the staff.	1	2	3	4
73	My principal has a reasonable understanding of the problems connected with my teaching assignment.	1	2	3	4
74	I feel that my work is judged fairly by my principal.	1	2	3	4
75	Salaries paid in this school system compare favorably with salaries in other systems with which I am familiar.	1	2	3	4
76	Most of the actions of students irritate me.	1	2	3	4
77	The cooperativeness of teachers in our school helps make our work more enjoyable.	1	2	3	4
78	My students regard me with respect and seem to have confidence in my professional ability.	1	2	3	4
79	The purpose and objectives of the school cannot be achieved by the present curriculum.	1	2	3	4
80	The teachers in our school have a desirable influence on the values and attitudes of their students.	1	2	3	4
81	This community expects its teachers to meet unreasonable	1	2	3	4

	personal standards.				
82	My students appreciate the help I give them with their schoolwork.	1	2	3	4
83	To me there is no more challenging work than teaching.	1	2	3	4
84	Other teachers in our school are appreciative of my work.	1	2	3	4
85	As a teacher in this community, my nonprofessional activities outside of school are unduly restricted.	1	2	3	4
86	As a teacher, I think I am as competent as most other teachers.	1	2	3	4
87	The teachers with whom I work have high professional ethics.	1	2	3	4
88	Our school curriculum does a good job of preparing students to become enlightened and competent citizens.	1	2	3	4
89	I really enjoy working with my students.	1	2	3	4
90	The teachers in our school show a great deal of initiative and creativity in their teaching assignments.	1	2	3	4
91	Teachers in our community feel free to discuss controversial issues in their classes.	1	2	3	4
92	My principal tries to make me feel comfortable when visiting my classes.	1	2	3	4
93	My principal makes effective use of the individual teacher's capacity and talent.	1	2	3	4
94	The people in this community, generally, have a sincere and whole hearted interest in the school system.	1	2	3	4
95	Teachers feel free to go to the principal about problems of personal and group welfare.	1	2	3	4
96	This community supports ethical procedures regarding the appointment and reappointment of members of the teaching staff.	1	2	3	4
97	The community is willing to support a good program of education.	1	2	3	4
98	Our community expects the teachers to participate in too many social activities.	1	2	3	4
99	Community pressures prevent me from doing my best as a teacher.	1	2	3	4
100	I am well satisfied with my present teaching position.	1	2	3	4

The following questions were reverse coded, so that if the respondents stated 1 the results considered this a 4, 2 became a 3, 3 became a 2, and 4 became a 1: 1, 5, 6, 8, 10, 11, 14, 18, 25, 30, 31, 34, 40, 42, 45, 54, 56, 60, 71, 72, 76, 79, 81, 85, 98, 99

The table below indicates the item in the scale that correspond to each dimension listed in the Perdue Teachers Opinionnaire (Houchard, 2005). The questions of the PTO instrument are in no particular order and are not grouped by factors.

Table 14

*Purdue Teacher Opinionnaire Division of 10 Teacher Morale Factors*

Factor #	Description	Question #s
1	Teacher Rapport with Principal	2, 3, 5, 7, 12, 33, 38, 41, 43, 44, 61, 62, 69, 70, 72, 73, 74, 92, 93, 95
2	Satisfaction with Teaching	19, 24, 26, 27, 29, 30, 46, 47, 50, 51, 56, 58, 60, 76, 78, 82, 83, 86, 89, 100
3	Rapport Among Teachers	18, 22, 23, 28, 48, 52, 53, 54, 55, 77, 80, 84, 87, 90
4	Teacher Salary	4, 9, 32, 36, 39, 65, 75
5	Teacher Load	1, 6, 8, 10, 11, 14, 31, 34, 40, 42, 45
6	Curriculum Issues	17, 20, 25, 79, 88
7	Teacher Status	13, 15, 35, 37, 63, 64, 68, 71
8	Community Support of Education	66, 67, 94, 96, 97
9	School Facilities and Services	16, 21, 49, 57, 59
10	Community Pressure	81, 85, 91, 98, 99

## APPENDIX II

This appendix lists the results of the paired t-tests for the ten morale factor means in this study.  
Alpha = .05

### Paired t: meanTRP2, meanST2

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#### Descriptive Statistics

Sample	N	Mean	StDev	SE Mean
meanTRP2	18	2.8389	0.5802	0.1368
meanST2	18	3.1556	0.3776	0.0890

#### Estimation for Paired Difference

Mean	StDev	SE Mean	95% CI for $\mu_d$
-0.3167	0.5576	0.1314	(-0.5939, -0.0394)

$\mu_d$ : mean of (meanTRP2 - meanST2)

#### Test

Null hypothesis	$H_0: \mu_d = 0$
Alternative hypothesis	$H_1: \mu_d \neq 0$

T-Value	P-Value
-2.41	0.0276

### Paired t: meanTRP2, meanRAT2

---

#### Descriptive Statistics

Sample	N	Mean	StDev	SE Mean
meanTRP2	17	2.8529	0.5980	0.1450
meanRAT2	17	2.9529	0.5647	0.1370

#### Estimation for Paired Difference

Mean	StDev	SE Mean	95% CI for $\mu_d$
-0.1000	0.6403	0.1553	(-0.4292, 0.2292)

$\mu_d$ : mean of (meanTRP2 - meanRAT2)

#### Test

Null hypothesis	$H_0: \mu_d = 0$
Alternative hypothesis	$H_1: \mu_d \neq 0$

T-Value	P-Value
-0.64	0.5287

## Paired t: meanTRP2, meanTS2

---

### Descriptive Statistics

Sample	N	Mean	StDev	SE Mean
meanTRP2	19	2.8053	0.5826	0.1337
meanTS2	19	2.2421	0.5601	0.1285

### Estimation for Paired Difference

Mean	StDev	SE Mean	95% CI for $\mu_d$
0.5632	0.7559	0.1734	(0.1988, 0.9275)

$\mu_d$ : mean of (meanTRP2 - meanTS2)

