

ACADEMIC PLACEMENT: ASSESSING EMOTIONAL INTELLIGENCE AS AN INDICATOR FOR
ACADEMIC PREPAREDNESS FOR DEVELOPMENTAL ENGLISH

by

Paige M. Vanderhyden

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Has been approved

May 2017

APPROVED:

Judy L. Mitchell, EdD
Committee Chair

Sandra J. Balkema, PhD
Committee Member

Sherry Zylka, EdD
Committee Member

Dissertation Committee

ACCEPTED:

Roberta C. Teahen, PhD, Director
Community College Leadership Program

ABSTRACT

Community colleges have grown from one public institution in 1901 to over 1,000 in 2017 and are open to individuals seeking enrollment in higher education. As a result of this growth over the decades, community colleges are tasked with balancing being an open access institution with assessing college preparedness of the students who enroll. Historically, community colleges rely on a single, standardized placement exam to assess entry into a college-level course. However, research has indicated using one standardized placement exam is not a valid predictor of successful course completion and students are being over- and under-placed in developmental education. Noncognitive tests, such as emotional intelligence, are being introduced to compliment the assessment process to accurately determine college preparedness and as a valid predictor of course completion.

This correlational method research study examined the COMPASS Reading scores, trait emotional intelligence, and course completion outcomes for students enrolled in a developmental English course in reading at Joliet Junior College to determine if a relationship of statistical significance existed among these variables. Students who were enrolled in the ENG 021, College Reading II, course in the spring 2016 semester were given the opportunity to participate in the study.

Findings from the data indicate a positive, statistically significant relationship exists between students' trait emotional intelligence and their ability to complete a developmental

English course in reading. COMPASS Reading scores were proven to not be a valid predictor for course completion based on a weak correlation with their ability to complete a developmental English course in reading which was not statistically significant.

DEDICATION

To my grandmother, Pauline Wilma Secrest Hamilton (1911-2015).

You always stressed how important education is and no one can take it away from you. This is
for you.

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TABLE OF CONTENTS

	Page
LIST OF TABLES	x
LIST OF FIGURES	xii
CHAPTER ONE: INTRODUCTION.....	1
Introduction	1
Community College Origin of Open Access	2
History of Remedial Placement Approach	4
Statement of the Problem	6
Current Approach	6
Noncognitive Measures	7
Student Success and Retention	7
Purpose of Research	10
Significance of the Study.....	10
Research Questions.....	12
Null Hypotheses	13
Overview to the Study.....	13
Definition of Terms	14
Summary of Chapters.....	15
CHAPTER TWO: LITERATURE REVIEW.....	16
Introduction	16
History and Purpose of Developmental Education.....	16
Developmental Education.....	17
Context of Developmental Education.....	17
Placement in Developmental Education.....	21
Emotional Intelligence	25
Origin and Definition.....	26
Emotional Intelligence Models	27
Self-Management/Intrapersonal Skills	28
Managing Relationships with Others/Interpersonal Skills.....	30
Emotional Intelligence Types	32
Emotional Intelligence and Education	33
Conclusion	35

CHAPTER THREE: METHODOLOGY.....	37
Introduction	37
Research Problem	38
Research Questions.....	39
Research Design	40
Correlational Study Methodology.....	43
Data Collection Process and Protocols	46
Limitations of the Study	48
Delimitations of the Study	49
Validity and Reliability.....	49
Data Analysis	50
Conclusion	52
 CHAPTER FOUR: FINDINGS, RESULTS, AND ANALYSIS.....	 53
Introduction	53
Research Questions.....	53
Purpose Of This Study	54
Data Analysis Process.....	54
Research Study Findings	55
Research Question #1: Findings.....	56
Question #1a	57
Question #1b	58
Question #1c	62
Research Question #2: Findings.....	65
Participant Information.....	70
Descriptive Statistics	72
COMPASS Reading Placement Score: Results.....	73
COMPASS Reading Placement Score: Analysis	73
Trait Emotional Intelligence Score: Results	73
Trait Emotional Intelligence Score: Analysis.....	74
Research Question #1: Results And Analysis	74
COMPASS Reading Placement Score and Pass or Fail: Results.....	75
COMPASS Reading Placement Score and Pass or Fail: Analysis	75
COMPASS Reading Placement Score and Trait Emotional Intelligence: Results	75
COMPASS Reading Placement Score and Trait Emotional Intelligence: Analysis	76
COMPASS Reading Placement Score and Trait Emotional Intelligence Overall Mean: Results	76
COMPASS Reading Placement Score and Trait Emotional Intelligence Overall Mean: Analysis	77
COMPASS Reading Placement Score and Emotional Intelligence Component Means: Results	77
COMPASS Reading Placement Score and Emotional Intelligence Component Means: Analysis	77

COMPASS Reading Placement Score and Emotional Intelligence Statements.....	78
Self-Awareness Statements: Results.....	78
Self-Awareness Statements: Analysis	79
Self-Regulation Statements: Results	79
Self-Regulation Statements: Analysis	80
Motivation Statements: Results.....	81
Motivation Statements: Analysis	82
Empathy Statements: Results	82
Empathy Statements: Analysis.....	83
Social Skills Statements: Results	84
Social Skills Statements: Analysis.....	85
Pass or Fail and Trait Emotional Intelligence: Results	85
Pass or Fail and Trait Emotional Intelligence: Analysis.....	86
Pass or Fail and Trait Emotional Intelligence Overall Mean: Results	87
Pass or Fail and Trait Emotional Intelligence Overall Mean: Analysis	87
Pass or Fail and Emotional Intelligence Component Means: Results.....	88
Pass or Fail and Emotional Intelligence Component Means: Analysis	89
Pass or Fail and Emotional Intelligence Component Statements.....	89
Self-Awareness Statements: Results.....	90
Self-Awareness Statements: Analysis	91
Self-Regulation Statements: Results	91
Self-Regulation Statements: Analysis	92
Motivation Statements: Results.....	92
Motivation Statements: Analysis	93
Empathy Statements: Results	94
Empathy Statements: Analysis.....	95
Social Skills Statements: Results	95
Social Skills Statements: Analysis.....	96
Research Question #2: Results and Analysis.....	97
Inferential Statistics	98
Conclusion	100
 CHAPTER FIVE: CONCLUSIONS AND RECOMMENDATIONS.....	102
Review of the Study	102
Contribution to Research	104
Interpretations of the Findings	106
Research Question 1: Implications	106
Research Question 2: Implications	108
Recommendations	109
Limitations of the Study	109
Delimitations of the Study	110
Recommendations for Future Research	110
Conclusion	112

REFERENCES	115
APPENDIX A: INSTITUTIONAL REVIEW BOARD APPROVAL.....	123
APPENDIX B: ONLINE SURVEY.....	126
APPENDIX C: COMPASS READING SCORE	132
APPENDIX D: EMOTIONAL INTELLIGENCE PARTICIPANT STATEMENT TOTALS	134

