Perceived Life Satisfaction of Workplace Specialist I Faculty and Mentors Participating in a First-Year STEM Teacher Training Project

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Abstract

The purpose of this study was to measure perceived professional and personal life satisfaction of Indiana Workplace Specialist I (WS I) faculty and their mentors. Workplace Specialist I teachers are all first-year career and technical education (CTE) faculty who must complete the WS I training program to be eligible for the Workplace Specialist II teaching license. These new teachers bring significant professional skills and experience to the secondary classroom; however, none had completed traditional teachers college training before they were licensed. WS I faculty are assigned mentors during the first year of training. Mentors must have at least five years of kindergarten-12 (K-12) teaching experience, and typically they are CTE faculty members.

During a WS I / Mentor training workshop, 84 first-year WS I faculty and 68 mentors were asked to take the Life Satisfaction Index for the Third Age (LSITA) in an effort to determine perceived overall life satisfaction; 105 total people participated in the study. Of these 105, 45 mentors perceived life satisfaction as higher than did the 60 first-year WS I CTE teachers. The results of the statistical analyses revealed statistical significance at the 0.1 level (0.068).

When analyzing only participants (both mentors and WS I teachers who were 50 years of age or older, the results of the statistical analyses revealed a statistical significance at the 0.05 level (0.023) between the perceived life satisfaction results of the 10 first-year WS I faculty and the 28 mentors. Mentors who were 50 years of age or older had a higher level of perceived life satisfaction than did the first-year WS I faculty members of the same age group.

Introduction

Since the seminal report on K-12 education "A Nation at Risk" was published in 1985, the call for education reform has increased dramatically over the last 25 years. During the last nine years, the No Child Left Behind Act of 2001 (NCLB) has ensured that educators at every level focus on accountability and use scientifically based research. K-12 education policymakers have demanded that education researchers create rigorous study designs in which participants are randomly assigned to either control or experimental groups, with the aim of generating new, more credible knowledge on what works to improve student achievement.

> According to Kimmelmen (2006): After nearly four years of observing schools working under NCLB, I am convinced the path to school improvement is through the process of building organizational capacity. There needs to be greater focus placed on acquiring, managing, and implementing research-based knowledge in improvement initiatives. (p. 1)

The current focus on evidence-based decision making that is based on scientific research has also brought a renewed focus on student achievement as the only outcome that matters in K-12 education. All 50 states require high-stakes tests at various grade levels, and to receive federal funds, states must develop a report card to detail student achievement in specific schools using disaggregated data that reflect various demographic variables of standardized test takers, including gender, race, and special needs status. However, the accountability movement is not the panacea that educational policymakers and researchers hoped it would be.

Rothstein, Jacobson, and Wilder (2008) stated:

> We have wound up, however, adopting accountability policies based almost exclusively on standardized test scores for reading and mathematics. To hold schools and other institutions of youth development accountable, information from tests of basic skills must be combined with a wide array of information from other sources, including tests of reasoning and critical thinking and evaluations by experienced and qualified experts who observe schools, child care centers, health clinics, and after-school

and summer programs, to determine if they are performing satisfactorily. (p. 2)

Not all researchers and policymakers are supportive of the current focus on student outcomes based on standardized tests as the sole measure of student achievement. This intense focus has added significant pressure to all K-12 faculty and especially for STEM faculty because math and science are often included in standardized tests. In addition, educational research dealing with student achievement has eclipsed other areas of research including studies on the job and life satisfaction of teachers. Research on teachers' job and life satisfaction has been neglected despite evidence that it is a factor that should be considered (Clark, Frijters, & Shields, 2008; Easterlin, 2006). Questions remain regarding how much the accountability movement affects teachers' job and life satisfaction, and very few studies have addressed these issues.

Unwanted employee turnover is one of the largest and most costly problems organizations face. Various studies (Drizin & Hundley, 2008; Feldhaus & Hundley, 2007) report that the costs associated with employee turnover can average upwards of $25,000 per employee, because of lost productivity, loss of intellectual capital, and the direct and the indirect expenses of recruiting, selecting, and training new employees. Beyond cost is the relationship employee loyalty has on an organization's ability to serve customers and succeed in an ever-competitive global marketplace. Employee loyalty is directly associated with organizational success, which includes its impact on performance, innovation, professional life satisfaction, and retention. "Employees with low levels of professional and life satisfaction are less loyal than those who report high levels of professional and life satisfaction" (Feldhaus & Hundley, 2007).