### Test

Null hypothesis  $H_0: \mu_d = 0$

Alternative hypothesis  $H_1: \mu_d \neq 0$

T-Value	P-Value
3.25	0.0045

## Paired t: meanTRP2, meanTL2

---

### Descriptive Statistics

Sample	N	Mean	StDev	SE Mean
meanTRP2	15	2.8733	0.6076	0.1569
meanTL2	15	2.5933	0.6408	0.1655

### Estimation for Paired Difference

Mean	StDev	SE Mean	95% CI for $\mu_d$
0.2800	0.8055	0.2080	(-0.1661, 0.7261)

$\mu_d$ : mean of (meanTRP2 - meanTL2)

### Test

Null hypothesis  $H_0: \mu_d = 0$

Alternative hypothesis  $H_1: \mu_d \neq 0$

T-Value	P-Value
1.35	0.1996



## Paired t: meanTRP2, meanCI2

---

### Descriptive Statistics

Sample	N	Mean	StDev	SE Mean
meanTRP2	19	2.8053	0.5826	0.1337
meanCI2	19	2.4211	0.8189	0.1879

### Estimation for Paired Difference

Mean	StDev	SE Mean	95% CI for $\mu_d$
0.3842	0.8241	0.1891	(-0.0130, 0.7814)

$\mu_d$ : mean of (meanTRP2 - meanCI2)

### Test

Null hypothesis  $H_0: \mu_d = 0$   
Alternative hypothesis  $H_1: \mu_d \neq 0$

T-Value	P-Value
2.03	0.0572

## Paired t: meanTRP2, meanTST2

---

### Descriptive Statistics

Sample	N	Mean	StDev	SE Mean
meanTRP2	19	2.8053	0.5826	0.1337
meanTST2	19	2.5895	0.5577	0.1279

### Estimation for Paired Difference

Mean	StDev	SE Mean	95% CI for $\mu_d$
0.2158	0.6149	0.1411	(-0.0806, 0.5121)

$\mu_d$ : mean of (meanTRP2 - meanTST2)

### Test

Null hypothesis  $H_0: \mu_d = 0$   
Alternative hypothesis  $H_1: \mu_d \neq 0$

T-Value	P-Value
1.53	0.1435

## Paired t: meanTRP2, meanCS2

---

### Descriptive Statistics

Sample	N	Mean	StDev	SE Mean
meanTRP2	18	2.8333	0.5861	0.1381
meanCS2	18	2.2667	0.6399	0.1508

### Estimation for Paired Difference

Mean	StDev	SE Mean	95% CI for $\mu_d$
0.5667	0.5760	0.1358	(0.2802, 0.8531)

$\mu_d$ : mean of (meanTRP2 - meanCS2)

### Test

Null hypothesis  $H_0: \mu_d = 0$   
Alternative hypothesis  $H_1: \mu_d \neq 0$

T-Value	P-Value
4.17	0.0006

## Paired t: meanTRP2, meanSFS2

---

### Descriptive Statistics

Sample	N	Mean	StDev	SE Mean
meanTRP2	19	2.8053	0.5826	0.1337
meanSFS2	19	2.6947	0.6123	0.1405

### Estimation for Paired Difference

Mean	StDev	SE Mean	95% CI for $\mu_d$
0.1105	0.5924	0.1359	(-0.1750, 0.3961)

$\mu_d$ : mean of (meanTRP2 - meanSFS2)

### Test

Null hypothesis  $H_0: \mu_d = 0$   
Alternative hypothesis  $H_1: \mu_d \neq 0$

T-Value	P-Value
0.81	0.4267

## Paired t: meanTRP2, meanCP2

---

### Descriptive Statistics

Sample	N	Mean	StDev	SE Mean
meanTRP2	19	2.8053	0.5826	0.1337
meanCP2	19	2.6947	0.4961	0.1138

### Estimation for Paired Difference

Mean	StDev	SE Mean	95% CI for $\mu_d$
0.1105	0.6324	0.1451	(-0.1943, 0.4153)

$\mu_d$ : mean of (meanTRP2 - meanCP2)

### Test

Null hypothesis  $H_0: \mu_d = 0$   
Alternative hypothesis  $H_1: \mu_d \neq 0$

T-Value	P-Value
0.76	0.4560

## Paired t: meanST2, meanRAT2

---

### Descriptive Statistics

Sample	N	Mean	StDev	SE Mean
meanST2	16	3.2188	0.3507	0.0877
meanRAT2	16	2.9313	0.5759	0.1440

### Estimation for Paired Difference

Mean	StDev	SE Mean	95% CI for $\mu_d$
0.2875	0.5402	0.1351	(-0.0004, 0.5754)

$\mu_d$ : mean of (meanST2 - meanRAT2)

### Test

Null hypothesis  $H_0: \mu_d = 0$   
Alternative hypothesis  $H_1: \mu_d \neq 0$

T-Value	P-Value
2.13	0.0503

## Paired t: meanST2, meanTS2

---

### Descriptive Statistics

Sample	N	Mean	StDev	SE Mean
meanST2	18	3.1556	0.3776	0.0890
meanTS2	18	2.2222	0.5694	0.1342

### Estimation for Paired Difference

Mean	StDev	SE Mean	95% CI for $\mu_d$
0.9333	0.6000	0.1414	(0.6350, 1.2317)

$\mu_d$ : mean of (meanST2 - meanTS2)

### Test

Null hypothesis  $H_0: \mu_d = 0$

Alternative hypothesis  $H_1: \mu_d \neq 0$

T-Value	P-Value
6.60	<0.0001

## Paired t: meanST2, meanTL2

---

### Descriptive Statistics

Sample	N	Mean	StDev	SE Mean
meanST2	15	3.2133	0.3623	0.0935
meanTL2	15	2.5933	0.6408	0.1655

### Estimation for Paired Difference

Mean	StDev	SE Mean	95% CI for $\mu_d$
0.6200	0.7063	0.1824	(0.2289, 1.0111)

$\mu_d$ : mean of (meanST2 - meanTL2)

### Test

Null hypothesis  $H_0: \mu_d = 0$

Alternative hypothesis  $H_1: \mu_d \neq 0$

T-Value	P-Value
3.40	0.0043

## Paired t: meanST2, meanCI2

---

### Descriptive Statistics

Sample	N	Mean	StDev	SE Mean
meanST2	18	3.1556	0.3776	0.0890
meanCI2	18	2.4000	0.8374	0.1974