LIST OF TABLES

	Page
Table 1: <i>Research methodology attributes</i>	41
Table 2: <i>Research variables</i>	44
Table 3: <i>Data Collection Timeline</i>	47
Table 4: <i>COMPASS Reading Score and Pass or Fail Correlation</i>	58
Table 5: <i>COMPASS Reading Score and Emotional Intelligence Component Means</i>	60
Table 6: <i>Statistically Significant Emotional Intelligence Statements with COMPASS Reading Score</i>	61
Table 7: <i>COMPASS Reading Score and EI_Total Correlation</i>	61
Table 8: <i>COMPASS Reading Score and EI_Mean Correlation</i>	62
Table 9: <i>Pass or Fail and Emotional Intelligence Component Means Statistical Significance</i>	63
Table 10: <i>Highly statistically significance Emotional Intelligence Statements with Pass or Fail Variables</i>	63
Table 11: <i>ANOVA Table among the Variables</i>	65
Table 12: <i>Coefficients Table among the Variables</i>	66
Table 13: <i>Independent Samples Test to Compare COMPASS Reading Score and EI_Mean Variables</i>	66
Table 14: <i>Independent Samples Test to Compare Emotional Intelligence Means</i>	67
Table 15: <i>ANOVA Table Comparing COMPASS Reading Score and EI_Mean Variables</i>	68
Table 16: <i>ANOVA Table Comparing EI_Total and Pass or Fail Variables</i>	69
Table 17: <i>Eta Squared Measuring Association of EI_Total and Pass or Fail Variables</i>	69
Table 18: <i>ANOVA Table Comparing EI_Total and COMPASS Reading Score Variables</i>	69
Table 19: <i>Age of Participants</i>	70
Table 20: <i>Attempts at COMPASS</i>	71
Table 21: <i>Satisfaction with COMPASS Score</i>	71
Table 22: <i>Number of Times Previously Enrolled in ENG 021</i>	72

Table 23: Number of Times Enrolled in ENG 021 with the Ability to Pass or Fail the Course	72
Table 24: COMPASS Reading Score and Self-Awareness Statements Correlation.....	78
Table 25: COMPASS Reading Score and Self-Regulation Statements Correlation.....	80
Table 26: COMPASS Reading Score and Motivation Statements Correlation	81
Table 27: COMPASS Reading Score and Empathy Statements Correlation	82
Table 28: COMPASS Reading Score and Social Skills Statements Correlation	84
Table 29: Pass or Fail and EI_Total Correlation	86
Table 30: Pass or Fail and EI_Mean Correlation	87
Table 31: Pass or Fail and Emotional Intelligence Component Means	88
Table 32: Pass or Fail and Self-Awareness Statements Correlation	90
Table 33: Pass or Fail and Self-Regulation Statements Correlation.....	91
Table 34: Pass or Fail and Motivation Statements Correlation	93
Table 35: Pass or Fail and Empathy Statements Correlation	94
Table 36: Pass or Fail and Social Skills Statements Correlation	95
Table 37: Model Summary Which Identifies Fit Among the Variables	97
Table 38: Independent t-Test to Compare COMPASS Reading Score and EI_Mean Variables with Pass or Fail	98

LIST OF FIGURES

	Page
Figure 1. COMPASS Reading Placement Scores.....	57
Figure 2. Trait Emotional Intelligence Scores.	59

CHAPTER ONE: INTRODUCTION

INTRODUCTION

Community colleges are committed to providing open access and convenient proximities for students to attend (Boggs & McPhail, 2016; Cohen, et al., 2014; Myran, 2009). However, it has been a balancing act for community colleges to maintain their “open-access philosophy” (Boggs & McPhail, 2016, p. 22) and focus on improving completion rates. The community college system also witnessed its largest growth in the 1960s “with the opening of 457 public community colleges,” (AACC, 2017) and became a national network of higher education institutions. It was also at this time, in the 1960s, when community colleges began to see “the apparent breakdown of basic academic education in secondary schools...coupled with the expanded percentage of people entering college” (Cohen, et al, 2014, p. 29) that resulted in developmental education moving to the forefront. Community college growth continued since the 1960s and currently there are 1,167 public community colleges across the nation (AACC, 2017).

Today, community colleges are witnessing a pipeline of freshmen who enter institutions unprepared for college-level courses, and students are finding themselves enrolled in a developmental education course as colleges attempt to address their inadequate preparation (Bettinger, Boatman, & Long, 2013). It is estimated that over 50% of students entering a two-

year college are assessed as requiring remedial or developmental education courses before entering a college-level course (Complete College America, 2012). Data released in the 2015 National Assessment of Educational Progress (NAEP) report indicate a 3% increase from 2013 in the percentage of twelfth-grade students performing below basic proficiency achievement level for both mathematics (38% from 35% in 2013) and reading (28% from 25% in 2013) (NCES, 2017).

Research studies indicate that completion and retention rates are dismal for students enrolled in developmental education courses (Ari, Fisher-Ari, & Paul, 2016; Bailey, 2009; Bailey, Jeong, & Cho, 2010a; Bettinger & Long, 2009; Complete College America, 2012; Scott-Clayton 2012b). Students may not enroll nor show up for their developmental education course, or they fail to enroll in the next class in the sequence. One area of focus for a possible remedy is the methodology and tools used in which students are assessed and placed into remedial courses. Community colleges seek to ensure students are successful in reaching their goal of entering the workforce or matriculating onto a four-year institution; therefore, alternate assessment tools are critical to ensure student success.

COMMUNITY COLLEGE ORIGIN OF OPEN ACCESS

The origin of community colleges can be attributed to societal forces. Colleges and universities were viewed as accepting the most elite students in the late 19th century. In the 1880s specifically, the movement in America of the elitist and populist social schools of thought influenced the development of the community college (Nevarez, 2010, p. 24-25). This movement began by the populist leaders to “create access to education for all people, not only

those who were white, male, and wealthy" (Nevarez, 2010, p. 25). Access to education was perceived by the public "as an avenue of upward mobility and a contributor to the community's wealth" (Cohen, Brawer, & Kisker, 2014, p. 2). This viewpoint was the polar opposite position of the elitist leaders, who were primarily university professors and presidents, and who upheld the tradition "which restricted higher education from the general public and reserved for the wealthy alone" (Nevarez, 2010, p. 25). As the populist movement progressed forward, these elitist leaders supported this progressive movement because it further defined an "intellectual and class separation of the educational system" (Nevarez, 2010, p. 25).

The need for higher education began to rise with the increased number of high school graduates in the late 19th century and early 20th century (Cohen, Brawer, & Kisker, 2014, p. 6). The inability of the university structure to accommodate this growing interest in higher education prompted public support for educational opportunities and "set the stage for the development of the community college" (Nevarez, 2010, p. 26).

During this same time period, the German educational structure, where students attended secondary education for two years longer (grades 13 and 14) to complete their general education, was beginning to influence the United States' educational system (Nevarez, 2010, p. 26-27). William Rainey Harper was a proponent of the German model and advocated the creation of a junior college to free-up the universities from general education and increase educational opportunities for all (Nevarez, 2010, p. 30-31). As the first president of the University of Chicago, Harper and the superintendent of the Joliet High School, J. Stanley Brown, founded the oldest, public two-year junior college, Joliet Junior College (JJC). In 1901,

the University of Chicago accredited the courses offered by JJC (Cohen, Brawer, & Kisker, 2014, p. 127).

Junior, or community, colleges had no traditions to advocate for and welcomed their new responsibilities (Cohen, Brawer, & Kisker, 2014, p. 3). Community colleges are flexible and “their goals were to serve the people with whatever the people wanted” (Cohen, et al., 2014, p. 36). Today, community colleges offer access to the community and are considered to be *open door* in which “everyone can, through education, achieve their academic, career, and other life goals” (Myran, 2009, p. 2). While each community college is unique, “open admissions and the tradition of charging low tuition are among the practices they have in common” (AACC, 2017).

