

Summer 2019

Teachers' Job Satisfaction: Content Area in Relation to Middle School Teachers' Job Satisfaction

Ashley Potter
Old Dominion University

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Running head: TEACHERS' JOB SATISFACTION

TEACHERS' JOB SATISFACTION:
CONTENT AREA IN RELATION TO MIDDLE SCHOOL TEACHERS' JOB
SATISFACTION

by

Ashley Potter
B.S. May 2014, Elizabeth City State University

A Research Study Presented to the Faculty of
Old Dominion University in Partial Fulfillment of the
Requirement for the Degree of
MASTER OF SCIENCE

OCCUPATIONAL AND TECHNICAL STUDIES

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Approved By
SEPS 636 Instructor
Tian Luo, Ph. D.

ABSTRACT

Retaining high quality teachers to counteract the teacher shortage happening across the nation has been a focus of the education system. Middle school educators require a certain skill set and knowledge to be effective at this vital time in their student's lives. These specific set of educators have not been exempt from the shortage statistic. A teachers' overall job satisfaction plays a major role in their decision making on a daily basis and their longevity in the profession. Although there are studies on teachers' job satisfaction, there is minimal research available on how the content area a middle school teacher teaches affects their job satisfaction.

This study explores the relationship between the variable of content area in relation to middle school teachers' job satisfaction. All core content teachers at Currituck County Middle and Moyock Middle School were sent a demographic, aJIG, and aJDI questionnaire to measure job satisfaction. There were 25 participants in the study: eight from English language, nine from math, four from science, and four from social studies. Using the responses and scoring from the aJIG and JDI, a one-way ANOVA was conducted, along with descriptive statistics. The results and conclusions of the ANOVA suggest that there is no relationship between the core content area a teacher teaches and their job satisfaction. The descriptive statistics showed differences in the means of responses between variables and content areas, with English language arts teachers ($M = 77.25$) scoring the highest mean score and science teachers ($M = 61.75$) scoring the lowest mean score, out of a total of 114 points.

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CHAPTER I

INTRODUCTION

National attention has been given to severe teacher shortages. Reports show that schools would resort to lowering standards to fill teaching openings, resulting in an increase in under-qualified teachers and low-performing schools (Ingersoll, 1999). Inadequate support from the school administration, low salaries, student discipline problems, and limited faculty input into school decision-making all contribute to higher rates of teacher turnover (Ingersoll, 1999). These factors have played a significant role in teacher job satisfaction in past research. However, few previous studies discuss subject or content area as a variable when assessing teachers' job satisfaction.

In research surrounding teacher job satisfaction, extrinsic factors (salary, administration support, and resources), intrinsic factors (classroom environment, lesson feedback), and demographic factors (age, gender) have all been shown to influence job satisfaction (Sharma & Jyoti, 2006). Middle level educators in particular have been reported to have lower levels of self-efficacy compared to elementary school teachers (Klassen & Chiu, 2010). Middle school educators make a conscious choice to work with young adolescents and advocate for them, because they understand the developmental uniqueness of this age group, the curriculum they teach, and effective learning and assessment strategies (National Middle School Association, 2003). Over the past decade, more attention has been given to the affective needs of young adolescents in their middle school careers (Powell & Van Zandt Allen, 2001) and teachers' sense of efficacy is one of the few teacher characteristics consistently related to student achievement (Hoy & Hannum, 1997). "Teachers who are committed to students, their colleagues, and their school; who are enthusiastic; who set high but achievable academic goals for students; and who

are cohesive and cooperative rather than critical and divisive are most likely to develop a climate conducive to student learning” (Hoy & Hannum, 1997, p. 298). It is vital for school districts and administrators to understand what contributes to job satisfaction and reference the research when developing ways to improve teacher retention and performance.

This study will explore content area as the main variable examined in relationship with teacher job satisfaction. The findings of this study could be used to inspire further discussion and development of resources for teachers to improve job satisfaction. The findings will also contribute to the research surrounding the importance of teacher job satisfaction on retention of teachers in the profession and overall morale.

Definition of Terms

The following are a list of terms used in this report. These definitions are given to assist the reader in understanding the study.

1. Middle School Teacher: a licensed professional, who teaches at a public school that offers instruction for students in grades 6 - 8 (Juvonen, Le, Kaganoff, Augustine, & Constant, 2004).
2. Core/Traditional Content Area: Subjects that are deemed a necessity for students to learn in order to be educated; mathematics, English language arts, social studies, and science (Bauer, 2016)
3. Job Satisfaction: Worker's sense of achievement and success on the job. It is generally perceived to be directly linked to productivity as well as to personal well-being. Job satisfaction implies doing a job one enjoys, doing it well and being rewarded for one's efforts. Job satisfaction further implies enthusiasm and happiness with one's work. Job

satisfaction is the key ingredient that leads to recognition, income, promotion, and the achievement of other goals that lead to a feeling of fulfillment (Kaliski, 2007)

4. English language arts (ELA): Courses students take and are tested on each year of middle school that emphasize: reading, reading comprehension, writing, spelling, or grammar.
5. Math: Courses students take and are tested on each year of middle school that emphasize: numbers, quantities, and calculations.
6. Science: Courses students take and are tested on each year of middle school that emphasize: the study of nature and the world around us and scientific method/inquiry.
7. Social Studies: Courses students take and are tested on each year of middle school that emphasize: the studies (civics, history, and geography) that deal with human relationships and the way society works ("Social Studies", n.d.).

Literature Review

When analyzing the current research as it pertains to teacher's job satisfaction, there are countless factors that could potentially correlate to job satisfaction. This study explores the relationship between the content area a middle school instructor teaches and their job satisfaction. This section will review existing research studies on the dynamics of middle school education, overall job satisfaction, content area and teacher job satisfaction, and the relationship between teacher job satisfaction and job performance.

Middle School Education

To grasp the current status of middle school education, it is beneficial to have the meaning behind the creation of the middle school concept. At the turn of the century, there were multiple society pressures such as immigration, increased industrialization, and higher education institutions demanding that pre-college courses start before 9th grade (Juvonen, 2004). These

pressures orchestrated the reorganizing of the elementary and high school model to include a junior high (Juvonen, 2004). Distaste for junior high schools then spawned the middle school era in the 1960s, which was reformed again in the 1980s due to an emphasis on research-based needs of young people (Midgley, 2002). These reforms resulted from the increased attention given to developmental changes adolescents are undergoing due to social redefinitions, cognitive development, pubertal development, school transitions, and the emergence of sexuality (Eccles et al., 1993).