Despite the importance of finding and keeping good employees, and the direct relationship employees have on the organization's overall ability to succeed, several K-12 school districts face challenges in retaining and motivating their science, technology, engineering, and math (STEM) workforce. According to the 2004 U.S. Dept. of Education Schools and Staffing Survey, about 66% of public schools with teacher vacancies in STEM areas (e.g., biology, physical sciences, math and technology) reported difficulty in filling those posts. This compares to only 41% reporting similar difficulties in filling English/Language Arts positions. For more than a decade, school districts across the United States have struggled to recruit and retain effective STEM faculty in general and more specifically math teachers. This problem appears to be more acute in schools serving students in high poverty populations (Boyd, Grossman, Lankford, Loeb & Wyckoff, 2006; Boyd, Grossman, & Hammerness et al., 2008; Hanushek & Rivkin, 2004). Historically, this has meant that often middle and high school STEM teachers are teaching courses that they were not in their major or minor areas of study (Ingersoll, 2003). The National Commission on Teaching and America's Future (Barnes, Crowe, & Schaefer, 2007) has estimated the cost of replacing teachers, who turn over in the early years, at $15,000 to $20,000 per teacher for the largest urban schools. The additional cost of remediation for students who lack expert teachers more than doubles that amount.

However, according to Arthur Levine, President of the Woodrow Wilson National Fellowship Foundation and former Dean of Columbia University's Teachers College, "We can help retain teachers by ameliorating the key problems that cause them to leave: poor salaries, bad working conditions, low status, and too little preparation for the classroom" (2008, p.1). This research will examine more than external conditions that affect the retention of STEM teachers, it will also address working conditions, salaries, preparation, and status. This study will examine other reasons why high school STEM faculty, especially career and technical education STEM teachers, may be satisfied with their professional and personal lives.

Purpose of the Study and Research Questions

The purpose of this study was to use participants' survey data to determine perceived satisfaction with life experiences. Overall, life satisfaction was determined by using the Life Satisfaction Index for the Third Age (LSITA) that focused on perceived life satisfaction (see Appendix A).

Three primary research questions directed this inquiry:

1. Do the mentors for the first-year Indiana CTE Workplace Specialist I teachers, as a group, have a higher life satisfaction than the group of first-year CTE Workplace Specialist I teachers, as measured by the LSITA?

2. Do the mentors, ages 50 and above, for the first-year CTE Workplace Specialist I teachers, as a group, have a higher life satisfaction than the CTE Workplace Specialist I teachers, ages 50 and above, as measured by the LSITA?

3. Do the first-year career and technical education (CTE) Workplace Specialist I teachers (as a group ages 50 and under, or as a group 50 years of age or older) or the mentors (as a group ages 50 and under, or as a group ages 50 and over) have a higher life satisfaction, as compared to the norm of the LSITA?

Review of the Literature

Recently a flurry of national reports on CTE and STEM education have been published: such titles include The Overlooked STEM Imperatives: Technology and Engineering K-12 Education (International Technology Education Association, 2009), *Tough Choices or Tough Times: The Report of the New Commission on the Skills of the American Workforce* (National Center on Education and the Economy, 2007), and Learning to Work, Working to Learn: Transforming Career and Technical Education (National Association of State Boards of Education, 2008). For the most part, these reports center on the need for dramatic change in K-12 STEM workforce and career and technical education to ensure that America maintains its competitive advantage with other countries. Some of the aforementioned reports attempted to scare the K-12 establishment into change by citing facts and figures and by drawing unfavorable comparisons between students in the United States and international students in various areas of STEM student achievement. Others use a pragmatic approach and attempted to define how applied, hands-on, project-based learning can increase student achievement in STEM subjects. Still others discussed what 21st century curricula, teacher training, assessments, career clusters, articulation agreements, workforce training, the education of parents and counselors and the benefits of CTE and STEM education should look like. In very dramatic fashion, and with much bravado and fanfare, each of the previously mentioned reports end with a "call to action" and specific recommendations for improvement.