HISTORY OF REMEDIAL PLACEMENT APPROACH

Community colleges provide open access and are challenged with assessing students for college preparedness and the responsibility to ensure students are enrolled in classes based on their ability. According to Edward Morante (1989), “placement testing must be mandatory since it borders on the unethical to know that a student lacks basic skills but is still allowed to enroll in college courses requiring that skill” (p. 2). In the early 1900s, Parisian Alfred Binet established mental testing to identify academic needs in children and produced a set of tasks which reflect a student’s “mental age” (Perdew, 2001, p. 71-72). Binet’s mental testing made its way to the United States in 1910 through translation and application by psychologist Henry Goddard (Perdew, 2001, p. 72). Over time, various individuals transformed Binet’s mental test into numerous assessments, such as the Stanford-Binet IQ test in 1916, the Army Alpha and Beta tests in 1917, which marked the beginning of testing groups, and the College Entrance

Examination Board (now the College Board) Scholastic Aptitude Test (SAT) in 1937 (Perdew, 2001). The College Board's SAT was the primary test given for college admissions until 1959 when the American College Testing (ACT) was created by ACT, Inc. to assess high school students for college aptitude and became a direct competitor of the SAT. Both the SAT and ACT assessments are used primarily by four-year institutions for college entrance and acceptance; community colleges are open access and do not require a test for admission into the college.

The need to assess students for academic preparedness to enroll in a college-level courses was addressed by the College Board, formerly the College Entrance Examination Board, by creating and offering the ACCUPLACER standard placement exam over 30 years ago (College Board, 2017). In 1983, ACT, Inc. started offering their version of an academic assessment for high school students called the Assessing Student Success for Entry and Transfer (ASSET) test which was the pencil and paper version of, and predecessor to, the Computerized Adaptive Placement Assessment and Support System (COMPASS) (Bader & Hardin, 2002). The exact timeframe is unknown when COMPASS replaced the paper and pencil ASSET standardized placement exam; however, COMPASS was discontinued by ACT, Inc. in December 2016 (ACT, 2016). In 2012, approximately 92% of institutions use standardized placement exams, such as COMPASS and ACCUPLACER (Bettinger, Boatman & Long, 2013, p. 96; Fields & Parsad, 2012; Scott-Clayton, 2012b).

STATEMENT OF THE PROBLEM

Current Approach

The accuracy in using standardized placement assessments such as COMPASS or ACCUPLACER as the sole means to determine placement has been the focus of research studies conducted by the Community College Research Center. Research results show poor developmental education course placement accuracy using a sole standardized placement exam such as COMPASS or ACCUPLACER, demonstrating students are under- or over-placed into developmental education courses. This inaccuracy may be attributed to students being underprepared and not comprehending the impact of the test, the standardized test content not being properly aligned with the course curriculum, and using a single standardized placement test as measurement for placement (Hodara, Jaggars, & Karp, 2012). A comprehensive assessment which includes noncognitive measures may deliver a more truthful placement.

Binet's mental testing originated on the foundation of assessing a student's academic ability, prompting succeeding forms of standardized testing to abide by the same cognitive concentration. Therefore, COMPASS and ACCUPLACER assess a student's cognitive, or academic ability. However, college readiness is not solely a function of a student's academic factors; non-academics, or noncognitive, factors are also involved in determining if a student is equipped and prepared to enroll in college-level courses.

Noncognitive Measures

Noncognitive measures which reveal a student's level of emotional intelligence, motivation, and perseverance are not present in standardized placement exams such as COMPASS and ACCUPLACER, yet these exams are widely used by community colleges. Lack of noncognitive measures in assessing college readiness results in the community college not having a complete picture or assessment of the student's abilities, and therefore, prediction of course success is inaccurate based on an assessment of cognitive skills only. Noncognitive tests can also evaluate a student's "strengths and weaknesses in the areas of career choices, learning habits, financial resources, social support, verbal confidence, math and science confidence, and prior academic experiences" (Hodara, Jaggars, & Karp, 2012, p. 12). This information would be beneficial to a community college in order to make available targeted counseling and support services to retain the student.

Student Success and Retention

Success in development education is dependent upon a complex pattern of variables: student preparation and understanding of the assessment placement process, an accurate and comprehensive placement method, consistent indicators to determine college readiness, alternative avenues to complete developmental education, and instruction provided by faculty who are competent in teaching developmental education. Students attending college for the first time are influenced socially and academically, both on a personal level and from the institution of interest. Vincent Tinto's (1995) longitudinal model of dropout, also referred to as a retention model, addresses the social and academic influences and conditions that impact a

student's a decision to drop out. A student's placement into developmental education courses is an academic influencer on whether the student will remain enrolled in courses or drop out of the institution; therefore, retention and completion are both threatened when students are placed into developmental education (Complete College America, 2012). Additionally, there is a need to focus on retention of low-income students in connection with developmental education, as "low-income students are disproportionately academically under-prepared" (Tinto, 2006, p. 12).

These social and academic influences are further affected by the student's own level of identity development. A study of student retention would be remiss without recognizing and identifying Arthur Chickering's (2015) seven vectors as they relate to identity development of a college student: developing competence, managing emotions, moving through autonomy toward interdependence, developing mature interpersonal relationships, establishing identity, developing purpose, and developing integrity. Awareness of noncognitive skills and abilities align with theorists Tinto and Chickering who present the theoretical foundation for developing students to their highest potential as a whole and not solely based on intellectual competence. Noncognitive testing would convey a student's level of identity development and allow the community college an opportunity to target support services to promote retention and completion, thereby warranting student success in developmental education.

In *A matter of degrees: Promising practices for community college student success (a first look)*, one of the first design principles for effective practice is "a strong start" (Center for Community College Student Engagement, 2012, p. 5). Students must have a positive, welcoming experience when they enter the doors to a community college; failure to provide

this will result in students losing motivation and/or not attending. Since 2003, the Center for Community College Student Engagement (CCCSE) has regularly conducted student focus groups. Students are asked in the focus groups, “Did you ever think about dropping out of college?” and the majority of replies are “Yes.” Kay McClenney (2015) lists six key design principles and/or benchmarks in which community colleges should adhere to for student engagement and retention:

1. *Personal connections* – be intentional when connecting with students;
2. *High expectations and aspirations* – Tinto said, “no one rises to low expectations”;
3. *A plan and a pathway* – students cited academic planning and advising are the most important services offered by their college;
4. *Creating an effective track to college readiness* – students need to complete development education courses to succeed;
5. *Engaged learning* – active and collaborative learning needs to be the standard mode of operation; and
6. *Integrated support* – take the services where the students are and integrate into a course, e.g., college orientation, student success course, etc.

McClenny and Arnsperger (2012) state “90% of entering community college students say they have the motivation to do what it takes to succeed in college” (p. 17). However, lack of intellectual and/or interpersonal competence can de-rail this motivation as students “often acknowledge that they didn’t clearly understand in the beginning what it would take for them to succeed” (McClenny & Arnsperger, 2012, p. 17). A negative academic influence for a student may be their placement in developmental education courses. Motivation is jeopardized when 85% of students entering community colleges believe they are prepared academically to enter and succeed in college; however, more than 60% test into at least one course in

developmental education prior to entering a college-level class (McClenney & Arnsperger, 2012, p. 29).

Purpose of Research

Assessing students using standardized placement exam scores alone, which are based on measuring academic or cognitive, ability results in students who are often over-placed or under-placed in developmental education (Scott-Clayton, Crosta & Belfield, 2012). The addition of using noncognitive measures may result in a stronger predictor for successful completion of a college-level course. The purpose of this research study is to analyze the current cognitive, standardized placement exam scores with trait (noncognitive) emotional intelligence assessments to determine if there is a correlation or relationship with successful completion of a developmental English course in reading.