A century later, there are over 15,000 public middle schools, mostly structured 6th to 8th grade, that serve roughly 9 million students (Juvonen, 2004). Juvonen (2004) supports Eccles et al. (1993) idea that middle schools were developed to help bridge the gap between elementary and high school, because research eluded to the fact that students were undergoing major physical, mental, and emotional development changes during this period. Research showed that middle school teachers needed to have more of a personal relationship with students during this developmental phase to help their social-emotional needs (Juvonen, 2004). With a wealth of research on the different psychological, physical, and emotional processes going on during adolescence, the National Middle School Association (2003) released a position paper recommending that “effective middle level educators must understand the developmental uniqueness of the age group, the curriculum they teach, effective learning and assessment strategies, and understand the dynamics of the ever-changing youth culture” (p. 9). By focusing on those factors, the National Middle School Association (2003) aspired to promote successful middle level schools that “enhanced the healthy growth of young adolescents as lifelong learners, ethical and democratic citizens, and increasingly competent, self-sufficient young people who are optimistic about the future” (p. 9). Middle level educators teach foundational skills that help

young adolescents successfully navigate the transition to higher education (Ellerbrock & Kiefer, 2014). From the research on the development and purpose of middle schools, it is substantiated that the role the teacher plays is important to adolescent success.

Teachers' Job Satisfaction

There is an ample amount of literature looking at the factors contributing to overall teacher job satisfaction, but it is helpful to think about them by splitting them up into intrinsic, extrinsic, and demographic variables. By splitting them up into those three groups, it will make it easier to understand while at the same time showing how many factors contribute to a teacher's job satisfaction. First, the variety of extrinsic factors that have been associated with teacher satisfaction, including salary, perceived support from administrators, school safety, and availability of school resources, among others will be expanded upon (Sharma & Jyoti, 2006). Ghenghesh (2013) surveyed 103 teachers and administrators at the British University of Egypt and found that five specific variables ranked the highest for teacher satisfaction with 70.9% saying students' 'interest in the module', 68.9% the working environment, 61.2% recognition by one's boss and others, 56.3% sufficient positive feedback, and 55.3% saying pay/salary. Even though other variables were measured, these were the five most important to teacher job satisfaction, showing that teachers could be more motivated if they feel that students are more actively involved, they are supported environmentally in their faculties/departments, they get adequate feedback, and the salaries are fair (Ghenghesh, 2013). In addition, Hosseinkhanzadeh, Hosseinkhanzadeh, and Taiebeh (2013) found 123 middle school teachers also showed similar factors related to teacher job satisfaction. Using a 24-item questionnaire, the researchers found there was a significant positive correlation between organizational culture and job satisfaction (Hosseinkhanzadeh et al., 2013). More specifically, they determined that there was significant

correlational relationships between leader style, risk, situation conflict, teacher integration, support management, and employee reward/salary with job satisfaction (Hosseinkhanzadeh et al., 2013). Finally, Perrachione, Rosser, and Peterson (2008) conducted a survey of 201 elementary school teachers from Missouri and found that only extrinsic factors such as role overload, low salary, minimal parent support, student behavior, and large class size were found to influence teachers' dissatisfaction.

Secondly, intrinsic factors dealing with teacher job satisfaction that were mentioned in the literature included feedback from classroom activities such as daily interactions with students, student characteristics, and perceptions over the classroom environment (Sharma & Jyoti, 2006). More specifically, the two most prominent intrinsic variables selected by the 103 teachers in the Ghenghesh (2013) study were a good relationship with people they work with and responsibility within the job. In addition, seeing changes in students' performance and an overall sense of achievement ranked third and fourth respectively to teacher job satisfaction. (Ghenghesh, 2013). Expanding on responsibility within the job, Liu and Ramsey (2008) found that "stress from poor work conditions had the strongest influence on teachers' job satisfaction and noted that inadequate time for planning and preparation and a heavy teaching workload reduced satisfaction from teaching" (p. 1173). As noted by Skaalvik and Skaalvik (2010) in their research among primary and middle school teachers in Norway, teacher' job satisfaction and self-efficacy have a strong positive relationship. They supported that teacher's autonomy, good interpersonal relations between teachers and parents, and high time pressure were the most important factors that influence teachers' job satisfaction. Finally, Karabiyik and Korumaz (2014) conducted a study of 83 teachers from different grade levels in Turkey found a significant and positive relationship between teachers' self-efficacy perception and job satisfaction level.

Similar to professionals in any other occupation, “teacher job satisfaction has been related to demographic variables including age, education, marital status, and gender” (Sharma & Jyoti, 2006, p. 350). Bolin’s (2007) study of 434 middle school teachers in China found personal characteristics such as age, length of service, and academic credentials are all correlated significantly with overall job satisfaction. Even though a variety of demographic variables were accessed in numerous studies, cross-validated regression results from a study of 954 teachers from the Virginia Department of Education suggested that work-related variables, such as leadership support, role conflict, role ambiguity, and stress, are better predictors of commitment and job satisfaction than are demographic variables (Billingsley & Cross, 1992). From this research, ample evidence has been provided to support that a variety of extrinsic, intrinsic, and demographic variables have been shown to impact job satisfaction, so an intrinsic variable such as content area taught could have an impact on job satisfaction.

Content Area and Job Satisfaction

There are numerous studies to support extrinsic, intrinsic, and demographic factors that influence middle school teacher’s job satisfaction, however limited research has considered content area or subject taught. Since there is very little data or research on content area, this specific study could help provide value to the education system as a whole. Out of the studies that were examined, only two studies had considered the relationship between content area and job satisfaction. These two studies reported conflicting results about the relationship between these variables. Bishay (1996) conducted a survey of 50 teachers at the Bronx High School of Science in New York City looking at many different factors affecting teacher job satisfaction. Along with several others, Bishay (1996) concluded from ANOVAs that “mathematics and science teachers generally gave more positive responses than English and social studies teachers

as well as higher levels of concentration and challenge than teachers of English and social studies” (p. 152). In addition, Mathematics and science teacher’s responses indicated significantly higher ($p < .01$) measures of enjoyment, skill, challenge, happiness, involvement, stimulation, and sociability than their other humanities peers (Bishay, 1996). Bishay (1996) concluded from the specific surveys that mathematics and science teachers scored the highest in self-esteem, importance of teaching, individual success at teaching, and they scored lower in their desire to be doing something else. On the other hand, a larger-scale study of 434 junior and senior Middle School Teachers from Beijing found satisfaction among teachers teaching core courses was lower than that of the other teachers on all five aspects of job satisfaction, which were measured by self-fulfillment, job intensity, income, relations with leadership, and relations with colleagues in this particular study (Bolin, 2007). Bolin (2007) expected teachers of core courses to get more attention and more recognition for their achievements, and therefore have greater satisfaction in self-fulfillment and leadership relations.