What these reports lack is a section on teachers and their perceived professional and personal life satisfaction. Few of the most recent, high profile, nationally recognized research reports sought to gain a clear understanding of what STEM teachers in general and CTE faculty in particular want, need, expect, desire, or perceive about the very nature of the work they experience daily. After a preliminary review of the National Research Center for Career and Technical Education (NRCCTE) Web site demonstrated that there was not even a "publications by topic" devoted to the concept of "teacher satisfaction," it became clear that additional research should be completed on this topic, and that was the impetus for this study.

Ironically, there are numerous research publications that measure CTE teachers' perceptions on a variety of issues, including professional growth and development (Burns & Schafer, 2003; Crawford-Self, 2001; Zaleski-Burns, 2008), cultural diversity (Rehm, 2008) and the No Child Left Behind Act of 2001 (Gordon, Yocke, Moldanado, & Saddler, 2007). A comprehensive study on trends in CTE research by Rojewski, Asunda, and Kim (2008) reveals that topics of teacher recruitment and retention of CTE professionals, teacher preparation, certification, and instructional approaches were of greatest concern in this field. Research on teachers' well-being and satisfaction was not a focal point of CTE researchers. The study found that research published in prestigious CTE research journals such as the J*ournal of Career and Technical Education, the Career and Technical Education Research Journal*, and the *Journal of Industrial Teacher Education*, could be divided into seven basic themes or topics: accountability, integration of academics and CTE, career pathways and course sequencing, articulation and transition, alternative instructional delivery, recruitment and retention of CTE professionals, and miscellaneous. Although some research on faculty perception of work and life satisfaction may be included in the "miscellaneous" category, it is evident that CTE researchers have not focused on the perceptions of CTE faculty of their professional experiences or their satisfaction with those experiences.

Despite the importance of finding and keeping good employees – and the direct relationship employees have on the organization's overall ability to succeed – many K-12 school districts face challenges regarding retaining and motivating their workforce. CTE program administrators have also felt this faculty shortage as they

attempt to fill the talent gap with CTE faculty who possess both real-world experience and teaching experience in the technology disciplines (Feldhaus & Hundley, 2007).

Mid- and second-career teacher candidates offer a prospective talent pool for the nation's schools. The potential of career changers has yet to be fully tapped, despite substantial growth in the number of programs targeting such candidates in recent years. In addition to their presumed subject matter backgrounds in high-demand disciplines, midcareer professionals who are currently a part of or choose to enter teaching can bring new maturity and experience to the nation's talent base of educators and help connect teaching and learning to expanded applications in the world of work.

Life Satisfaction Research

In an effort to continue learning about the potential for recruitment and retention of career changers who might consider becoming K-12 STEM faculty, it is important to have a clearer understanding of research that has been conducted in the area of adult education. Before investing extensively in the recruitment of existing STEM workers over the age of 50, typically called "baby boomers," some basic questions should be asked and then answered, such as the following: What is the body of research that currently exists on perceived life satisfaction? How might one find out about levels of satisfaction and happiness on the part of baby boomers? Will baby boomers be a good fit for teaching STEM subjects to K-12 students? How do younger STEM faculty compare with baby boomers in terms of personal and professional life satisfaction?

According to research (Barrett, 2005; Dychtwald, 1999; Settersten, 2002) two major current social phenomena augmented the important potential contribution that a reliable and valid index of an individual's subjective perception of successful aging can provide to researchers in Adult and Community Education, Gerontology, Psychology, Health and Medical Sciences, and other social science disciplines. These phenomena were the baby boom generation and the third age.

The "baby boom" was a result of the increase in the birth rate beginning after the end of World War II (Dychtwald, 1999). The baby boom generation was generally regarded as people born between 1946 and 1964 (Bennis & Thomas, 2002). The extraordinary number of births in the United States during this period, over 76 million, has created a population phenomenon that has affected American society at every era as this cohort has matured. The boomers are now arriving in the third age (Dychtwald, 1999).