### Estimation for Paired Difference

Mean	StDev	SE Mean	95% CI for $\mu_d$
0.7556	0.8024	0.1891	(0.3565, 1.1546)

$\mu_d$ : mean of (meanST2 - meanCI2)

### Test

Null hypothesis  $H_0: \mu_d = 0$   
Alternative hypothesis  $H_1: \mu_d \neq 0$

T-Value	P-Value
4.00	0.0009

## Paired t: meanST2, meanTST2

---

### Descriptive Statistics

Sample	N	Mean	StDev	SE Mean
meanST2	18	3.1556	0.3776	0.0890
meanTST2	18	2.5333	0.5156	0.1215

### Estimation for Paired Difference

Mean	StDev	SE Mean	95% CI for $\mu_d$
0.62222	0.41806	0.09854	(0.41433, 0.83012)

$\mu_d$ : mean of (meanST2 - meanTST2)

### Test

Null hypothesis  $H_0: \mu_d = 0$   
Alternative hypothesis  $H_1: \mu_d \neq 0$

T-Value	P-Value
6.31	<0.0001

## Paired t: meanST2, meanCS2

---

### Descriptive Statistics

Sample	N	Mean	StDev	SE Mean
meanST2	17	3.1882	0.3621	0.0878
meanCS2	17	2.3059	0.6369	0.1545

### Estimation for Paired Difference

Mean	StDev	SE Mean	95% CI for $\mu_d$
0.8824	0.7868	0.1908	(0.4778, 1.2869)

$\mu_d$ : mean of (meanST2 - meanCS2)

### Test

Null hypothesis  $H_0: \mu_d = 0$

Alternative hypothesis  $H_1: \mu_d \neq 0$

T-Value	P-Value
4.62	0.0003

## Paired t: meanST2, meanSFS2

---

### Descriptive Statistics

Sample	N	Mean	StDev	SE Mean
meanST2	18	3.1556	0.3776	0.0890
meanSFS2	18	2.7222	0.6179	0.1456

### Estimation for Paired Difference

Mean	StDev	SE Mean	95% CI for $\mu_d$
0.4333	0.7146	0.1684	(0.0780, 0.7887)

$\mu_d$ : mean of (meanST2 - meanSFS2)

### Test

Null hypothesis  $H_0: \mu_d = 0$

Alternative hypothesis  $H_1: \mu_d \neq 0$

T-Value	P-Value
2.57	0.0198

## Paired t: meanST2, meanCP2

---

### Descriptive Statistics

Sample	N	Mean	StDev	SE Mean
meanST2	18	3.1556	0.3776	0.0890
meanCP2	18	2.6556	0.4792	0.1130

### Estimation for Paired Difference

Mean	StDev	SE Mean	95% CI for $\mu_d$
0.5000	0.6231	0.1469	(0.1901, 0.8099)

$\mu_d$ : mean of (meanST2 - meanCP2)

### Test

Null hypothesis  $H_0: \mu_d = 0$   
Alternative hypothesis  $H_1: \mu_d \neq 0$

T-Value	P-Value
3.40	0.0034

## Paired t: meanRAT2, meanTS2

---

### Descriptive Statistics

Sample	N	Mean	StDev	SE Mean
meanRAT2	17	2.9529	0.5647	0.1370
meanTS2	17	2.2706	0.5871	0.1424

### Estimation for Paired Difference

Mean	StDev	SE Mean	95% CI for $\mu_d$
0.6824	0.8308	0.2015	(0.2552, 1.1095)

$\mu_d$ : mean of (meanRAT2 - meanTS2)

### Test

Null hypothesis  $H_0: \mu_d = 0$   
Alternative hypothesis  $H_1: \mu_d \neq 0$

T-Value	P-Value
3.39	0.0038

## Paired t: meanRAT2, meanTL2

---

### Descriptive Statistics

Sample	N	Mean	StDev	SE Mean
meanRAT2	15	2.9533	0.5890	0.1521
meanTL2	15	2.5933	0.6408	0.1655

### Estimation for Paired Difference

Mean	StDev	SE Mean	95% CI for $\mu_d$
0.3600	0.6706	0.1732	(-0.0114, 0.7314)

$\mu_d$ : mean of (meanRAT2 - meanTL2)

### Test

Null hypothesis  $H_0: \mu_d = 0$

Alternative hypothesis  $H_1: \mu_d \neq 0$

T-Value	P-Value
2.08	0.0565

## Paired t: meanRAT2, meanCI2

---

### Descriptive Statistics

Sample	N	Mean	StDev	SE Mean
meanRAT2	17	2.9529	0.5647	0.1370
meanCI2	17	2.4588	0.7673	0.1861

### Estimation for Paired Difference

Mean	StDev	SE Mean	95% CI for $\mu_d$
0.4941	0.6200	0.1504	(0.1754, 0.8129)

$\mu_d$ : mean of (meanRAT2 - meanCI2)

### Test

Null hypothesis  $H_0: \mu_d = 0$

Alternative hypothesis  $H_1: \mu_d \neq 0$

T-Value	P-Value
3.29	0.0047



## Paired t: meanRAT2, meanTST2

---

### Descriptive Statistics

Sample	N	Mean	StDev	SE Mean
meanRAT2	17	2.9529	0.5647	0.1370
meanTST2	17	2.6706	0.5217	0.1265

### Estimation for Paired Difference

Mean	StDev	SE Mean	95% CI for $\mu_d$
0.2824	0.5769	0.1399	(-0.0143, 0.5790)

$\mu_d$ : mean of (meanRAT2 - meanTST2)

### Test

Null hypothesis  $H_0: \mu_d = 0$   
Alternative hypothesis  $H_1: \mu_d \neq 0$

T-Value	P-Value
2.02	0.0607

## Paired t: meanRAT2, meanCS2

---

### Descriptive Statistics

Sample	N	Mean	StDev	SE Mean
meanRAT2	17	2.9529	0.5647	0.1370
meanCS2	17	2.2471	0.6539	0.1586