Job Satisfaction and Job Performance

Since job satisfaction is the main variable that is being measured in this study, it is beneficial to investigate the relationship between job satisfaction and job performance in terms of student academic performance and teacher retention rates. This could assist in understanding why teacher job performance is actually important to monitor. “It is expected that a school which has teachers with high level of job satisfaction gives qualified education and brings up successful students” (Demirtas, 2010, p.1069). Demirel (2014) surveyed 406 teachers at preschool, primary, and secondary schools, and found that a high level of individual job satisfaction positively affects both job performance and life satisfaction. In Rivers State of Nigeria, Ololube (2006) surveyed 680 full-time teachers and principals and revealed that teacher

job satisfaction has a great impact on teaching-specific performance. Ololube (2006) continues by stating, "Job satisfaction and motivation are very essential to the continuing growth of educational systems around the world and they rank alongside professional knowledge and skills, center competencies, educational resources as well as strategies, in genuinely determining educational success and performance for students" (p. 1). A study administered by Caprera et al. (2006) included over 2000 teachers from 75 Italian junior high schools who completed job satisfaction surveys, which showed a positive relationship between the teacher's job satisfaction and student's academic achievement in the form of average final grades (controlling for previous levels of achievement). Finally, it was found that teachers who experience greater perceived teaching efficacy and job satisfaction encourage greater achievement, and self-efficacy among their students (Collie et al., 2012).

Higher job satisfaction for teachers can improve teacher retention and encourage the best prospects to enter the field since teacher retention is correlated with job satisfaction and attrition rates are a serious concern for public education (Knox & Anfara, 2013). More specifically, teachers with high job satisfaction are more likely to want to improve their teaching efforts and to engage in continuing education (Knox & Anfara, 2013). One specific statistic that shows how valuable job satisfaction is that the cumulative attrition rate after five years of teaching is approximately 46% (Knox & Anfara, 2013). Teachers who are dissatisfied with their work display lower commitment and are at greater risk for leaving the profession (Klassen & Chiu, 2010).

Purpose of Study

The purpose of this study is to explore the relationship between middle school teachers' job satisfaction and the core content area they teach. The research question that guides the study

is: what's the relationship between middle school core subject teachers' content area and their job satisfaction? Since only two studies could be found where specific content area and job satisfaction were explored, this study hopes to shed light upon these two variables and what solutions there could be to improve the education system for students and teachers. After gathering the literature on job satisfaction and job performance, it is reinforced that job satisfaction for teachers needs to be addressed by administrators to allow for improved school and student academic performance and greater retention of teachers.

CHAPTER III

METHODS

The research question that guides the study is “What’s the relationship between middle school core subject teachers’ content area and their job satisfaction?” The purpose of this study is to explore the relationship between job satisfaction and middle school teachers’ content area. This chapter will cover the methodology used for this study, including sections on the design, population and sample, instrument, measure, procedure, and analytic approach.

Research Design

This is a non-experimental quantitative study to explore the relationship between middle school core subject teachers’ content area and the teachers’ job satisfaction. This cross-sectional study (Creswell, 2019) will examine current attitudes and beliefs by utilizing a survey design at one point in time, with a web-based questionnaire in the form of an online version of the abridged Job Descriptive Index (aJDI) and the abridged Job in General (aJIG). The sample includes middle school teachers from two middle schools who teach either mathematics, science, social studies, or English language arts to students in 6-8th grade.

Population and Sample

The target population of this study was middle school teachers in the United States who teach one or more of the four core subjects; math, English language arts, social studies, or science. The United States Department of Labor Bureau of Labor Statistics (2019) reported that in 2016 there was 630,300 total middle school teachers. More specifically, the average U.S. teacher is white, 42 years old, has 14 years of experience, and 77% of U.S. teachers are female (Loewus, 2017). For this study, the average age was 40.88 years old, 92% were female, 11 had Bachelor’s Degrees, 14 had Graduate Degrees, 88% were Caucasian, 8% were black, and 4%

were multiple ethnicities Caucasian/Asian.

The study utilizes a non-probability convenience sample, drawn from two middle schools, Moyock Middle School and Currituck County Middle School, located in eastern North Carolina. Web-based questionnaires were sent to all 40 6th to 8th grade teachers in the two middle schools that taught one of the core subjects. The questionnaire was administered to the group and then a follow up reminder was sent to those who had not responded, one, two, and three weeks after the initial questionnaire was administered. The study had 25 teachers respond, eight from English language, nine from math, four from science, and four from social studies. Overall, there was a 60% response rate. No compensation was given for participation in the study.

Instrument

This study used a demographic and two job satisfaction questionnaires as the instruments for data collection. The teacher demographic questionnaire contained five questions assessing age, gender, race/ethnicity, highest completed level of education, and specifies what core content they teach. This questionnaire was administered to teachers to identify the trends of job satisfaction within their content groups.