SIGNIFICANCE OF THE STUDY

The goal of this study was to examine a noncognitive type of assessment, specifically trait emotional intelligence, which can be coupled with the existing cognitive, standardized placement exam to provide a comprehensive assessment of a student's preparedness for college. This research study examined whether a correlation exists between a student's noncognitive, soft skills and their academic ability, as well as their ability to complete a developmental English course in reading. The outcome of the research may provide insights into developing a student's level of emotional intelligence to the same degree as their academic ability in elementary and secondary education.

Researchers question the accuracy of using a single standardized placement exam to assess a student's placement into developmental or college-level course. The standardized placement test taken at the onset of applying and enrolling in higher education is viewed as the primary academic gatekeeper for students to a post-secondary education (Bettinger & Long, 2009). In February 2012, research conducted by Clive Belfield and Peter Crosta through the Community College Research Center focused on a statewide community college system and the validity of placement tests as used by the colleges. Belfield and Crosta concluded a student's high school grade point average (GPA) is a greater predictor of success in a college-level course and that placement tests such as COMPASS and ACCUPLACER do not yield strong predictions. By October 2012, additional research conducted by Crosta and Belfield and researcher Judith Scott-Clayton through the National Bureau of Economic Research again supported the idea of using a student's high school GPA as a more accurate predictor of college performance and found severe under-placements using COMPASS or ACCUPLACER are more common.

This research may also lead institutions of higher education to include a noncognitive assessment to measure social and emotional learning skills in order to provide the support services required to ensure student retention and success. As noted by theorists Tinto and Chickering and retention specialist Kay McClenney, considering a student's social and academic influencers, level of identity development, and pathway to college readiness are significant components in supporting the student to achievement.

RESEARCH QUESTIONS

Research for this study will be focused on a population that consists of students who were placed into a developmental English course in reading, ENG 021 (College Reading II), at Joliet Junior College in the 2016 spring semester. The researcher sought answers to the research questions below. The questions were designed to determine if a correlation exists between a student's level of trait emotional intelligence (noncognitive skills assessment), their COMPASS Reading placement score, and their completion of ENG 021. The outcomes were contained in terms of the completion of the developmental English course in reading, ENG 021. A noncognitive skills assessment would be the trait emotional intelligence self-assessment and a standardized placement exam would be the COMPASS placement exam. The questions are as follows:

1. Can a noncognitive skills assessment coupled with a standardized placement exam provide an accurate assessment of a student's preparedness to enter into college-level English courses?
 - a. Does a correlation exist between a student's COMPASS Reading placement score and their ability to successfully complete a developmental English course in reading?
 - b. How does trait emotional intelligence correlate to a student's COMPASS Reading placement score?
 - c. How does trait emotional intelligence correlate to a student's completion of developmental English course, ENG 021 (College Reading II)?
2. Can trait emotional intelligence be used, in conjunction with an existing standardized placement tool, to assess placement into college-level English courses?

Null Hypotheses

In addition to the research questions, the researcher made the following null hypotheses based on suggested links between the variables. The null hypotheses give the statistical significance testing, *p*-values, situated in Chapter Four meaning (Vogt, 2007, p. 15-16); otherwise, the researcher would be analyzing data for statistical significance with no power or meaning. One purpose of this study is to test the null hypotheses using quantitative research analysis, which will be analyzed in chapter four. The hypotheses are as follows:

- Students who have a higher level of trait emotional intelligence, will also have a higher COMPASS Reading placement exam score.
- Students who have a higher level of trait emotional intelligence, will successfully complete a developmental English course in reading.

OVERVIEW TO THE STUDY

This quantitative research was designed to determine if there is a relationship between ACT COMPASS Reading placement scores, trait emotional intelligence levels, and completion of a developmental English course in reading, as well as provided descriptive information on that relationship. Students enrolled in Joliet Junior College's 2016 spring semester developmental ENG 021 (College Reading II) class, as a result of their COMPASS Reading placement score, comprised the research sample. Limitations and delimitations of the study are provided in Chapters 3 and 5. Most notable is the small number of participants ($N = 71$) which confines the researcher from applying statistically significant findings to the general population with confidence.

DEFINITION OF TERMS

For the purpose of this research study and to provide clarification, the following definitions are provided for the terms listed below.

- *Ability emotional intelligence (EI)* or “cognitive-emotional ability’ refers to one’s actual ability to recognize, process, and utilize emotion-laden information” (Petrides, Frederickson & Furnham, 2004, p. 278). Ability EI is difficult to assess because it requires a right or wrong answer (objectivity) which is challenging given the subjectivity of emotional intelligence. This type of emotional intelligence is considered cognitive because it is based on a person’s ability to process emotions (Petrides et al., 2004).
- *College Readiness/Preparedness* “means that a high school graduate has the knowledge and skills in English and mathematics necessary to qualify for and succeed in entry-level, credit-bearing postsecondary coursework without the need for remediation” (Achieve, 2017).
- *Cognitive skills* can be defined as intellect and encompass “thinking, reasoning, or remembering” (ACT, Inc., 2014, p.1).
- *Developmental/Remedial education* is designed to help those learners identified with weak academic skills receive the opportunity to build and strengthen required skill sets to aide in transitioning and preparing for entry into a college-level course (Bailey, Jeong & Cho, 2010b). The theory of developmental education courses is to prepare a student for entry into gatekeeper or first-level college courses.
- *Gatekeeper courses* are considered the first-level college course in a relevant subject area (Bailey, Jeong, & Cho, 2010b).
- *Noncognitive skills* are linked to “motivation, integrity, and interpersonal interaction” (ACT, Inc., 2014, p. 1). Skillsets such as these are also considered to be character or soft skills.
- *Trait emotional intelligence (EI)* or “emotional self-efficacy” (Petrides et al., 2004, p. 278), centers on behavior, thoughts, and feelings including elements of empathy, social intelligence, self-control, and self-motivation (Perera & DiGiacomo, 2013). Trait EI is characterized as a noncognitive skill with weak associations with intelligence (Saklofske, Austin, & Minski, 2003). Measurement of trait EI is through self-assessment questionnaires or surveys (Petrides et al., 2004).

SUMMARY OF CHAPTERS

Chapter One provided the background information on the mission of community colleges as open-access institutions. The problem stated is the increase in the number of students entering developmental education and how to accurately assess their preparedness to enter college-level courses. The purpose of this study is to examine and analyze standardized placement exam scores for the COMPASS Reading test with trait emotional intelligence assessments to determine if there is a correlation or relationship with a student successfully completing a developmental English course in reading. Chapter Two includes a review of literature with regard to the history and purpose, context, and placement of developmental education. Emotional intelligence is introduced as a noncognitive skill, trait emotional intelligence, and the relationship with education and academic ability is explored. Chapter Three provides the research design, methodology, sampling, and data collection process. Also presented in this chapter are the limitations and delimitations, and validity and reliability of the research. Chapter Four will delve into the analysis of data, results, findings, and descriptive statistical data. The research study concludes with Chapter Five which reviews the contributions of the study and provides recommendations for further research on developmental education placement.