The "third age" has been defined as the result of the extra time that has been added to the average life span since the early 1900s (Weiss & Bass, 2002) and can be thought of as beginning at the age of fifty years old and ending at death. "During the past 1000 years, our life expectancy has climbed from an average of 25 to 47 at the turn of the 20th century, and then skyrocketed to 76 today" (Dychtwald, 1999, p. 1). Many K-12 STEM faculty are currently classified as both baby boomers and residents of the third age. Recent reports (Indiana's Career and Technical Education System Report, 2007; Ingersoll, 2003; Rojewski, Asunda, & Kim, 2008) suggest that there is a looming crisis in K-12 STEM education because over 50% of the current STEM faculty will be eligible to retire in the next three years. The third age is the span of life that begins at approximately fifty years of age and ends with the start of the fourth age, which is the final stage of mind and body deterioration that ends with death (Laslett, 1996).

Statistically, the baby boom cohort began to enter the third age fifty years after 1946 or in 1996. With over 75 million adults, including native and foreign born U.S. residents, arriving at the threshold of and entering the third age measurement of subjective perceptions of success in aging, it is increasingly important to understanding the effects of the variables that impinge on their lives (Settersten, 2002). For example, a more complete understanding of the consequences of socioeconomic status, widowhood, or moving to a retirement community on older adults' perception of successful aging can help researchers and others to respond more effectively to these influences (Dychtwald, 1999; Settersten, 2002;).

According to Barrett (2005) a large and growing body of research exists that investigates what people believe makes them satisfied with their lives. A reliable and valid measure of constructs specifically related to life satisfaction in the third age or successful aging as represented in the Life Satisfaction Index for the Third Age

(LSITA) can assist researchers (Barret, 2005). An improved understanding of the contributors or barriers to a pattern of attaining increased success in life satisfaction as perceived by those going through the aging process can be facilitated by such an instrument, according to Neugarten, (1996), Lawton, (1977), and Voltz, (2003). Using such an instrument to help better understand K-12 STEM faculty might help policymakers and school administrators, as they craft new ways to recruit, retrain, reward, and retain this faculty.

Barrett (2005) developed a new instrument to measure successful aging in the third age cohort, which was titled the Life Satisfaction Index for the Third Age (LSITA). This instrument or scale was based on the theoretical framework that Neugarten and colleagues (1961) used to design the Life Satisfaction Index – Form A (LSI-A), and it was an adaptation of the LSI-A. The LSI-A was an attempt to measure perceived life satisfaction in American Midwestern adults over the age of fifty as a representation of successful aging. The construct was the concept of successful aging and the researchers called it "Life Satisfaction" (Neugarten et al., 1961).

LSI-A, according to Lawton, "is one of the most frequently used scales in the area" (1977, p. 13 as cited in Helmes, Goffin & Chrisjohn, 1998). Lawton also stated that the LSI-A has "the most careful psychometric derivation" (1977, p. 13). The LSI-A and its variants are still widely used today in such areas of research as rehabilitation and gerontology (Helmes et al., 1998). Barrett (2005) then developed specific definitions and constructs for two very important areas of the LSITA, life satisfaction, and third age.

Life satisfaction is a theoretical construct that cannot be observed directly, and it is, therefore, a latent variable. Latent variables are defined as factors that must be measured indirectly based on operational definitions (Byrne, 2001). Neugarten and colleagues, (1961) theoretical framework provided an operational definition of the latent variable of life satisfaction, which consists of the following five observed variables: zest versus apathy; resolution and fortitude; congruence between desired and achieved goals; self-concept, and mood tone.

Extensive research exists on a wide range of topics germane to career and technical education. Teacher recruitment and retention, integration of academics and CTE, career and technical student organizations (CTSOs), comprehensive school reform, underrepresented and at- risk youth, and teachers' perceptions on various issues related to CTE are common in CTE research. An educational accountability system is in place to determine program effectiveness. Lacking in the literature on CTE is research that measures the satisfaction of the personal and professional lives of STEM faculty. Also, no studies were found that compared perceptions of the satisfaction of personal and professional life of first-year CTE faculty with that of experienced teachers, 50 years of age or older, who were mentors of the first-year CTE faculty.