The abridged Job Descriptive Index (aJDI) and abridged Job in General (aJIG) was used to measure the job satisfaction of core content middle school teachers. The original JDI was developed by Smith et al. (1987), who wanted to measure job satisfaction using words and is further described by Tasiso & Giannouli (2017) as the most widespread and popular questionnaire to measure job satisfaction. The aJDI and aJIG was developed by Balzer et al. (1997) and was supported by a national sample (n=1,534) and a sample of university workers (n=636) (Stanton et al., 2002). In a study, Russell et al. (2004) concluded that the aJDI

successfully preserved both the internal consistency and validity relations of the original scale. Russell et al. (2004) presents a series of studies on the aJIG that yielded alpha coefficients no smaller than .85, which is larger than the minimum estimated reliabilities for comparable single-item measures. The current version of aJDI contains 30 close-ended items that are broken up into five different categories that relate to aspects of employee satisfaction. The five factors measure, the general feeling about the job, how satisfied is the employee with supervision, how adequate is the pay, how satisfied is the employee with colleagues, and how the employee perceives growth or promotion within the organization (Tasiso & Giannouli, 2017). The aJIG has one category with eight closed-ended items and measures overall satisfaction with the job. Stanton et al. (2002) elaborates more on the creation of the abridged version of the aJDI by discussing how a systematic scale-reduction technique was employed to decide which items to cut out of the original 72, and then a second test was run with the abridged subscales which indicated that the association among the five abridged subscales and between the five abridged subscales and other measures were substantially preserved. Figure 1 shows the correlations among the JDI facets by providing Cronbach's coefficient alphas.

JDI Facets	Cronbach's coefficient alpha	Work	Pay	Promotion	Supervision	CoWorkers	JIG
Work	.90	1.00					
Pay	.88	0.34	1.00				
Promotion	.91	0.37	0.31	1.00			
Supervision	.92	0.42	0.31	0.41	1.00		
Co-Workers	.92	0.47	0.31	0.26	0.47	1.00	
Job in General	.92	0.69	0.45	0.42	0.58	0.54	1.00

* All correlations are significant at the 0.01 level (2-tailed).

Figure 1. Correlations among the JDI facets. Reprinted from *The Job Descriptive Index and Job in General Quick Reference Guide* (p. 15), by M.R.H. Brodke et al., 2009, Bowling Green, OH.

A Cronbach's alpha was conducted during this study and yielded an overall 0.773, and a Cronbach's alpha score of 0.859 based on standardized items.

In this study, five domains under general job satisfaction were examined as dependent variables: a) work, b) pay, c) promotion, d) supervision, and e) coworkers. The variable work means how satisfied and intrigued middle school teachers are with their daily job. The pay variable refers to how a middle school teachers' income satisfies them as it relates to their quality of life. The variable of promotion means how satisfied middle school teachers are with the opportunities they have to advance in the education field. The variable of supervision means the level of satisfaction that teachers have with the effectiveness of their supervisors. The coworkers' variable can be defined as how satisfied middle school teachers are with their interrelationships with colleagues they meet or interact with on a daily basis. Participants responded to each item by indicating "Y" (yes) 3 points, "N" (no) 0 points, or "?" (don't know) 1 point, to each question. According to the "Quick Reference Guide" provided by Bowling Green State University, the aJDI and aJIG are scored so that high values indicate high levels of satisfaction, this requires reverse scoring for responses that are worded negatively (Brodke et al., 2009). When scoring the reverse items, yes responses will change from 3 to 0 points, no responses will change from 0 to 3 points, and "?" will stay one point. A total positive score was calculated by summing up the response points after reverse scoring. Figure 2 provides an

example of how the questionnaire was scored. The demographic questionnaire can be found in Appendix A and the aJDI and aJIG can be found in Appendix B.

WORK ON PRESENT JOB

Think of the work you do at present. How well does each of the following words or phrases describe your work?

Circle: 3 for "Yes" if it describes your work
 0 for "No" if it does not describe it
 1 for "?" if you cannot decide

	Yes	No	?
Fascinating	3	0	1
Routine	3	0	1
Satisfying	3	0	1
Boring	3	0	1
Good	3	0	1
Gives sense of accomplishment	3	0	1
Respected	3	0	1
Exciting	3	0	1
Rewarding	3	0	1
Useful	3	0	1
Challenging	3	0	1
Simple	3	0	1
Repetitive	3	0	1
Creative	3	0	1
Dull	3	0	1
Uninteresting	3	0	1
Can see results	3	0	1
Uses my abilities	3	0	1

Figure 2. Example of scoring with an 18-item JDI work facet. Reprinted from *The Job*

Descriptive Index and Job in General Quick Reference Guide (p. 6), by M.R.H. Brodke et al., 2009, Bowling Green, OH. Copyright 2009 by Bowling Green State University

Procedure

This is a non-experimental, quantitative study to explore the relationship between middle school teachers' job satisfaction and the core content area they teach. Participants of the study include middle school teachers from two middle schools located in eastern North Carolina, who teach a core content subject; English language arts, math, science, or social studies. The measures for the study, the abridged Job Descriptive Index (aJDI) and the abridged Job in General (aJIG), created by Balzer et al. (1997), were administered one time to participants.

Participants were sent follow up email reminders, Appendix E, and had three weeks to respond. The aJDI is comprised of 30 close-ended items and the aJIG has eight close-ended items. The results of the study will explore the relationship between teachers' job satisfaction and content areas.

The data was collected from the demographic, the aJDI, and aJIG questionnaires and kept confidential. An information sheet and both questionnaires, were sent via a recruitment email to all content area teachers in each school building that were participating in the study. All participants received and completed the same questionnaires. In the case of non-respondents, a weekly reminder email was sent to those who have not responded. The consent form can be found in Appendix C, and the recruitment email for this study can be found in Appendix D.

Data Analysis

The synthesis of the analytic approach for this study is detailed in Table 1. This study is to explore the relationship between middle school core subject teachers' content area and their job satisfaction. The independent variable is the content area that the middle school teacher teaches, English language arts, mathematics, science, or social studies. The dependent variable of job satisfaction, is continuous. SPSS software was used to input and compute data. An ANOVA was chosen based on the comparison of four independent variable groups to a single variable of job satisfaction. An ANOVA was run to determine if the average level of satisfaction is significantly different for English language arts, math, science, and social studies, compared to the overall mean of job satisfaction. This provided insight into whether job satisfaction varies between the subgroups of content area.

Table 1

Synthesis of Analytic Approach

Research Question	Independent Variable(s)	Dependent Variable	Analytic Technique
What is the relationship between a middle school core subject teachers' content area and their job satisfaction?	The core content middle school teachers teach. (English language arts, mathematics, science, social studies) (categorical)	The teachers' job satisfaction. (positive to negative) (continuous)	ANOVA

Validity

The study's internal validity is strengthened by administering one web-based questionnaire to all participants at the same time. Internal validity could be weakened by the three-week time frame that occurred from sending the initial questionnaire to the last follow up reminder. The study's external validity may be weakened by using a non-probability convenience sample of teachers and the results cannot be generalized to a greater population.