CHAPTER TWO: LITERATURE REVIEW

INTRODUCTION

History and Purpose of Developmental Education

Development education, also referred to as remedial education, is focused on the essentials of reading, writing, and math. According to Arendale (2002), the first “American college freshman remedial English course” was developed in 1874 by Harvard University in response to faculty criticisms that students were not prepared in writing skills (p. 13). A century later, by 1979, developmental education had been engrained in federal and state legislation through statutes, resolutions, and appropriations as a major community-college function (Lombardi, 1979, p. 70). Today, it is estimated that one-third, about 32%, of current high school graduates are marginally prepared to enter college academically; consequently, students find themselves enrolled in a developmental education course as colleges try to address inadequate preparation (Bettinger, Boatman, & Long, 2013).

Developmental education is a term described by the National Association for Developmental Education (2016) for a wide-range of learning-centered activities and encompasses goals such as providing educational opportunities for post-secondary education learners, properly placing students in classes based on their assessed level of college-readiness, developing academic skills, and enabling learners to master competencies required for college-level courses. Fundamentally, developmental education is designed to help those learners identified with weak academic skills receive the opportunity to build and strengthen required

skill sets to aid in transitioning and preparing for entry into a college-level course (Bailey, Jeong & Cho, 2010b). The developmental education process also helps to enable institutions of higher education to uphold the academic standards and rigor expected of college-level courses (Hodara, Jaggars & Karp, 2012, p. 1).

This literature review will analyze research on the topics of developmental education and methodology currently used to assess academic preparedness to help determine whether a student needs to be placed into developmental education. Research throughout this study will also explore the origins of emotional intelligence, the components of three models of emotional intelligence, and the ways emotional intelligence relates to education.

DEVELOPMENTAL EDUCATION

Context of Developmental Education

Since its inception in 1874, a steady increase of placing students into developmental education courses has been observed. Today, it is now estimated that 50% to 60% of all incoming community college freshman are placed into at least one remedial or developmental education course (Bailey & Cho, 2010; Complete College America, 2012; Cohen, Brawer & Kisker, 2014). Complete College America (2012) also reported that 51.7% of freshmen entering a two-year college enrolled in developmental education, with African Americans (67.7%), Hispanics (58.3%), and low-income (64.7%) students being the most probable to need remediation. Not surprisingly, low tests scores are correlated to households with low income (Cohen et al., p. 239).

Roksa, Jenkins, Jaggars, & Zeidenberg (2009) found that, although developmental education classes remain in high demand due to the large number of students placed in remediation, they questioned the effectiveness of sending students through this pathway based on unfavorable educational outcomes. Their findings were later supported by additional studies, including Rutschow & Schneider in 2011, that found few students complete their sequence of developmental courses required to enroll in college-level courses. Developmental education, conceived as the academic bridge between inadequate high school preparation and college readiness, is a broken bridge. In 2012, Complete College America published a report entitled *Remediation: Higher Education's Bridge to Nowhere* which further reinforced remediation programs do not work in their current state of structure and suggested using multiple measures to assess college readiness. According to research by Lau (2014), too many students begin in remedial level courses, and too few ever cross the bridge into college-level courses and reach the destination of credential attainment. Crisp and Delgado (2014) concluded from their study that developmental education may be a deterrent to students transferring to four-year institutions and is not beneficial to promoting the success of a community college student. By 2015, Bailey, Jaggars, and Jenkins, described the traditional system of developmental education as weak in which students are assessed to be denied entry into college-level courses rather than establishing students as soon as possible into post-secondary coursework.

Over the years, researchers' supplementary concerns include the inconsistency with defining and regulating developmental education statewide and nationally. According to research by Bailey (2009), Bailey and Cho (2010), and Moss and Yeaton (2013), the difficulty lies

in that each academic institution can set standards and processes for establishing developmental education sequences, placement assessments, and self-prescribed cut-off scores to determine college-readiness. Therefore, students face the complexity of trying to navigate an unregulated system that differs process to process, college to college, and state to state. And research by Hodara, Jaggars, and Karp (2012) indicate students are confused and frustrated when placement scores differ among two-year colleges within a state or system. Prince's 2005 policy brief prepared for *Achieving the Dream* examines state centralized and decentralized developmental education policies and the rationale for consistent statewide guidelines with caution to becoming too prescriptive and rigid. According to Prince's 2005 policy brief, only five states — Florida, Maryland, Minnesota, Oklahoma, and Texas — require institutions to use a standardized cutoff score for developmental education and placement; whereas, others focus on an individualized approach that may mean a variety of cut-score levels across the institutions and/or using additional assessment measures to determine placement. States may also use the high school GPA as a placement indicator based on national research, unlike others that are hesitant to do so (Bracco, Dadgar, Austin, Klarin, Broek, Finkelstein, Mundry & Bulger, 2014, p. 37).

By 2009, Bailey noted that research into student retention indicates students enrolling in developmental education courses are not succeeding in college due to failing to begin their developmental education course sequence. Additional research in 2012 by Scott-Clayton (2012a) indicated retention is also threatened by students being assigned to an incorrect developmental education course not aligning with their level of college-readiness, and/or becoming discouraged with the notion of never being able to enter college-level courses (Scott-

Clayton & Rodriquez, 2012). Nevertheless, some students choose to proceed through the sequence in order, defined as assessment, referral to remediation, completion of highest required developmental education class, and entry into the college-level course (Bailey, Jeong, & Cho, 2010b, p. 1), while others may “enroll in higher and even lower level courses than those to which they are referred, or they skip courses” (Bailey et al., 2010b, p. 2) in the sequence. According to recent research (Bailey, Jeong, & Cho, 2010a; Belfield & Crosta, 2012; Scott- Clayton & Rodriquez, 2012), for two-thirds of students facing a sequence of developmental education courses in at least one area before enrolling in an actual college-level course, the task appears daunting to complete these “obstacle courses,” and it is no surprise that fewer than half of those students who begin the sequence successfully complete the sequence.

Additional research studies (Bailey, 2009; Hodara & Jaggars, 2014; Scott-Clayton & Rodriquez, 2012) indicate that students are discouraged when placed in lower-level classes and denied direct entry into college-level courses, and only about 60% of students actually enroll in their referred developmental education course (Bailey, Jeong, & Cho, 2010b, p. 1). Of these students, half fail to show up for their first class or enroll in subsequent developmental education courses (Complete College America, 2012, p. 2), and for those who do show up for the first class, 62% complete remediation; whereas only 22.3%, which is a significant drop-off, actually complete both remediation and associated college-level course within two years (Complete College America, 2012, p. 8).

Much of the research into the value of developmental education focuses on the high costs associated with these programs. Developmental education is estimated to place a financial burden on institutions at approximately one billion dollars annually (Noble, Schiel, &

Sawyer, 2003, p. 300) and over three billion dollars annually when institution costs (e.g., instructional costs) are combined with student costs (e.g., tuition) (Bettinger, Boatman & Long, 2013, p. 96). Students can face the cost of lost opportunity and time to complete their degree while taking a sequence of developmental education courses (Hughes & Scott-Clayton, 2011), and at the same time while the students pay tuition for developmental education courses, they are not transferable and the credits are not applied toward their graduation requirements (Calcagno & Long, 2008; Scott-Clayton, 2012a). Testing and assessing students for college-level preparedness (diagnosis) costs lower in proportion to the actual implementation of developmental education courses (treatment) (Rodriguez, Bowden, Belfield, & Scott-Clayton, 2014, p. 19).

In light of the identified concerns with developmental education, and for the purpose of this research, the emphasis on remediation will be the placement of a student into a developmental education course or sequence based on assessing a student's level of preparedness for entry into college-level classes using a single, standardized assessment.