Method

In this study the authors measured perceived professional and personal life satisfaction of Workplace Specialist I (WS I) faculty and their mentors. WS I faculty were all first-year career and technical education (CTE) faculty who must have completed the WS I training program to be eligible for the Workplace Specialist II teaching license. WS I faculty were assigned mentors during their first year of training. Mentors were experienced CTE K-12 faculty with at least five years of teaching experience.

Instrument

The LSITA survey instrument was designed to provide a reliable and valid measure of successful aging based on the theoretical framework developed by Neugarten and her colleagues in the Kansas City Study of Adult Life in the 1960s. Their original Life Satisfaction Index – Form A (LIS-A) was updated to take advantage of the improved statistical processes. The development process of the LSITA used structural equation modeling (SEM) to measure the validity of the newly designed LSITA with Neugarten's theoretical model. The LSITA development process validated both the new instrument and the theoretical framework. The study used responses from 654 participants and established a mean score of 151.0 out of a possible 210 with a standard deviation of 19.53 as norms for the LSITA. The mean score of 151 was established as a norm for life satisfaction, as measured by the LSITA. Anyone taking the LSITA and receiving a score higher than this norm was more satisfied; a lower score would indicate less satisfaction, when comparing scores to this life satisfaction mean.

Participants

At a WS I / Mentor training workshop, a total of 84 WS I faculty and 68 mentors were asked to take the LSITA in an effort to determine perceived overall life satisfaction for novice and experienced CTE faculty. There were a total of 105 completed LSITA surveys: Forty-five experienced mentor teachers of all ages participated. Twenty-eight experienced mentor teachers and 10 first-year WS I faculty 50 years or older participated.

Table 1. Subjects That Completed All 35 items of the LSITA

Cases Included		Cases Excluded		Total	
N	Percent	N	Percent	N	Percent
105	87.5%	15	12.5%	120	100.0%

Results

Three primary research questions drove this inquiry:

1. Do the mentors for the first-year CTE WS I teachers as a group have a higher life satisfaction than the group of first-year CTE WS I teachers, as measured by the LSITA?

The results of the analyses of research question 1 are presented in Tables 2 and 3:

The results of the statistical analyses revealed a statistical significance at the 0.1 level (0.068) between the mean perceived life satisfaction results of the 60 first-year WS I faculty of all ages and the 45 experienced mentor teachers of all ages, showing that the mentors had a higher level of perceived life satisfaction than did the first year WS I faculty. There was a difference of 6.14 points in the raw score (.36 units of standard deviation). There was no statistically significant difference based on sex.

2. Do the mentors, 50 years or older, for the first-year CTE WS I teachers as a group have a higher life satisfaction than the CTE WS I teachers, 50 years or older, as measured by the LSITA?

The results of the analyses of research question 2 can be found in Tables 4 and 5. When the groups were compared by age categories (<50 and 50 and older), the mentors 50 and older had a significant difference at the 0.05 level (0.023) from the teachers 50 and older, as shown in Table 4. There was a difference of 14.24 points in the raw score that equated to .777 units of standard deviation. The overall mean was 158.43 of 210 possible on the LSITA.

Table 2. The Descriptive Statistics for LSITA Total Score for Both Teachers and Mentors

Group type	Mean	*N*	Std. Deviation	Minimum	Maximum	Range	
Teacher	155.80	60	16.59	114	185	7	
Mentor	161.94	45	17.31	110	196	86	
Total	158.43	105	17.09	110	196	86	

Table 3. The Analysis of Variance Between the Teachers and Mentors on the LSITA at the .1 Level

		Df	*F*	Sig.
LSITA Total Score	Between Groups	1	3.399	.068
	Within Groups	103		
	Total	104		

Table 4. LSITA Scores and Statistics by Age Categories

Group type	Mean	*N*	Std. Deviation	Minimum	Maximum	Range	
Teacher 50 and over	147.80	10	19.66	114	169	55	
Mentor 50 and over	162.04	28	17.85	110	194	84	
Teacher under 50	157.40	50	15.64	119	185	66	
Mentor under 50	161.79	17	16.93	124	196	72	
Total	158.43	105	17.09	110	196	86	

Table 5. The Analysis of Variance Between the Teachers 50 and over and the Mentors 50 and over on the LSITA at the .05 Level

	df	F	Sig.	
Between Groups	1	5.664	.023	
Within Groups	35			
Total	36			

The results of the statistical analyses revealed a statistical significance at the 0.05 level (0.023) between the mean perceived life satisfaction results of the 10 first-year WS I faculty 50 years or older and the 28 experienced mentor teachers 50 years or older, showing that the mentors 50 and over had a higher level of perceived life satisfaction than the first-year WS I faculty who were aged 50 and over.