CHAPTER III

RESULTS

The purpose of this study was to explore the relationship between job satisfaction and a middle school teachers' content area. A one-way ANOVA was run to calculate whether there was a statistically significant difference between the means of the independent variable groups of content area. The results of which is given in Table 2.

Table 2

ANOVA

	<i>F</i>	<i>p</i>
aJIG	0.076	0.972
Coworker	1.072	0.382
Work	0.129	0.942
Pay	0.882	0.466
Promotion	2.83	0.063
Supervision	0.241	0.866
Total	0.493	0.691

Note. Findings that approach statistical significance depends on the p value: significant $p < 0.05$

The ANOVA results suggest that there is no statistically significant difference between the four content areas and all of the evaluation items on the aJIG and aJDI questionnaires. The ANOVA test results on the total job satisfaction variable indicates that there is not a statistically significant difference on overall job satisfaction of middle school teachers between the four content areas ($F = 0.493$, $p < 0.691$).

However, when looking at a descriptive table, there are differences between teachers' subject areas and their responses to the job satisfaction questionnaires (See Table 3). Table 3 provides the number of respondents to each question, the minimum score of each variable, the

maximum score of each variable, the mean, standard deviation, and variance of the data. The descriptive table is disaggregated by content area. Based on means, the data showed that English language arts teachers had the highest overall job satisfaction, followed by social studies, math, and then science. English teachers also had the largest standard deviation and variance across all facets of job satisfaction and overall job satisfaction, excluding the supervision measure. Overall, science teachers had the least amount of variance in their responses. The aJIG questionnaire closely mirrored the mean responses for overall job satisfaction. More specifically, social studies scored the highest followed by English language arts, math, and science.

Teachers had the highest standard deviation when responding to the supervision variable, and showed the least standard deviation when responding to the coworker variable. Science scored the lowest in every variable of job satisfaction, except for coworkers. The variable measuring promotion was the only facet where the means of the four content areas are ranked in the same order as overall job satisfaction. Out of the aJDI variables, coworkers ($M = 15.52$) had the most positive responses, with work ($M = 14.6$) and supervision ($M = 13$) having similarly high mean scores. The aJDI variables of pay ($M = 5.8$) and promotion ($M = 5.8$) had the lowest mean scores overall.

Table 3

Descriptive Statistics

Subject		aJIG	Coworkers	Work	Pay	Promotion	Supervision	Total
English	Mean	18.88	14.13	14.25	7.75	8.5	13.75	77.25
	N	8	8	8	8	8	8	8
	Std. Deviation	7.661	4.673	6.159	6.563	7.309	6.042	33.062
	Variance	58.696	21.839	37.929	43.071	53.429	36.5	1093.071
	Minimum	1	6	0	0	0	0	7
	Maximum	24	18	18	18	18	18	114
Math	Mean	18.22	16.33	15.22	6	3.33	12.56	71.67
	N	9	9	9	9	9	9	9
	Std. Deviation	4.868	2.179	2.906	4.743	0.707	6.948	11.726
	Variance	23.694	4.75	8.444	22.5	0.5	48.278	137.5
	Minimum	8	12	12	0	3	0	55
	Maximum	24	18	18	15	5	18	96
Science	Mean	17.5	15	13.75	2.75	1.75	11	61.75
	N	4	4	4	4	4	4	4
	Std. Deviation	5.196	0.816	4.031	2.062	1.5	8.124	10.145
	Variance	27	0.667	16.25	4.25	2.25	66	102.917
	Minimum	10	14	9	0	0	3	52
	Maximum	22	16	18	5	3	18	75
Social Studies	Mean	19.25	17	14.75	4.5	5	14.5	75
	N	4	4	4	4	4	4	4
	Std. Deviation	4.646	2	2.754	5.745	2.828	4.726	12.987
	Variance	21.583	4	7.583	33	8	22.333	168.667
	Minimum	13	14	12	0	3	8	61
	Maximum	24	18	18	12	9	18	90
Total	Mean	18.48	15.52	14.6	5.8	5	13	72.4
	N	25	25	25	25	25	25	25
	Std. Deviation	5.606	3.137	4.143	5.276	4.89	6.252	20.656
	Variance	31.427	9.843	17.167	27.833	23.917	39.083	426.667
	Minimum	1	6	0	0	0	0	7
	Maximum	24	18	18	18	18	18	114

The total maximum points possible on the aJIG and aJDI is 114, with one English language arts respondent scoring the maximum 114 points. Zero is the minimum points possible and four out of six of the variables (66.67%) had at least one respondent who scored a "0" when responding. Pay was the only variable to receive a measure of zero in each one of the four content areas. This study produced a minimum total score of seven from one respondent in the English language arts variable. The data range of overall teacher job satisfaction scores was 107.

CHAPTER IV

DISCUSSION

The previous research shows that retention rates for teachers are low and that job satisfaction is affecting the retention rates and performance. Keeping effective high-quality teachers in the classroom is a goal of many organizations and districts.

The research question “what’s the relationship between middle school core subject teachers’ content area and their job satisfaction?” is what guided this study. The results of the one-way ANOVA concluded that there was no statistically significant difference between the content areas and the variables that evaluated a teachers’ overall job satisfaction. We can conclude from these results that a middle school teachers’ content area does not affect their overall job satisfaction.

However, the descriptive statistics provided insight into the means and standard deviations shown by the variables and the content areas. When looking at the extrinsic factors of pay, promotion, and supervision that were measured in this study, there are commonalities between the order of the content area means and the final rankings of total job satisfaction for the content areas. Hosseinkhanzadeh et al. (2013) determined that extrinsic factors have significant correlational relationships with job satisfaction and this study shows that the teachers in each content area answered the extrinsic questions similarly to how they scored on the entire questionnaire. It is worth mentioning that the only variable that was identical to the content area rankings of overall job satisfaction was the facet dealing with promotion opportunities. This further supports Ghenghesh’s (2013) research where both pay/salary and recognition by boss and others were cited in the top five variables that affected teacher job satisfaction. This data may

suggest that extrinsic factors are closer aligned to a middle school teachers' job satisfaction than intrinsic factors.