### Estimation for Paired Difference

Mean	StDev	SE Mean	95% CI for $\mu_d$
0.7059	0.9175	0.2225	(0.2341, 1.1776)

$\mu_d$ : mean of (meanRAT2 - meanCS2)

### Test

Null hypothesis  $H_0: \mu_d = 0$   
Alternative hypothesis  $H_1: \mu_d \neq 0$

T-Value	P-Value
3.17	0.0059

## Paired t: meanRAT2, meanSFS2

---

### Descriptive Statistics

Sample	N	Mean	StDev	SE Mean
meanRAT2	17	2.9529	0.5647	0.1370
meanSFS2	17	2.7412	0.5821	0.1412

### Estimation for Paired Difference

Mean	StDev	SE Mean	95% CI for $\mu_d$
0.2118	0.8403	0.2038	(-0.2203, 0.6438)

$\mu_d$ : mean of (meanRAT2 - meanSFS2)

### Test

Null hypothesis  $H_0: \mu_d = 0$   
Alternative hypothesis  $H_1: \mu_d \neq 0$

T-Value	P-Value
1.04	0.3142

## Paired t: meanRAT2, meanCP2

---

### Descriptive Statistics

Sample	N	Mean	StDev	SE Mean
meanRAT2	17	2.9529	0.5647	0.1370
meanCP2	17	2.6706	0.4896	0.1187

### Estimation for Paired Difference

Mean	StDev	SE Mean	95% CI for $\mu_d$
0.2824	0.6376	0.1546	(-0.0455, 0.6102)

$\mu_d$ : mean of (meanRAT2 - meanCP2)

### Test

Null hypothesis  $H_0: \mu_d = 0$   
Alternative hypothesis  $H_1: \mu_d \neq 0$

T-Value	P-Value
1.83	0.0866

## Paired t: meanTS2, meanTL2

---

### Descriptive Statistics

Sample	N	Mean	StDev	SE Mean
meanTS2	15	2.2667	0.6172	0.1594
meanTL2	15	2.5933	0.6408	0.1655

### Estimation for Paired Difference

Mean	StDev	SE Mean	95% CI for $\mu_d$
-0.3267	0.8811	0.2275	(-0.8146, 0.1613)

$\mu_d$ : mean of (meanTS2 - meanTL2)

### Test

Null hypothesis  $H_0: \mu_d = 0$   
Alternative hypothesis  $H_1: \mu_d \neq 0$

T-Value	P-Value
-1.44	0.1730

## Paired t: meanTS2, meanCI2

---

### Descriptive Statistics

Sample	N	Mean	StDev	SE Mean
meanTS2	19	2.2421	0.5601	0.1285
meanCI2	19	2.4211	0.8189	0.1879

### Estimation for Paired Difference

Mean	StDev	SE Mean	95% CI for $\mu_d$
-0.1789	0.9295	0.2132	(-0.6270, 0.2691)

$\mu_d$ : mean of (meanTS2 - meanCI2)

### Test

Null hypothesis  $H_0: \mu_d = 0$   
Alternative hypothesis  $H_1: \mu_d \neq 0$

T-Value	P-Value
-0.84	0.4124

## Paired t: meanTS2, meanTST2

---

### Descriptive Statistics

Sample	N	Mean	StDev	SE Mean
meanTS2	19	2.2421	0.5601	0.1285
meanTST2	19	2.5895	0.5577	0.1279

### Estimation for Paired Difference

Mean	StDev	SE Mean	95% CI for $\mu_d$
-0.3474	0.4846	0.1112	(-0.5809, -0.1138)

$\mu_d$ : mean of (meanTS2 - meanTST2)

### Test

Null hypothesis  $H_0: \mu_d = 0$   
Alternative hypothesis  $H_1: \mu_d \neq 0$

T-Value	P-Value
-3.12	0.0059

## Paired t: meanTS2, meanCS2

---

### Descriptive Statistics

Sample	N	Mean	StDev	SE Mean
meanTS2	18	2.2556	0.5731	0.1351
meanCS2	18	2.2667	0.6399	0.1508

### Estimation for Paired Difference

Mean	StDev	SE Mean	95% CI for $\mu_d$
-0.0111	0.6434	0.1517	(-0.3311, 0.3089)

$\mu_d$ : mean of (meanTS2 - meanCS2)

### Test

Null hypothesis  $H_0: \mu_d = 0$   
Alternative hypothesis  $H_1: \mu_d \neq 0$

T-Value	P-Value
-0.07	0.9424

## Paired t: meanTS2, meanSFS2

---

### Descriptive Statistics

Sample	N	Mean	StDev	SE Mean
meanTS2	19	2.2421	0.5601	0.1285
meanSFS2	19	2.6947	0.6123	0.1405

### Estimation for Paired Difference

Mean	StDev	SE Mean	95% CI for $\mu_d$
-0.4526	0.9125	0.2093	(-0.8924, -0.0128)

$\mu_d$ : mean of (meanTS2 - meanSFS2)

### Test

Null hypothesis  $H_0: \mu_d = 0$   
Alternative hypothesis  $H_1: \mu_d \neq 0$

T-Value	P-Value
-2.16	0.0443

## Paired t: meanTS2, meanCP2

---

### Descriptive Statistics

Sample	N	Mean	StDev	SE Mean
meanTS2	19	2.2421	0.5601	0.1285
meanCP2	19	2.6947	0.4961	0.1138

### Estimation for Paired Difference

Mean	StDev	SE Mean	95% CI for $\mu_d$
-0.4526	0.7082	0.1625	(-0.7940, -0.1113)

$\mu_d$ : mean of (meanTS2 - meanCP2)

### Test

Null hypothesis  $H_0: \mu_d = 0$   
Alternative hypothesis  $H_1: \mu_d \neq 0$

T-Value	P-Value
-2.79	0.0122

## Paired t: meanTL2, meanCI2

---

### Descriptive Statistics

Sample	N	Mean	StDev	SE Mean
meanTL2	15	2.5933	0.6408	0.1655
meanCI2	15	2.4000	0.8000	0.2066