3. Do the first-year CTE WS I teachers (as a group under age 50, or as a group 50 years and over) or the mentors (as a group under age 50, or as a group 50 years and over) have a higher life satisfaction, as compared to the norm of the LSITA?

The original LSITA instrument research (Barrett, 2005) used responses from 654 participants and established a mean score of 151.0 out of 210 possible with a standard deviation of 19.53 as norms for the LSITA. Table 4 shows that the results of the statistical analyses revealed that three groups in this study ("Mentor 50 and over," "Teacher under 50," and "Mentor under 50") had means higher than the LSITA norm, meaning higher life satisfaction than the norm. The "Teacher 50 and over" group has a lower mean score than the LSITA norm, meaning they have a lower perceived life satisfaction than the norm. See Table 4.

Discussion

One important finding of this study revealed that Indiana faculty who serve as mentors for first-year CTE faculty are more satisfied with their lives than the first-year CTE faculty. Many things might contribute to this finding. It is important to remember that Indiana CTE faculty who are 50 years of age or older likely started teaching in the early 1980s. This was before the "Nation at Risk" phenomenon and well in advance of the accountability movement that is now prevalent in K-12 education. It is possible that older faculty can anticipate retirement and are anxious to leave the profession. They realize that they are near the end of their professional careers and are content, and in some cases happy, about that status and the choices that come with the "third age" of life. In addition, it is possible these older faculty members are "master teachers" because they have vast and varied experiences. It is plausible that master teachers are unflappable regardless of accountability pressures placed on them. Research on teacher self-efficacy (Bandura, 1997; Guskey & Passaro, 1994; Zimmermann, 1995) would support this finding regarding master teachers.

Tschannen-Moran, Woolfolk-Hoy, and Hoy (1998, p. 203) defined teacher efficacy as a teacher's "judgment of his or her capabilities to bring about desired outcomes of student engagement and learning, even among those students who may be difficult or unmotivated." We contend that CTE faculty aged 50 or older would be more apt to be efficacious than first-year CTE faculty who had never taught before. The idea that teachers' self-beliefs are determinants of teaching behavior, and ultimately perceived life satisfaction, is a simple, yet powerful idea.

Research during the past 30 years reveals that the correlates of teacher efficacy are many when using a variety of efficacy scales and measurements. Students of efficacious teachers generally have outperformed students in other classes. Teacher efficacy was predictive of student achievement on the Iowa Test of Basic Skills (Moore & Esselman, 1992), the Canadian Achievement Tests (Anderson, Greene, & Loewen, 1988), and the Ontario Assessment Instrument Pool (Ross, 1994). Additionally, greater student achievement in areas of attendance, grade point average, and persistence to graduation in rural, urban, majority black, and majority white schools for students of efficacious teachers was found by Watson (1991). Teacher efficacy is also positively correlated to students' own sense of efficacy and student motivation (Anderson et al., 1988). Regarding teacher behaviors, efficacious teachers persist with struggling students and criticize less regarding incorrect answers (Gibson & Dembo, 1984). Teachers with high efficacy tend to experiment with methods of instruction, seek improved teaching methods, and experiment with instructional materials (Allinder, 1994; Guskey, 1988). Allinder (1994) observed higher professional commitment for efficacious in-service teachers.

As a result of extensive research on teacher efficacy, it is reasonable to conclude that the successes that experienced CTE faculty have experienced over the years would contribute to their perceived life satisfaction. We also conclude that experience in teaching leads to more confidence. This study required that mentors for first-year CTE teachers have at least five years experience. It takes some faculty at least this long before feeling comfortable with teaching. We also believe that helping others (mentoring) makes one feel good, more so than mentees who rely on the help. It is possible that many mentors are good teachers and that this may have been the main reason that they were approached to be mentors. Although a speculative conclusion, these people may have a good outlook on the teaching profession and life in general.