The intrinsic factors on the aJDI were coworker relationships and the employee's general feelings about their work. The means for these intrinsic variables were not as aligned with the overall mean rankings of content area's job satisfaction. The data from these variables contradicts Skaalvik and Skaalvik's (2010) research that concluded interpersonal relations between teachers was one of the most influential factors when looking at teachers' job satisfaction. English language arts had the highest overall score for job satisfaction, but was the least satisfied when it came to coworkers and second to last when it came to general feelings about their work. Math educators scored the highest when it came to their general feelings on how satisfied they are with their job, but ranked third when looking at the means of overall job satisfaction. This data shows that the variables of coworker relations and general feelings about work are not representative of teachers' overall job satisfaction.

As an exploratory study on content area and middle school teachers' job satisfaction, this research showed that when looking at the average score by content area, English language arts has the highest job satisfaction, followed by social studies, math, and then science. This goes against Bishay's (1996) previous research that concluded that math and science teachers showed higher job satisfaction than English language arts and social studies teachers. Science teachers scored the lowest on five out of the six variables, ranking them last for overall job satisfaction. This would suggest that science teachers are the least satisfied out of the four content areas. Math teachers ranked third overall for job satisfaction and only ranked first or second in the variables of coworkers, work, and pay. This means that 50% of the time math was ranked in the

bottom two for each variable of job satisfaction, and 50% of the time both math and science had means that were less than English language Arts and social studies.

Recommendations

The results and conclusion of this study suggest there is not a significant relationship between a middle school teacher's core content area and their job satisfaction. Several factors may have contributed to these findings. This study may not support Bishay (1996) due to it being limited to only two middle schools in eastern North Carolina, Moyock Middle School and Currituck County Middle School. Admittedly, this study's small sample size of 25 participants, each subject area having a different number of participants that completed the questionnaire, and the difference of average ages between the content areas ranging from 39 to 43 years old, may have affected the outcomes.

The researcher recommends the following, based on the data collected from the two middle schools:

1. Further research should be conducted with a larger and more diverse sample size of teachers, throughout multiple middle schools and varying states during the same point in the school year.
2. Further research should be conducted with the same number of participants throughout all four subject areas to ensure that each subject is represented equally.
3. Additional research should be conducted using qualitative data to provide a more thorough analysis of middle school teachers' job satisfaction.
4. Additional research should be conducted to explore if promotion opportunities has the largest influence on middle school teachers' job satisfaction.

5. Further research should be conducted to explore the relationship between English language arts teachers having the lowest overall mean score for the coworker variable and the highest overall score for job satisfaction.
6. Additional research should be conducted to explore if intrinsic or extrinsic variables have a larger impact on a middle school teachers' job satisfaction between core content areas.

References

- Balzer, W. K., Kihm, J. A., Smith, P. C., Irwin, J. L., Bachiochi, P. D., Robie, C., Sinar, E. F., & Parra, L. F. (1997). User's manual for the job descriptive index (JDI: 1997 Revision) and the job in general (JIG) scales. Bowling Green, OH: Bowling Green State University.
- Bauer, S. W. (2016, July 12). Core subjects: What are they? Retrieved April 14, 2019, from <https://welltrainedmind.com/a/core-subjects-what-are-they/>
- Billingsley, B. S., & Cross, L. H. (1992). Predictors of commitment, job satisfaction, and intent to stay in teaching: A comparison of general and special educators. *The Journal of Special Education, 25*(4), 453-471.
- Bishay, A. (1996). Teacher motivation and job satisfaction: A study employing the experience sampling method. *Journal of Undergraduate Sciences, 3*(3), 147-155.
- Bolin, F. (2007). A study of teacher job satisfaction and factors that influence it. *Chinese Education & Society, 40*(5), 47-64.
- Brodke, M. R., Sliter, M. T., Balzer, W. K., Gillespie, J. Z., Gillespie, M. A., Gopalkrishnan, P., Yankelevich, M. (2009). *The Job Descriptive Index and Job in General: Quick reference guide*. Bowling Green, OH: Department of Psychology Bowling Green State University.
- Caprara, G. V., Barbaranelli, C., Steca, P., & Malone, P. S. (2006). Teachers' self-efficacy beliefs as determinants of job satisfaction and students' academic achievement: A study at the school level. *Journal of school psychology, 44*(6), 473-490.
- Collie, R. J., Shapka, J. D., & Perry, N. E. (2012). School climate and social-emotional learning: Predicting teacher stress, job satisfaction, and teaching efficacy. *Journal of Educational Psychology, 104*(4), 1189.
- Creswell, J. W., & Guetterman, T. C. (2019). *Educational research: Planning, conducting, and*

- evaluating quantitative and qualitative research*. New York, NY: Pearson.
- Demirel, H. (2014). An investigation of the relationship between job and life satisfaction among teachers. *Procedia-Social and Behavioral Sciences*, *116*, 4925-4931.
- Eccles, J. S., Midgley, C., Wigfield, A., Buchanan, C. M., Reuman, D., Flanagan, C., & Iver, D. M. (1993). Development during adolescence: The impact of stage–environment fit on young adolescents experiences in schools and in families (1993). *The Evolution of Psychology: Fifty Years of the American Psychologist.*, *48*(2), 475-501.
doi:10.1037/10254-034
- Ellerbrock, C. R., & Kiefer, S. M. (2014). Supporting young adolescents' middle-to-high-school transition by creating a ninth-grade community of care: Implications for middle grades educators. *Middle School Journal*, *45*(3), 3-10. doi:10.1080/00940771.2014.11461886
- Ghenghesh, P. (2013). Job satisfaction and motivation-what makes teachers tick?. *Journal of Education, Society and Behavioural Science*, 456-466.
- Hosseinkhanzadeh, A. A., Hosseinkhanzadeh, A., & Yeganeh, T. (2013). Investigate relationship between job satisfaction and organizational culture among teachers. *Procedia-Social and Behavioral Sciences*, *84*, 832-836.
- Hoy, W. K., & Hannum, J. W. (1997). Middle school climate: An empirical assessment of organizational health and student achievement. *Educational Administration Quarterly*, *33*(3), 290-311.
- Ingersoll, R. M. (2001). Teacher turnover, teacher shortages, and the organization of schools. *PsycEXTRA Dataset*, 1-29. doi:10.1037/e384452004-001
- Juvonen, J., Le, V., Kaganoff, T., Augustine, C., & Constant, L. (2004). Promoting teacher