Placement in Developmental Education

Due to the high costs — financial and academic — associated with developmental education, much of the research over recent years has focused on the impacts of these programs on students' retention and their degree completion. Research studies (Ari, Fisher-Ari, & Paul, 2016; Bailey, 2009; Bailey, Jeong, & Cho, 2010a; Bettinger & Long, 2009; Complete College America, 2012; Scott-Clayton 2012b) indicate that completion and retention is dismal for students enrolled in developmental education courses; one area of focus for a possible

remedy is the methodology and tools used in which students are assessed and placed into remedial courses. Students may be funneled into “college-level” or “developmental education” courses based on individual scores from high-stakes assessments in reading, writing and math. Over 50% of students entering a two-year college, and nearly 20% of those entering a four-year institution, are assessed as requiring remedial or developmental education courses before entering the gatekeeper or college-level course (Complete College America, 2012, p. 2).

According to a 2012 report conducted by the National Assessment Governing Board, two nationally standardized placement exams dominate the market in placing students into developmental education courses: Computerized Adaptive Placement Assessment and Support Systems (COMPASS), developed by ACT, and ACCUPLACER, developed by the College Board, and are used by approximately 92% of the institutions (Bettinger, Boatman & Long, 2013, p. 96; Fields & Parsad, 2012; Scott-Clayton, 2012b). Standardized placement exams, such as COMPASS and ACCUPLACER, are not timed and are adaptive, tailoring the exam to the student based on their first response (Scott-Clayton, 2012b). However, in January 2017, ACCUPLACER became the sole standardized placement exam since all COMPASS placement assessments were phased out by December 31, 2016 by ACT (ACT COMPASS, 2016).

Likewise, a scan of assessment and placement policies and practices was conducted with community college stakeholders at 38 open-access, two-year public colleges in seven different states (Hodara, Jaggars & Karp, 2012, p. 4). Results from this scan indicated poor developmental education course placement accuracy using a variety of standardized placement exams including COMPASS and ACCUPLACER as a sole assessment tool and inconsistent standards of college readiness (Hodara, Jaggars & Karp, 2012). Three factors are deemed as

contributors to the poor predictability and placement using these standardized placement exams: (1) students were not prepared to take the standardized placement exam, (2) the standardized placement exam content was misaligned with the college course academic curriculum, and, (3) placement was determined based on using one standardized placement exam as measurement (Hodara, Jaggars & Karp, 2012, p. 2). Bettinger and Long (2009) identified the remediation placement exam as a “key academic gate-keeper to postsecondary study” (p. 737) for students entering an open-admissions institution; students arrive unprepared to take this exam. Judith Scott-Clayton (2012a), a senior research associate at the Community College Research Center, states that standardized placement exams weakly align college readiness to college outcomes. Using only one instrument to measure academic proficiency limits the indication of a student’s level of college-readiness for coursework by providing a partial indication and overlooks noncognitive measures which may be a stronger predictor for successful completion of a college-level course (Hodara, Jaggars & Karp, 2012, p. 2).

This same scan identified inconsistent standards of college readiness due in part to the setting of cut scores for placement varying from state to state and from institution to institution, which causes confusion for students (Hodara, Jaggars & Karp, 2012, p. 3). Cut scores determine whether a student needs to be placed in developmental education or college-level courses. It has a direct effect on the number of students enrolled in developmental education and the sequence of remedial courses (Perin, 2006, p. 354).

Within the past decade, a debate has developed on whether institutions should be able to determine cut scores themselves or if a state should make individual determinations (Hughes

& Scott-Clayton, 2011, p. 331). One example is Texas, which focused on improving developmental education success through various statewide initiatives throughout the years. In 1987, their state legislature passed the Texas Academic Skills Program (TASP), which enforced statewide standardized assessment. TASP was then phased out in 2003 and replaced with the Texas Success Initiative (TSI), which gave local control to college administrators on assessments and placements (Saxon, & Slate, 2013, p. 35-36), allowing for varying cut scores among institutions. From 2000-11, the number of students in developmental education decreased by 6.37%, which may be attributed to the change in law from TASP to TSI, allowing local institutions to set their own cut scores and the softening of state testing and placement mandates (Saxon, & Slate, 2013, p. 40).

Research was also conducted in 2012 by the Community College Research Center entitled *Do High-Stakes Placement Exams Predict College Success* (Scott-Clayton, 2012b) to analyze the predictive validity of the COMPASS. While the study found COMPASS placement exams can be used to predict student success in math (more so than English) and those likely to do well in a college-level course, findings indicated the rate of mistakes in placing students in the correct course (over- or under-placement) are significant in both math and English (Scott-Clayton, 2012b, p. 37). It is estimated that for every ten students assigned to developmental education courses, three are either incorrectly over- or under-placed in English courses (Belfield & Crosta, 2012, p. 39). This research seems to indicate that, because students successfully complete or fail to complete developmental education courses for a myriad of reasons beyond their placement exam results, the use of one assessment placement exam to determine

placement may be an issue. Research has suggested that more than one assessment tool be used as a means for assessment and placement into developmental education.

A subsequent study conducted in 2012 by the Community College Research Center, entitled *Predicting Success in College: The Importance of Placement Tests and High School Transcripts*, focused on the validity of the placement exams and how they were being used by the colleges. Findings from this study indicated that assessment placement exams did not predict positive course grades for students in developmental education classes. Moreover, it is believed the placement exams do not predict or have any correlation with various measures of performance such as college GPA, credits earned, and success in completing gatekeeper math and English classes (Belfield & Crosta, 2012, p. 39). Based on these findings, researchers suggest that the high school GPA may be useful for making placement decisions based on its consistency with predicting college performance.

EMOTIONAL INTELLIGENCE

As this review has shown, students are assessed for preparedness to enter college-level courses and “the use of placement examinations is nearly universal in community colleges” (Hughes & Scott-Clayton, 2011, p. 333). Research conducted using Regression Discontinuity studies (Bettinger & Long, 2009; Boatman & Long, 2010; Calcagno & Long, 2008; Martorell and McFarlin, 2008) on developmental education placement assessments scores showed similar outcomes for students who just scored below the cut-off score and enrolled in developmental education courses with students who scored just above the cut-off score and enrolled in a college-level course. Hughes & Clayton (2011) addressed concerns on how decisions are made

for student placement in developmental education based on test scores inaccurately aligned with college preparedness and the inconsistency in which colleges interpret the scores. These research studies question not only the effectiveness of developmental education, but also the process in which a student is placed into remediation (Scott-Clayton, 2012b). Belfield and Crosta (2012) state the following:

Perhaps colleges would be able to make more accurate placements by using alternative tests, interpreting the tests differently, or supplementing test scores with additional information based on students' prior education...this would lead to a faster and more successful progression through college. (p. 1)

It is suggested by Hodara, Jaggars, and Karp (2012) that "noncognitive measures may be stronger predictors of course success" (p. 2).

Origin and Definition

Emotional intelligence (EI) is the ability to be both aware of one's emotions and the emotions of others (Cherniss, 2004; Zeidner, Matthews, & Roberts, 2009, p. 3). Daniel Goleman, co-chair of the Consortium for Research on Emotional Intelligence in Organizations at Rutgers University, is the foremost leader on the topic of emotional intelligence, however, not the first to define emotional intelligence.