In addition, for whatever reason, many of the WS I first-year teachers were working other jobs part-time, in addition to teaching. This could be to supplement income or to keep current in their fields of practice. Perhaps this is adding an additional level of stress that creates some life dissatisfaction.

Another finding of this study revealed that the group of mentors 50 and over had perceived life satisfaction higher than did the group of first-year WS I CTE teachers 50 years of age or older. From this result, we conclude that the pressures of teaching and the accountability movement have taken a toll on first-year CTE faculty, and even though they chronologically reside within the third age of life, these pressures overcome their experience and ability to deal with pressure and problems based on that experience. In addition, it is likely that these pressures also have affected their teacher self-efficacy and, therefore, their perceived life satisfaction.

Considering the findings of this research, the following recommendations are made:

1. It is imperative that CTE administrators not underestimate the power of experienced CTE faculty to serve as mentors, coaches, and professional role models for junior faculty.

2. It is imperative that first-year training for WS I faculty be retained and that the state of Indiana fund this initiative appropriately because it is important to the well-being of first-year faculty. Some meaningful and directed pedagogical training should be undertaken before first-year teachers are allowed to teach in the secondary classroom.

3. It is important to understand that this research found no difference in perceived life satisfaction based on gender, race, or other demographic variables. The issues here seem to relate to age and experience.

Further research should be conducted to determine if the perceived effectiveness of WS I training, or additional years of teaching, has an effect on the perceived life satisfaction of new WS I faculty. A longitudinal study that follows the WS I class of 2009 would be beneficial in an effort to determine if classroom experience has an effect on life/job satisfaction. Because the LSITA instrument has been used for many years and is valid and reliable, it would be beneficial to administer the LSITA to the WS I class of 2009 each year for a number of years to determine changes in job/life satisfaction. In addition, it may be useful to conduct similar research in other STEM areas. Although career and technical education is important, and not all CTE areas are necessarily in STEM areas, it would be useful to know how other STEM faculty perceive life satisfaction. Comparative research should be undertaken to determine if other STEM professions (e.g., medicine, physics, computer and information technology, engineering, and statistics) have similar or different results between experienced professionals and novice workers. Finally, research should be conducted to determine the relationship between teachers' self-efficacy and their perceived life satisfaction.

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Appendix A: LSITA Scale

Life Satisfaction Index for the Third Age (LSITA) Scale

Directions: There are some statements about life in general that people feel differently about. Please read each statement on the list and circle the answer that most closely reflects your attitude toward the statement above the responses. There are no right or wrong answers and your opinion on each of the statements is important. Thank you for your confidential participation in this survey.