- competence through training. In *focus on the wonder years: Challenges facing the american middle school* (pp. 9-27,73-83). Santa Monica, CA; Arlington, VA; Pittsburgh, PA: RAND Corporation. Retrieved from [://www.jstor.org/stable/10.7249/mg139edu.16](http://www.jstor.org/stable/10.7249/mg139edu.16)
- Kaliski, B.S. (2007). Encyclopedia of Business and Finance, Second edition, Thompson Gale, Detroit, p. 446
- Karabiyik, B., & Korumaz, M. (2014). Relationship between teacher's self-efficacy perceptions and job satisfaction level. *Procedia-Social and Behavioral Sciences*, 116, 826-830.
- Klassen, R. M., & Chiu, M. M. (2010). Effects on teachers' self-efficacy and job satisfaction: Teacher gender, years of experience, and job stress. *Journal of educational Psychology*, 102(3), 741.
- Knox, J. A., & Anfara Jr, V. A. (2013). Understanding job satisfaction and its relationship to student academic performance. *Middle School Journal*, 44(3), 58-64.
- Liu, X. S., & Ramsey, J. (2008). Teachers' job satisfaction: Analyses of the teacher follow-up survey in the United States for 2000 –2001. *Teaching and Teacher Education*, 24,.
- Loewus, L. (2017). The Nation's teaching force is still mostly white and female. *Education Week*, 37(1), 11. Retrieved from <https://www.edweek.org/ew/articles/2017/08/15/the-nations-teaching-force-is-still-mostly.html>
- Midgley, C. (2002). A goal theory perspective on the current status of middle level schools. In T. C. Urdan & F. Pajares (Authors), *Adolescence and education: General issues in the education of adolescents* (pp. 33-60). Greenwich, CT: Information Age Pub.
- National Middle School Association. (2003). *This we believe: Successful schools for young adolescents: A position paper of the National Middle School Association*. National

Middle School Association.

Ololube, N. P. (2006). Teachers' job satisfaction and motivation for school effectiveness: An assessment. *Online Submission*.

Perrachione, B. A., Rosser, V. J., & Petersen, G. J. (2008). Why Do They Stay? Elementary Teachers' Perceptions of Job Satisfaction and Retention. *Professional Educator, 32*(2), n2.

Powell, R., & Van Zandt Allen, L. (2001). Middle school curriculum. *The handbook of research in middle level education, 107-124*.

Russell, S. S., Spitzmüller, C., Lin, L. F., Stanton, J. M., Smith, P. C., & Ironson, G. H. (2004). Shorter can Also be Better: The Abridged Job in General Scale. *Educational and Psychological Measurement, 64*(5), 878–893. <https://doi.org/10.1177/0013164404264841>

Sharma, R. D., & Jyoti, J. (2006). Job satisfaction among school teachers. *IIMB Management Review, 18*(4), 349-363.

Skaalvik, E. M., & Skaalvik, S. (2014). Teacher self-efficacy and perceived autonomy: Relations with teacher engagement, job satisfaction, and emotional exhaustion. *Psychological reports, 114*(1), 68-77.

Smith, P. C., Balzer, W., Brannick, M., Chia, W., Eggleston, S., Gibson, W., Johnson, B., Josephson, H., Paul, K., Reilly, C., & Whalen, M. (1987). The revised JDI: A facelift for an old friend. *The Industrial – Organisational Psychologist, 24*, 31-33.

Social Studies [Def. 3]. (n.d.). In *Merriam-Webster's online dictionary*. Retrieved from <https://www.merriam-webster.com/dictionary/social%20studies>

Stanton, J. M., Sinar, E. F., Balzer, W. K., Julian, A. L., Thoresen, P., Aziz, S., ... & Smith, P. C.

(2002). Development of a compact measure of job satisfaction: The abridged Job descriptive index. *Educational and Psychological Measurement*, 62(1), 173-191. doi:10.1177/001316440206200112

Tasios, T., & Giannouli, V. (2017). Job descriptive index (JDI): Reliability and validity study Greece. *Archives of Assessment Psychology*, 7(1), 31-61.

United States Department of Labor, Bureau of Labor Statistics. (2019). Middle school teachers. *Occupational Outlook Handbook*. Retrieved from <https://www.bls.gov/ooh/education-training-and-library/middle-school-teachers.htm>

APPENDIX A: Content Teachers' Questionnaire

The purpose of this questionnaire is to explore the relationship between job satisfaction and middle school teachers' content area. The questionnaire should take 5 -10 minutes to complete. There are no correct or incorrect responses. Please read each item carefully and answer all items. Highlight responses or type in answers. All responses will be kept confidential.

1. What is your gender?
 - Male
 - Female
 - Other (please specify) _____

2. What is your age? _____

3. What core subject do you teach? If it is more than one, please choose the one you have more classes of or have taught longer.
 - English language arts
 - math
 - science
 - social studies

4. Which race/ethnicity best describes you? (Please choose only one.)
 - American Indian or Alaskan Native

- Asian / Pacific Islander
- Black or African American
- Hispanic
- White / Caucasian
- Multiple ethnicity / Other (please specify)

5. What is the highest level of school you have completed or the highest degree you have received?

- Less than high school degree
- High school degree or equivalent (e.g., GED)
- Some college but no degree
- Associate degree
- Bachelor degree
- Graduate degree

APPENDIX B: Job Satisfaction Instrument**Abridged Job in General**

This inventory consists of statements about your current job satisfaction. There are no correct or incorrect responses. Read each item carefully.

In the blank beside each word or phrase below, write

Y for "Yes" if it describes your job

N for "No" if it does not describe it

? for "?" if you cannot decide

Think of your job in general. All in all, what is it like most of the time?

_____ Good

_____ Undesirable

_____ Better than most

_____ Disagreeable

_____ Makes me content

_____ Excellent

_____ Enjoyable

_____ Poor

Abridged Job Descriptive Index

This inventory consists of statements about your current job satisfaction. There are no correct or incorrect responses. Read each item carefully.

In the blank beside each word or phrase below, write:

Y for "Yes" if it describes your job

N for "No" if it does not describe it

? for "?" if you cannot decide

People on Your Present Job

Think of the majority of people with whom you work or meet in connection with your work. How well does each of the following words or phrases describe these people?

_____ Boring

_____ Slow

_____ Responsible

_____ Smart

_____ Lazy

_____ Frustrating

Work on Present Job

Think of the work you do at present. How well does each of the following words or phrases describe your work?