Howard Gardner, a Harvard psychologist, developed a theory of seven multiple intelligences during the early 1980s, which included two personal intelligences: intrapersonal (self-knowledge) and interpersonal (social skills) (Cherniss, 2004; Das, 2010; Goleman, 1998; Lazarus & Benson, 2008). In the 1980s, Reuven Bar-On, an Israeli psychologist, also researched the idea of "social and emotional" intelligences (Cherniss, 2004; Goleman, 1998). In 1990,

psychologists Jack Mayer and Peter Salovey were the first to conduct systematic research on emotional intelligence and to use the term in an article title (Cherniss, 2004; Goleman, 1998; Lazarus & Benson, 2008; Zeidner, Matthews, & Roberts, 2009). Salovey and Mayer then coined the term 'Emotional Intelligence' in 1990 describing it as "a form of social intelligence that involves the ability to monitor one's own and others' feelings and emotions, to discriminate among them, and to use this information to guide one's thinking and action" (Golis, 2014, n.p.). However, it wasn't until Daniel Goleman's 1995 book entitled *Emotional Intelligence: Why it Can Matter More than IQ*, based on Salovey and Mayer's work, did the topic gain popularity (Brackett & Casey, 2009; Lazarus & Benson, 2008).

Emotional Intelligence Models

According to *Encyclopedia of Applied Psychology* three major models of emotional intelligence exist:

- The Salovey-Mayer model, referred to as the “ability” model, identifies four branches ability to perceive, use, understand, and manage emotions;
- The Goleman model, also known as the “performance-based” model, focuses on components of awareness of one’s one emotions (self-awareness), awareness of the emotions of others (social awareness), and the regulation of emotions; and
- The Bar-On model, which is a competency-based model, is comprised of five dimensions: intrapersonal; interpersonal; stress management; adaptability; and general mood, along with 20 competencies (Cherniss, 2004).

While relative intelligence and technical skills are needed in the workplace to be successful and considered entry-level executive skills, Goleman (1996) states it is emotional intelligence that produces an effective leader who rises above others. Upon further analysis and research of competency models from 188 companies, Goleman grouped leadership capabilities

into three categories: “purely technical skills like accounting and business planning; cognitive abilities like analytical reasoning; and competencies demonstrating emotional intelligence, such as the ability to work with others and effectiveness in leading change” (Goleman, 1996, p. 2).

His analysis indicated that while technical skills and cognitive abilities were particularly important and drove outstanding performance, it was emotional intelligence skills that pushed performance to the level of excellence.

All three models identified contain various components or dimensions of emotional intelligence that comprise Goleman’s (1996) five components of emotional intelligence in individuals possessing high levels of effective performance: self-awareness, self-regulation, motivation, empathy, and social skill. Everyone is born with levels of each of these components that can be strengthened “through persistence, practice, and feedback from colleagues or coaches” (Goleman, 1996, p. 3). Of these five components, the first three relate to self-management or intrapersonal skills; the latter two components relate to managing relationships with others or interpersonal (Cherniss, 2004; Goleman, 1996).

Self-Management/Intrapersonal Skills

All three models also describe a component that relates an individual’s self-awareness and self-management skills. For example, Salovey and Mayer (1990) identified emotional appraisals and expression of feelings for self-emotion as verbal and non-verbal. The ability to appraise one’s own emotions accurately allows for a quick, appropriate emotional response to others (Salovey & Mayer, 1990). Self-awareness is the ability to know one’s self and values, as well as to recognize implications and consequences of emotions and actions: “People who have a high degree of self-awareness recognize how their feelings affect them, other people, and

their job performance" (Goleman, 1996, p. 7). Self-awareness of emotions is the foundation for self-management, recognizing emotions in others, and the ability to manage relationships during emotional situations (Walton, 2012).

Students who have self-awareness may also recognize their limitations and know when to take a risk and when to play it safe (Goleman, 1996, p. 10-11). In Goleman's *Focus: The Hidden Driver of Excellence*, he states "There are two major streams of self-awareness: 'me,' which builds narratives about our past and future; and 'I,' which brings us into the immediate present" (2013, p. 66). Self-awareness is likened to an "internal rudder" which guides us on our way through life and represents an essential focus (Goleman, 2013, p. 62-63).

Bradberry and Greaves (2009) and Mayer, Salovey, and Caruso (2008) illustrate that the self-regulation of emotions builds upon self-awareness and is the high-level emotional intelligence ability to manage our emotions and think before acting. Not surprisingly, impulsive behavior has been linked to the occurrence of unfortunate and bad situations (Goleman, 1996, p. 13). Most of the research on self-regulation relates to moods rather than emotions (Salovey & Mayer, 1990). Salovey and Mayer (1990) describe self-regulation as regulating mood and state "there are a variety of experiences that one has about one's moods; these *meta-experiences of mood* can be conceptualized as the result of a regulatory systems that monitors, evaluates, and sometimes acts to change mood" (p. 196). Focus is the key to willpower, and willpower is the essence of self-regulation (Goleman, 2013, p. 77-79). Not only is self-regulation about understanding other's emotions and behaviors and modification of self-presentation in response, it also encompasses understanding environmental contexts (Schutte, Malouff, Bobik, Coston, Greeson, Jedlicka, Rhodes, & Wendorf, 2001).

Salovey & Mayer (1990) attribute moods to motivation; positive moods equate to an increase in confidence in capabilities and persistence in that “people with high motivation remain optimistic even when the score is against them” (Goleman, 1996, p. 15). This optimism allows for optimal focus “when we align what we do with what we enjoy” and allows students to perform at their personal best (Goleman, 2013, p. 22). However, unlike Goleman’s broad definition of emotional intelligence, Salovey and Mayer “do not see motivation as a factor of emotional intelligence” (Christie, Jordan, & Troth, 2007, p. 213). Goleman views motivation as an internal driver rather than being influenced by external sources (Christie et al., 2007). Goleman’s analysis of competencies indicated that virtually all effective leaders possess the trait of motivation and are driven to achieve levels beyond expectations of their own and others (1996, p. 14). People have a drive to achieve not for financial gains, but to fulfill their own beliefs and desire to continue to learn, along with make things better, and not accept status quo (Goleman, 1996, p. 14).

Managing Relationships with Others/Interpersonal Skills

All three models also attempt to define the interpersonal skills and ability to manage others through empathy and social skills. Salovey & Mayer (1990) characterize empathy as being central to emotionally intelligent behavior. Empathy is not sympathy. Empathy is the ability to recognize and understand what the other person is feeling and is perhaps the most readily recognized component of emotional intelligence; whereas, sympathy is a reflection of how you feel and place judgement on another’s situation (Goleman, 2013; Walton, 2012). People experience greater satisfaction in life and reduce stress when they positively relate to one another (Salovey & Mayer, 1990). Early signs of leadership in adolescents can be attributed

to displays of empathy through effective two-way communication, delegating responsibilities to others, and attending to the different types of individual needs (Charbonneau & Nicol, 2002). Goleman (1996) and Liff (2003) both indicate that being empathetic helps an effective student understand the dimensions of others to form synergy, communicate in a global society by being aware of cultural differences, and coach and mentor others for retention in the course.

Research on emotional intelligence interpersonal skills identifies social skills as an emotionally intelligent relationship defined by the ability to value individuals and generate a climate of appreciation (Walton, 2012). Research indicates that people with social skills rely on the implementation of the previous components of emotional intelligence to move in a desired direction or to meet specific goals by being highly adept in regulating emotion in themselves and others (Goleman, 1996; Salovey & Mayer, 1990). While an effective person possessing social skills may seem friendly, it is his or her innate ability to network with key individuals and create relationships to draw upon their resources, support, and talents at a time when needed (Goleman, 1996). Liff (2003) emphasizes that effective students recognize they cannot do the work alone; therefore, they are continually building rapport with others and building their network.