1. As I grow older, things seem better than I thought they would be.

Strongly Disagree	Disagree	Disagree Somewhat	Agree Somewhat	Strongly Agree	Agree

2. I am frequently down in the dumps.

Strongly Disagree	Disagree	Disagree Somewhat	Agree Somewhat	Strongly Agree	Agree

3. I have gotten more of the breaks in life than most of the people I know.

Strongly Disagree	Disagree	Disagree Somewhat	Agree Somewhat	Strongly Agree	Agree

4. The best of life is behind me.

Strongly Disagree	Disagree	Disagree Somewhat	Agree Somewhat	Strongly Agree	Agree

5. I achieved in my life what I set out to do.

Strongly Disagree	Disagree	Disagree Somewhat	Agree Somewhat	Strongly Agree	Agree

6. This is the dreariest time of my life.

Strongly Disagree	Disagree	Disagree Somewhat	Agree Somewhat	Strongly Agree	Agree

7. I have been unable to do things right. The deck has been stacked against me.

Strongly Disagree	Disagree	Disagree Somewhat	Agree Somewhat	Strongly Agree	Agree

8. I am just as happy as when I was younger.

Strongly Disagree	Disagree	Disagree Somewhat	Agree Somewhat	Strongly Agree	Agree

9. I would enjoy my life more if it were not so dull.

Strongly Disagree	Disagree	Disagree Somewhat	Agree Somewhat	Strongly Agree	Agree

10. My life could be happier than it is now.

Strongly Disagree	Disagree	Disagree Somewhat	Agree Somewhat	Strongly Agree	Agree

11. As I age, I get more irritable.

Strongly Disagree	Disagree	Disagree Somewhat	Agree Somewhat	Strongly Agree	Agree

12. These are the best years of my life.

Strongly Disagree	Disagree	Disagree Somewhat	Agree Somewhat	Strongly Agree	Agree

13. I get respect for the wisdom of my age and experience.

Strongly Disagree	Disagree	Disagree Somewhat	Agree Somewhat	Strongly Agree	Agree

14. The things I do are boring or monotonous.

Strongly Disagree	Disagree	Disagree Somewhat	Agree Somewhat	Strongly Agree	Agree

15. Everything I have attempted in life has failed.

Strongly Disagree	Disagree	Disagree Somewhat	Agree Somewhat	Strongly Agree	Agree

16. I expect interesting and pleasant things to happen to me in the future.

Strongly Disagree	Disagree	Disagree Somewhat	Agree Somewhat	Strongly Agree	Agree

17. I have made both good and bad choices in my life and I can live with the results.

Strongly Disagree	Disagree	Disagree Somewhat	Agree Somewhat	Strongly Agree	Agree

18. The things I do are as interesting to me as they ever were.

Strongly Disagree	Disagree	Disagree Somewhat	Agree Somewhat	Strongly Agree	Agree

19. I feel old and tired.

Strongly Disagree	Disagree	Disagree Somewhat	Agree Somewhat	Strongly Agree	Agree

20. I am appreciated by people who know me.

Strongly Disagree	Disagree	Disagree Somewhat	Agree Somewhat	Strongly Agree	Agree

21. My life is great.

Strongly Disagree	Disagree	Disagree Somewhat	Agree Somewhat	Strongly Agree	Agree

22. I feel my age, but it does not bother me.

SStrongly Disagree	Disagree	Disagree Somewhat	Agree Somewhat	Strongly Agree	Agree

23. Everything is just great.

Strongly Disagree	Disagree	Disagree Somewhat	Agree Somewhat	Strongly Agree	Agree

24. As I look back on my life I am well satisfied.

Strongly Disagree	Disagree	Disagree Somewhat	Agree Somewhat	Strongly Agree	Agree

25. Life has not been good to me.

Strongly Disagree	Disagree	Disagree Somewhat	Agree Somewhat	Strongly Agree	Agree

26. I would not change my past life even if I could.

Strongly Disagree	Disagree	Disagree Somewhat	Agree Somewhat	Strongly Agree	Agree

27. I enjoy everything that I do.

Strongly Disagree	Disagree	Disagree Somewhat	Agree Somewhat	Strongly Agree	Agree

28. Compared to other people my age, I have made many foolish decisions in my life.

Strongly Disagree	Disagree	Disagree Somewhat	Agree Somewhat	Strongly Agree	Agree

29. I did it my way.

Strongly Disagree	Disagree	Disagree Somewhat	Agree Somewhat	Strongly Agree	Agree

30. Compared to other people my age, I make a good appearance.

Strongly Disagree	Disagree	Disagree Somewhat	Agree Somewhat	Strongly Agree	Agree

31. I have made plans for things I will be doing a month from now.

Strongly Disagree	Disagree	Disagree Somewhat	Agree Somewhat	Strongly Agree	Agree

32. When I think back over my life, I did not get the important things I wanted.

Strongly Disagree	Disagree	Disagree Somewhat	Agree Somewhat	Strongly Agree	Agree

33. Compared to other people I often get depressed or down in the dumps.

Strongly Disagree	Disagree	Disagree Somewhat	Agree Somewhat	Strongly Agree	Agree

34. I have gotten pretty much what I expected out of life.

Strongly Disagree	Disagree	Disagree Somewhat	Agree Somewhat	Strongly Agree	Agree

35. In spite of what people say, the fate of the average person is getting worse, not better.

Strongly Disagree	Disagree	Disagree Somewhat	Agree Somewhat	Strongly Agree	Agree

** Adapted from B. L. Neugarten, R. J. Havighurst, and S. S. Tobin (1961).