- _____ Fascinating
 - _____ Satisfying
 - _____ Good
 - _____ Exciting
 - _____ Rewarding
 - _____ Uninteresting
-

Pay

Think of the pay you get now. How well does each of the following words or phrases describe your present pay?

- _____ Barely live on income
 - _____ Bad
 - _____ Well paid
 - _____ Underpaid
 - _____ Comfortable
 - _____ Enough to live on
-

Opportunities for Promotion

Think of the opportunities for promotion that you have now. How well does each of the following words or phrases describe these?

- _____ Good opportunities for promotion
 - _____ Opportunities somewhat limited
 - _____ Dead-end job
 - _____ Good chance for promotion
 - _____ Fairly good chance for promotion
 - _____ Regular promotions
-

Supervision

Think of the kind of supervision that you get on your job. How well does each of the following words or phrases describe this?

- _____ Praises good work
 - _____ Tactful
 - _____ Influential
 - _____ Up to date
 - _____ Annoying
 - _____ Knows job well
-

APPENDIX C: Study Information Sheet**INFORMATION SHEET****OLD DOMINION UNIVERSITY****PROJECT TITLE**

Teachers' Job Satisfaction: Content Area in Relation to Middle School Teachers' Job Satisfaction

INTRODUCTION

You are being asked to participate in a research study exploring how a middle school teachers' core content area relates to their overall job satisfaction. Several studies have been conducted looking into the subject of teachers' job satisfaction. Not many have explored the relationship between a teachers' core content area and their job satisfaction.

You are being asked to participate because you are currently a middle school teacher that teaches a core subject; English language arts, math, science, or social studies.

The purpose of this form is to give you information that may affect your decision whether to say YES or NO to the use of your data collected during your participation in this study.

RESEARCHERS**Responsible Principal Investigator:**

Tian Luo, PhD, Assistant Professor, Instructional Design & Technology, STEM Education & Professional Studies, Old Dominion University

Investigator:

Ashley Potter, Teacher, Old Dominion University, STEM Education and Professional Studies

DESCRIPTION OF RESEARCH STUDY

If you agree to take part in this non-experimental study, your participation will consist of:

1. Sharing your demographic information.
2. Completing a one-time 5 minute questionnaire on job satisfaction.

RISKS AND BENEFITS:

There is little to no risk involved in your participation in this study.

Benefits from this study include:

1. Provide school teachers with valuable information about job satisfaction, add to current literature in the CTE/OTS/k-12 field.
2. Participants will have access to reports of the study's findings.

COSTS AND PAYMENTS

There will be no costs to you for participation in this research study. The researchers are unable to give you any payment for participating in this study.

NEW INFORMATION

If the researchers find new information during this study that would reasonably change your decision about participating, then they will inform you.

CONFIDENTIALITY

All information obtained about you in this study is strictly confidential unless disclosure is required by law. The results of this study may be used in reports, presentations and publications, but the researcher will not identify you.

WITHDRAWAL PRIVILEGE

It is OK for you to say NO to us collecting and using your data for this study. Even if you say YES now, you are free to say NO later, and withdraw your data from inclusion in this study at any time.

QUESTIONS

If you say YES, then your participation in this study does not waive any of your legal rights. However, in the event of harm arising from this study, neither Old Dominion University nor the researchers are able to give you any money, insurance coverage, free medical care, or any other compensation for such injury. In the event that you suffer injury as a result of participation in any research project, you may contact Dr. Tian Luo at tluo@odu.edu or at 757-683-5369 or Dr. Laura Chezan at lchezan@odu.edu, Chair of the Darden College of Education Human Subjects Review Committee, Old Dominion University, who will be glad to review the matter with you.

APPENDIX D: Recruitment Email

Dear teachers,

Greetings!

I am a student at Old Dominion University, in the Department of STEM Education and Professional Studies. I am conducting a research study for my master's degree, which I invite you to take part in. The questionnaire attached contains 12 questions and should take around 5 minutes to complete. I have attached both a Word document and a Google Doc of the questionnaire. Please complete the questionnaire in the format of your choice, First, you must make a copy of the document, answer the questions, and then attach or share the completed questionnaire. Please fill out all of the questionnaire

I thank you in advance for your help!

Ashley Potter

Old Dominion Graduate Student

8th Grade Math Teacher

APPENDIX E: Recruitment Email Follow Up

Dear teachers,

Greetings!

I just wanted to send a friendly reminder to please read over and complete the questionnaires if you plan on participating. If you have already participated please disregard.

I am a student at Old Dominion University, in the Department of STEM Education and Professional Studies. I am conducting a research study for my master's degree, which I invite you to take part in. The questionnaire attached contains 12 questions and should take around 5 minutes to complete. I have attached both a Word document and a Google Doc of the questionnaire. Please complete the questionnaire in the format of your choice, First, you must make a copy of the document, answer the questions, and then attach or share the completed questionnaire. Please fill out all of the questionnaire

I thank you in advance for your help!

Ashley Potter

Old Dominion University Graduate Student

8th Grade Math Teacher

APPENDIX F: IRB Approval Letter**OFFICE OF THE VICE PRESIDENT FOR RESEARCH****Physical Address**

4111 Monarch Way, Suite 203
Norfolk, Virginia 23508

Mailing Address

Office of Research
1 Old Dominion University
Norfolk, Virginia 23529
Phone(757) 683-3460
Fax(757) 683-5902

DATE: June 22, 2019

TO: Tian Luo

FROM: Old Dominion University Education Human Subjects Review Committee

PROJECT TITLE: [1451155-1] Teachers' Content Area in Relation to their Job Satisfaction

REFERENCE #:

SUBMISSION TYPE: New Project

ACTION: DETERMINATION OF EXEMPT STATUS

DECISION DATE: June 22, 2019

REVIEW CATEGORY: Exemption category # 2

Thank you for your submission of New Project materials for this project. The Old Dominion University Education Human Subjects Review Committee has determined this project is EXEMPT FROM IRB REVIEW according to federal regulations.

We will retain a copy of this correspondence within our records.

If you have any questions, please contact Laura Chezan at (757) 683-7055 or lchezan@odu.edu. Please include your project title and reference number in all correspondence with this committee.

This letter has been electronically signed in accordance with all applicable regulations, and a copy is retained within Old Dominion University Education Human Subjects Review Committee's records.