### Estimation for Paired Difference

Mean	StDev	SE Mean	95% CI for $\mu_d$
0.1933	1.0124	0.2614	(-0.3673, 0.7540)

$\mu_d$ : mean of (meanTL2 - meanCI2)

### Test

Null hypothesis  $H_0: \mu_d = 0$   
Alternative hypothesis  $H_1: \mu_d \neq 0$

T-Value	P-Value
0.74	0.4718

## Paired t: meanTL2, meanTST2

---

### Descriptive Statistics

Sample	N	Mean	StDev	SE Mean
meanTL2	15	2.5933	0.6408	0.1655
meanTST2	15	2.6200	0.4945	0.1277

### Estimation for Paired Difference

Mean	StDev	SE Mean	95% CI for $\mu_d$
-0.0267	0.7630	0.1970	(-0.4492, 0.3958)

$\mu_d$ : mean of (meanTL2 - meanTST2)

### Test

Null hypothesis  $H_0: \mu_d = 0$   
Alternative hypothesis  $H_1: \mu_d \neq 0$

T-Value	P-Value
-0.14	0.8942

## Paired t: meanTL2, meanCS2

---

### Descriptive Statistics

Sample	N	Mean	StDev	SE Mean
meanTL2	15	2.5933	0.6408	0.1655
meanCS2	15	2.2533	0.6610	0.1707

### Estimation for Paired Difference

Mean	StDev	SE Mean	95% CI for $\mu_d$
0.3400	1.0425	0.2692	(-0.2373, 0.9173)

$\mu_d$ : mean of (meanTL2 - meanCS2)

### Test

Null hypothesis  $H_0: \mu_d = 0$   
Alternative hypothesis  $H_1: \mu_d \neq 0$

T-Value	P-Value
1.26	0.2272

## Paired t: meanTL2, meanSFS2

---

### Descriptive Statistics

Sample	N	Mean	StDev	SE Mean
meanTL2	15	2.5933	0.6408	0.1655
meanSFS2	15	2.7600	0.6010	0.1552

### Estimation for Paired Difference

Mean	StDev	SE Mean	95% CI for $\mu_d$
-0.1667	0.8252	0.2131	(-0.6236, 0.2903)

$\mu_d$ : mean of (meanTL2 - meanSFS2)

### Test

Null hypothesis  $H_0: \mu_d = 0$   
Alternative hypothesis  $H_1: \mu_d \neq 0$

T-Value	P-Value
-0.78	0.4471

## Paired t: meanTL2, meanCP2

---

### Descriptive Statistics

Sample	N	Mean	StDev	SE Mean
meanTL2	15	2.5933	0.6408	0.1655
meanCP2	15	2.6400	0.4793	0.1238

### Estimation for Paired Difference

Mean	StDev	SE Mean	95% CI for $\mu_d$
-0.0467	0.5475	0.1414	(-0.3499, 0.2566)

$\mu_d$ : mean of (meanTL2 - meanCP2)

### Test

Null hypothesis  $H_0: \mu_d = 0$   
Alternative hypothesis  $H_1: \mu_d \neq 0$

T-Value	P-Value
-0.33	0.7462

## Paired t: meanCI2, meanTST2

---

### Descriptive Statistics

Sample	N	Mean	StDev	SE Mean
meanCI2	20	2.4200	0.7971	0.1782
meanTST2	20	2.6000	0.5448	0.1218

### Estimation for Paired Difference

Mean	StDev	SE Mean	95% CI for $\mu_d$
-0.1800	0.7223	0.1615	(-0.5180, 0.1580)

$\mu_d$ : mean of (meanCI2 - meanTST2)

### Test

Null hypothesis  $H_0: \mu_d = 0$   
Alternative hypothesis  $H_1: \mu_d \neq 0$

T-Value	P-Value
-1.11	0.2790



## Paired t: meanCI2, meanCS2

---

### Descriptive Statistics

Sample	N	Mean	StDev	SE Mean
meanCI2	20	2.5200	0.7324	0.1638
meanCS2	20	2.3600	0.6824	0.1526

### Estimation for Paired Difference

Mean	StDev	SE Mean	95% CI for $\mu_d$
0.1600	0.9550	0.2135	(-0.2869, 0.6069)

$\mu_d$ : mean of (meanCI2 - meanCS2)

### Test

Null hypothesis  $H_0: \mu_d = 0$   
Alternative hypothesis  $H_1: \mu_d \neq 0$

T-Value	P-Value
0.75	0.4629

## Paired t: meanCI2, meanSFS2

---

### Descriptive Statistics

Sample	N	Mean	StDev	SE Mean
meanCI2	21	2.4476	0.7872	0.1718
meanSFS2	21	2.6857	0.5851	0.1277

### Estimation for Paired Difference

Mean	StDev	SE Mean	95% CI for $\mu_d$
-0.2381	0.8640	0.1885	(-0.6314, 0.1552)

$\mu_d$ : mean of (meanCI2 - meanSFS2)

### Test

Null hypothesis  $H_0: \mu_d = 0$   
Alternative hypothesis  $H_1: \mu_d \neq 0$

T-Value	P-Value
-1.26	0.2212

## Paired t: meanCI2, meanCP2

---

### Descriptive Statistics

Sample	N	Mean	StDev	SE Mean
meanCI2	20	2.4500	0.8075	0.1806
meanCP2	20	2.7100	0.4876	0.1090

### Estimation for Paired Difference

Mean	StDev	SE Mean	95% CI for $\mu_d$
-0.2600	0.9338	0.2088	(-0.6970, 0.1770)

$\mu_d$ : mean of (meanCI2 - meanCP2)

### Test

Null hypothesis  $H_0: \mu_d = 0$   
Alternative hypothesis  $H_1: \mu_d \neq 0$

T-Value	P-Value
-1.25	0.2282

## Paired t: meanTST2, meanCS2

---

### Descriptive Statistics

Sample	N	Mean	StDev	SE Mean
meanTST2	19	2.6526	0.5048	0.1158
meanCS2	19	2.2947	0.6337	0.1454

### Estimation for Paired Difference

Mean	StDev	SE Mean	95% CI for $\mu_d$
0.3579	0.7058	0.1619	(0.0177, 0.6981)

$\mu_d$ : mean of (meanTST2 - meanCS2)

### Test

Null hypothesis  $H_0: \mu_d = 0$   
Alternative hypothesis  $H_1: \mu_d \neq 0$

T-Value	P-Value
2.21	0.0403

## Paired t: meanTST2, meanSFS2

---

### Descriptive Statistics

Sample	N	Mean	StDev	SE Mean
meanTST2	20	2.6000	0.5448	0.1218
meanSFS2	20	2.6800	0.5996	0.1341

### Estimation for Paired Difference

Mean	StDev	SE Mean	95% CI for $\mu_d$
-0.0800	0.8154	0.1823	(-0.4616, 0.3016)

$\mu_d$ : mean of (meanTST2 - meanSFS2)

### Test

Null hypothesis	$H_0: \mu_d = 0$
Alternative hypothesis	$H_1: \mu_d \neq 0$

T-Value	P-Value
-0.44	0.6658

## Paired t: meanTST2, meanCP2

---

### Descriptive Statistics

Sample	N	Mean	StDev	SE Mean
meanTST2	19	2.5895	0.5577	0.1279
meanCP2	19	2.6947	0.4961	0.1138

### Estimation for Paired Difference

Mean	StDev	SE Mean	95% CI for $\mu_d$
-0.1053	0.5652	0.1297	(-0.3777, 0.1671)

$\mu_d$ : mean of (meanTST2 - meanCP2)

### Test

Null hypothesis	$H_0: \mu_d = 0$
Alternative hypothesis	$H_1: \mu_d \neq 0$

T-Value	P-Value
-0.81	0.4275

## Paired t: meanCS2, meanSFS2

---

### Descriptive Statistics

Sample	N	Mean	StDev	SE Mean
meanCS2	20	2.3600	0.6824	0.1526
meanSFS2	20	2.7400	0.5433	0.1215

### Estimation for Paired Difference

Mean	StDev	SE Mean	95% CI for $\mu_d$
-0.3800	0.7757	0.1734	(-0.7430, -0.0170)

$\mu_d$ : mean of (meanCS2 - meanSFS2)

### Test

Null hypothesis  $H_0: \mu_d = 0$

Alternative hypothesis  $H_1: \mu_d \neq 0$

T-Value	P-Value
-2.19	0.0411

## Paired t: meanCS2, meanCP2

---

### Descriptive Statistics

Sample	N	Mean	StDev	SE Mean
meanCS2	19	2.3368	0.6930	0.1590
meanCP2	19	2.7263	0.4954	0.1136

### Estimation for Paired Difference

Mean	StDev	SE Mean	95% CI for $\mu_d$
-0.3895	0.7586	0.1740	(-0.7551, -0.0239)

$\mu_d$ : mean of (meanCS2 - meanCP2)

### Test

Null hypothesis  $H_0: \mu_d = 0$

Alternative hypothesis  $H_1: \mu_d \neq 0$

T-Value	P-Value
-2.24	0.0381

## Paired t: meanSFS2, meanCP2

---

### Descriptive Statistics

Sample	N	Mean	StDev	SE Mean
meanSFS2	20	2.7000	0.5965	0.1334
meanCP2	20	2.7100	0.4876	0.1090

### Estimation for Paired Difference

Mean	StDev	SE Mean	95% CI for $\mu_d$
-0.0100	0.6973	0.1559	(-0.3363, 0.3163)

$\mu_d$ : mean of (meanSFS2 - meanCP2)

### Test

Null hypothesis	$H_0: \mu_d = 0$
Alternative hypothesis	$H_1: \mu_d \neq 0$

T-Value	P-Value
-0.06	0.9495

### APPENDIX III

This appendix lists the results of the paired t-tests by Years of Experience and by Job Type for the ten morale factor means in this study. Alpha = .1

#### Method

$\mu_1$ : mean of meanTRP2 when yrcat2 = <3 yrs  
 $\mu_2$ : mean of meanTRP2 when yrcat2 = >=3 yrs  
Difference:  $\mu_1 - \mu_2$

*Equal variances are assumed for this analysis.*

#### Descriptive Statistics: meanTRP2

yrcat2	N	Mean	StDev	SE Mean
<3 yrs	7	2.6429	0.5968	0.2256
>=3 yrs	12	2.9000	0.5784	0.1670

#### Test

Null hypothesis  $H_0: \mu_1 - \mu_2 = 0$   
Alternative hypothesis  $H_1: \mu_1 - \mu_2 \neq 0$

T-Value	DF	P-Value
-0.92	17	0.3683

#### Method

$\mu_1$ : mean of meanST2 when yrcat2 = <3 yrs  
 $\mu_2$ : mean of meanST2 when yrcat2 = >=3 yrs  
Difference:  $\mu_1 - \mu_2$

*Equal variances are assumed for this analysis.*

#### Descriptive Statistics: meanST2

yrcat2	N	Mean	StDev	SE Mean
<3 yrs	6	2.9833	0.2994	0.1222
>=3 yrs	12	3.2417	0.3942	0.1138

#### Test

Null hypothesis  $H_0: \mu_1 - \mu_2 = 0$   
Alternative hypothesis  $H_1: \mu_1 - \mu_2 \neq 0$

T-Value	DF	P-Value
-1.41	16	0.1786

## Method

$\mu_1$ : mean of meanRAT2 when yrcat2 = <3 yrs

$\mu_2$ : mean of meanRAT2 when yrcat2 = >=3 yrs

Difference:  $\mu_1 - \mu_2$

*Equal variances are assumed for this analysis.*

## Descriptive Statistics: meanRAT2

yr cat2	N	Mean	StDev	SE Mean
<3 yrs	6	2.8000	0.7239	0.2955
>=3 yrs	11	3.0364	0.4760	0.1435

## Test

Null hypothesis  $H_0: \mu_1 - \mu_2 = 0$

Alternative hypothesis  $H_1: \mu_1 - \mu_2 \neq 0$

T-Value	DF	P-Value
-0.82	15	0.4272

## Method

$\mu_1$ : mean of meanTS2 when yrcat2 = <3 yrs

$\mu_2$ : mean of meanTS2 when yrcat2 = >=3 yrs

Difference:  $\mu_1 - \mu_2$

*Equal variances are assumed for this analysis.*

## Descriptive Statistics: meanTS2

yr cat2	N	Mean	StDev	SE Mean
<3 yrs	7	2.2857	0.4634	0.1752
>=3 yrs	12	2.2167	0.6279	0.1813

## Test

Null hypothesis  $H_0: \mu_1 - \mu_2 = 0$

Alternative hypothesis  $H_1: \mu_1 - \mu_2 \neq 0$

T-Value	DF	P-Value
0.25	17	0.8038

## Method

$\mu_1$ : mean of meanTL2 when yrcat2 = <3 yrs

$\mu_2$ : mean of meanTL2 when yrcat2 = >=3 yrs

Difference:  $\mu_1 - \mu_2$

*Equal variances are assumed for this analysis.*

## Descriptive Statistics: meanTL2

yrcat2	N	Mean	StDev	SE Mean
<3 yrs	5	2.4800	0.8871	0.3967
>=3 yrs	10	2.6500	0.5276	0.1668

## Test

Null hypothesis  $H_0: \mu_1 - \mu_2 = 0$

Alternative hypothesis  $H_1: \mu_1 - \mu_2 \neq 0$

T-Value	DF	P-Value
-0.47	13	0.6457

## Method

$\mu_1$ : mean of meanCI2 when yrcat2 = <3 yrs

$\mu_2$ : mean of meanCI2 when yrcat2 = >=3 yrs

Difference:  $\mu_1 - \mu_2$

*Equal variances are assumed for this analysis.*

## Descriptive Statistics: meanCI2

yrcat2	N	Mean	StDev	SE Mean
<3 yrs	7	2.1714	0.9759	0.3689
>=3 yrs	14	2.5857	0.6724	0.1797

## Test

Null hypothesis  $H_0: \mu_1 - \mu_2 = 0$

Alternative hypothesis  $H_1: \mu_1 - \mu_2 \neq 0$

T-Value	DF	P-Value
-1.15	19	0.2661



## Method

$\mu_1$ : mean of meanTST2 when yrcat2 = <3 yrs

$\mu_2$ : mean of meanTST2 when yrcat2 = >=3 yrs

Difference:  $\mu_1 - \mu_2$

*Equal variances are assumed for this analysis.*

## Descriptive Statistics: meanTST2

yrcat2	N	Mean	StDev	SE Mean
<3 yrs	7	2.5143	0.6914	0.2613
>=3 yrs	13	2.6462	0.4737	0.1314

## Test

Null hypothesis  $H_0: \mu_1 - \mu_2 = 0$

Alternative hypothesis  $H_1: \mu_1 - \mu_2 \neq 0$

T-Value	DF	P-Value
-0.51	18	0.6189

## Method

$\mu_1$ : mean of meanCS2 when yrcat2 = <3 yrs

$\mu_2$ : mean of meanCS2 when yrcat2 = >=3 yrs

Difference:  $\mu_1 - \mu_2$

*Equal variances are assumed for this analysis.*

## Descriptive Statistics: meanCS2

yrcat2	N	Mean	StDev	SE Mean
<3 yrs	6	2.2333	0.6250	0.2552
>=3 yrs	14	2.4143	0.7210	0.1927

## Test

Null hypothesis  $H_0: \mu_1 - \mu_2 = 0$

Alternative hypothesis  $H_1: \mu_1 - \mu_2 \neq 0$

T-Value	DF	P-Value
-0.53	18	0.6005

### Method

$\mu_1$ : mean of meanSFS2 when yrcat2 = <3 yrs

$\mu_2$ : mean of meanSFS2 when yrcat2 = >=3 yrs

Difference:  $\mu_1 - \mu_2$

*Equal variances are assumed for this analysis.*

### Descriptive Statistics: meanSFS2

yr cat2	N	Mean	StDev	SE Mean
<3 yrs	7	2.6286	0.7432	0.2809
>=3 yrs	14	2.7143	0.5187	0.1386

### Test

Null hypothesis  $H_0: \mu_1 - \mu_2 = 0$

Alternative hypothesis  $H_1: \mu_1 - \mu_2 \neq 0$

T-Value	DF	P-Value
-0.31	19	0.7605

### Method

$\mu_1$ : mean of meanCP2 when yrcat2 = <3 yrs

$\mu_2$ : mean of meanCP2 when yrcat2 = >=3 yrs

Difference:  $\mu_1 - \mu_2$

*Equal variances are assumed for this analysis.*

### Descriptive Statistics: meanCP2

yr cat2	N	Mean	StDev	SE Mean
<3 yrs	7	2.7429	0.4276	0.1616
>=3 yrs	13	2.6923	0.5330	0.1478

### Test

Null hypothesis  $H_0: \mu_1 - \mu_2 = 0$

Alternative hypothesis  $H_1: \mu_1 - \mu_2 \neq 0$

T-Value	DF	P-Value
0.22	18	0.8318

## Method

$\mu_1$ : mean of meanTRP2 when jobcat2 = Gen Ed  
 $\mu_2$ : mean of meanTRP2 when jobcat2 = Sp/Other  
Difference:  $\mu_1 - \mu_2$

*Equal variances are assumed for this analysis.*

## Descriptive Statistics: meanTRP2

jobcat2	N	Mean	StDev	SE Mean
Gen Ed	11	2.8818	0.6030	0.1818
Sp/Other	8	2.7000	0.5757	0.2035

## Test

Null hypothesis  $H_0: \mu_1 - \mu_2 = 0$   
Alternative hypothesis  $H_1: \mu_1 - \mu_2 \neq 0$

T-Value	DF	P-Value
0.66	17	0.5174

## Method

$\mu_1$ : mean of meanST2 when jobcat2 = Gen Ed  
 $\mu_2$ : mean of meanST2 when jobcat2 = Sp/Other  
Difference:  $\mu_1 - \mu_2$

*Equal variances are assumed for this analysis.*

## Descriptive Statistics: meanST2

jobcat2	N	Mean	StDev	SE Mean
Gen Ed	11	3.2818	0.3737	0.1127
Sp/Other	7	2.9571	0.3101	0.1172

## Test

Null hypothesis  $H_0: \mu_1 - \mu_2 = 0$   
Alternative hypothesis  $H_1: \mu_1 - \mu_2 \neq 0$

T-Value	DF	P-Value
1.91	16	0.0739

## Method

$\mu_1$ : mean of meanRAT2 when jobcat2 = Gen Ed

$\mu_2$ : mean of meanRAT2 when jobcat2 = Sp/Other

Difference:  $\mu_1 - \mu_2$

*Equal variances are assumed for this analysis.*

## Descriptive Statistics: meanRAT2

jobcat2	N	Mean	StDev	SE Mean
Gen Ed	10	3.0200	0.6630	0.2097
Sp/Other	7	2.8571	0.4158	0.1571

## Test

Null hypothesis  $H_0: \mu_1 - \mu_2 = 0$

Alternative hypothesis  $H_1: \mu_1 - \mu_2 \neq 0$

T-Value	DF	P-Value
0.57	15	0.5753

## Method

$\mu_1$ : mean of meanTS2 when jobcat2 = Gen Ed

$\mu_2$ : mean of meanTS2 when jobcat2 = Sp/Other

Difference:  $\mu_1 - \mu_2$

*Equal variances are assumed for this analysis.*

## Descriptive Statistics: meanTS2

jobcat2	N	Mean	StDev	SE Mean
Gen Ed	11	2.2909	0.6252	0.1885
Sp/Other	8	2.1750	0.4892	0.1729

## Test

Null hypothesis  $H_0: \mu_1 - \mu_2 = 0$

Alternative hypothesis  $H_1: \mu_1 - \mu_2 \neq 0$

T-Value	DF	P-Value
0.44	17	0.6689

## Method

$\mu_1$ : mean of meanTL2 when jobcat2 = Gen Ed

$\mu_2$ : mean of meanTL2 when jobcat2 = Sp/Other

Difference:  $\mu_1 - \mu_2$

*Equal variances are assumed for this analysis.*

## Descriptive Statistics: meanTL2

jobcat2	N	Mean	StDev	SE Mean
Gen Ed	10	2.5900	0.6064	0.1917
Sp/Other	5	2.6000	0.7810	0.3493

## Test

Null hypothesis  $H_0: \mu_1 - \mu_2 = 0$

Alternative hypothesis  $H_1: \mu_1 - \mu_2 \neq 0$

T-Value	DF	P-Value
-0.03	13	0.9785

## Method

$\mu_1$ : mean of meanCI2 when jobcat2 = Gen Ed

$\mu_2$ : mean of meanCI2 when jobcat2 = Sp/Other

Difference:  $\mu_1 - \mu_2$

*Equal variances are assumed for this analysis.*

## Descriptive Statistics: meanCI2

jobcat2	N	Mean	StDev	SE Mean
Gen Ed	11	2.2182	0.9053	0.2730
Sp/Other	10	2.7000	0.5754	0.1820

## Test

Null hypothesis  $H_0: \mu_1 - \mu_2 = 0$

Alternative hypothesis  $H_1: \mu_1 - \mu_2 \neq 0$

T-Value	DF	P-Value
-1.44	19	0.1668

## Method

$\mu_1$ : mean of meanTST2 when jobcat2 = Gen Ed

$\mu_2$ : mean of meanTST2 when jobcat2 = Sp/Other

Difference:  $\mu_1 - \mu_2$

*Equal variances are assumed for this analysis.*

## Descriptive Statistics: meanTST2

jobcat2	N	Mean	StDev	SE Mean
Gen Ed	11	2.6091	0.5665	0.1708
Sp/Other	9	2.5889	0.5510	0.1837

## Test

Null hypothesis  $H_0: \mu_1 - \mu_2 = 0$

Alternative hypothesis  $H_1: \mu_1 - \mu_2 \neq 0$

T-Value	DF	P-Value
0.08	18	0.9369

## Method

$\mu_1$ : mean of meanCS2 when jobcat2 = Gen Ed

$\mu_2$ : mean of meanCS2 when jobcat2 = Sp/Other

Difference:  $\mu_1 - \mu_2$

*Equal variances are assumed for this analysis.*

## Descriptive Statistics: meanCS2

jobcat2	N	Mean	StDev	SE Mean
Gen Ed	10	2.2400	0.6450	0.2040
Sp/Other	10	2.4800	0.7315	0.2313

## Test

Null hypothesis  $H_0: \mu_1 - \mu_2 = 0$

Alternative hypothesis  $H_1: \mu_1 - \mu_2 \neq 0$

T-Value	DF	P-Value
-0.78	18	0.4466

## Method

$\mu_1$ : mean of meanSFS2 when jobcat2 = Gen Ed

$\mu_2$ : mean of meanSFS2 when jobcat2 = Sp/Other

Difference:  $\mu_1 - \mu_2$

*Equal variances are assumed for this analysis.*

## Descriptive Statistics: meanSFS2

jobcat2	N	Mean	StDev	SE Mean
Gen Ed	11	2.4909	0.6410	0.1933
Sp/Other	10	2.9000	0.4546	0.1438

## Test

Null hypothesis  $H_0: \mu_1 - \mu_2 = 0$

Alternative hypothesis  $H_1: \mu_1 - \mu_2 \neq 0$

T-Value	DF	P-Value
-1.67	19	0.1112

## Method

$\mu_1$ : mean of meanCP2 when jobcat2 = Gen Ed

$\mu_2$ : mean of meanCP2 when jobcat2 = Sp/Other

Difference:  $\mu_1 - \mu_2$

*Equal variances are assumed for this analysis.*

## Descriptive Statistics: meanCP2

jobcat2	N	Mean	StDev	SE Mean
Gen Ed	11	2.6364	0.5124	0.1545
Sp/Other	9	2.8000	0.4690	0.1563

## Test

Null hypothesis  $H_0: \mu_1 - \mu_2 = 0$

Alternative hypothesis  $H_1: \mu_1 - \mu_2 \neq 0$

T-Value	DF	P-Value
-0.74	18	0.4703