In addition, emotional intelligence abilities are distinct, yet complimentary, to academic intelligence, which is measured by intelligence quotient (IQ) (Goleman, 1998). According to Lam & Kirby (2002), “overall emotional intelligence was related to performance in that higher emotional intelligence was associated with better scores on one measure of cognitive performance” (p. 142). A research study conducted by Perera and DiGiacomo (2013) analyzing the relationship of trait emotional intelligence with academic performance, presented “a strong

case for considering the inclusion of personality measures...in academic selection and diagnostic assessment settings" (p. 29).

Emotional Intelligence Types

Research on the conceptual distinction of the types of emotional intelligence is based on cognitive and noncognitive skills (Petrides, Frederickson, & Furnham, 2004). Cognitive skills can be defined as intellect and encompass "thinking, reasoning, or remembering" (ACT, Inc., 2014, p.1). Academic ability is considered a cognitive skill. Noncognitive skills are linked to "motivation, integrity, and interpersonal interaction" (ACT, Inc., 2014, p. 1). Emotional intelligence abilities provide the noncognitive skills that can be equal, or above, cognitive, academic abilities as predictors of course success (Hodara, Jaggars & Karp, 2012, p. 2).

Researchers (Petrides, Frederickson, & Furnham, 2004) state two distinct types of emotional intelligence (EI) exist, trait EI, and ability EI. *Trait EI*, or "emotional self-efficacy," (Petrides et al., 2004, p. 278) centers on behavior, thoughts, and feelings including elements of empathy, social intelligence, self-control, and self-motivation (Perera & DiGiacomo, 2013). Trait EI is characterized as a noncognitive skill with weak associations with intelligence (Saklofske, Austin, & Minski, 2003). Measurement of trait EI is through self-assessment questionnaires or surveys.

Ability EI, or "cognitive-emotional ability' refers to one's actual ability to recognize, process, and utilize emotion-laden information" (Petrides et al., 2004, p. 278). Some researchers characterize emotional intelligence as a cognitive ability (Saklofske et al., 2003). Ability EI is difficult to assess because it requires a right or wrong answer which is challenging

given the subjectivity of emotional intelligence. The primary proponents of ability emotional intelligence approaches and corresponding assessment instruments which are available commercially are Mayer, Caruso, and Salovey, and Bar-On (Saklofske et al., 2003).

Emotional Intelligence and Education

When researchers attempt to link EI with academic performance, they find that students who demonstrate emotional intelligence skills and are involved in their education are more successful and earn better grades because they are motivated to learn (Lynn Veitch & Justice, 2012). Emotional intelligence is just as often a function as intelligence quotient (IQ) in the efficacy of a student's educational experience (Liff, 2003). Liff (2003) quotes Daniel Goleman in stating factors which contribute to life success are comprised of 20% traditional IQ abilities and 80% "other factors," which primarily fall under emotional intelligence. Emotional intelligence competencies reflect desired student characteristics of self-confidence, trustworthiness and integrity, a strong drive to achieve, cross-cultural sensitivity, and persuasiveness that can relate and contribute to positive outcomes in academics (Goleman, 1996). According to research by Salovey & Mayer (1990), moods and emotions influence problem solving and cognitive material. Students who possess emotional intelligence skills perceive and control behaviors, communicate verbally, make good impressions to others in their place of work by being professional, and overcome barriers by methodically investigating and solving problems (Davis & Leslie, 2015).

Numerous research studies (Costa & Faria, 2014; Perera & DiGiacomo, 2013; Petrides, et al., 2004; Song, Huang, Peng, Law, & Wong, 2010) have been conducted on the correlation

between emotional intelligence skills and academic achievement. Research studies examining the academic achievements of high school students and emotional intelligence indicated emotional intelligence was a “significant predictor of academic success” (Parker, Creque, Barnhart, Harris, Majeski, Wood, Bond, & Hogan, 2004, p. 1327) and “intrapersonal, adaptability and stress management abilities are important factors in the successful transition from high school to university” (Parker, Summerfeldt, Hogan, & Majeski, 2004, p. 170). Additional research (Song, Huang, Peng, Law, & Wong, 2010) indicates emotional intelligence is also a predictor for academic success and quality of social interactions among college students.

Research (Bradberry & Greaves, 2009; Ciarrochi, Chan, & Bajgar, 2001; Goleman, 1996, 2006; Joshith, 2012; Lynn Veitch & Justice, 2012) states that emotional intelligence skills can be taught and learned. Community colleges are aware of the need for students to enhance and address social and emotional skills and may offer classes which focus on test taking, study habits, and orientation to college: “By teaching students how to control emotions, academic achievement and persistence will rise” (Lynn Veitch & Justice, 2012, p. 188). Emotional intelligence components, self-awareness, self-regulation, motivation, empathy, and social skills, are “viewed as competencies in which learning occurs, all speak to the interpersonal growth and related academic potential of every college student” (Liff, 2003, p. 29). For disadvantaged and vulnerable adolescents especially, trait emotional intelligence (noncognitive) is relevant to academic ability and behavior (Petrides, Frederickson, & Furnham, 2004).

CONCLUSION

Developmental education originated in the university setting over 140 years ago and has been a mainstay of community colleges, ensuring that students are well prepared to enter college-level classes in reading, English, and math (Arendale, 2002). Research studies (Bailey, Jaggars, & Jenkins, 2015; Complete College America, 2012; Crisp & Delgado, 2014; Hughes & Clayton, 2011; Rutschow & Schneider, 2011; Roksa, Jenkins, Jaggars, & Zeidenberg, 2009) question the effectiveness of developmental education pathway. Students placed in developmental education courses are not succeeding due to a variety of reasons and for two-thirds of these students, the task to complete a sequence of developmental education courses is daunting (Bailey, 2009; Bailey, Jeong, & Cho, 2010a 2010b; Belfield & Crosta, 2012; Complete College America, 2012; Scott-Clayton, 2012a; Scott-Clayton & Rodriguez, 2012).

Placement into developmental education course(s) can be contingent upon a standardized placement exam, such as SAT's ACCUPLACER or ACT's COMPASS placement test, which assess a student's academic proficiency and are used by approximately 92% of the institutions (Bettinger, Boatman & Long, 2013, p. 96; Fields & Parsad, 2012; Scott-Clayton, 2012b). Research studies (Bettinger & Long, 2009; Hodara, Jaggars & Karp, 2012; Hughes & Scott-Clayton, 2011; Scott-Clayton, 2012a) indicate poor developmental education course placement accuracy using a sole assessment tool such as ACCUPLACER or COMPASS, students being unprepared for the exam, and/or the placement exam misaligned with college curriculum. Additional research (Belfield & Crosta, 2012; Hodara, Jaggars, & Karp, 2012) suggests using additional or different placement exams to assess college preparedness.

Components of emotional intelligence align with a student's ability to be successful in the classroom. The three major emotional intelligence models are (1) Salovey-Mayer, referred to as the "ability" model, (2) Goleman, known as the "performance-based" model, and (3) Bar-On, which is a competency-based model (Cherniss, 2004). Based on these models, general components of emotional intelligence are defined as self-awareness, self-regulation, motivation, empathy, and social skills, with the first three relating to intrapersonal skills and the latter two relating to interpersonal skills (Cherniss, 2004; Goleman, 1996). Two types of emotional intelligence exist, ability EI (cognitive) and trait EI (noncognitive) (Perera & DiGiacomo, 2013; Petrides, Frederickson, & Furnham, 2004; Saklofske, Austin, & Minski, 2003). Research studies (Davis & Leslie, 2015; Liff, 2003; Lynn Veitch & Justice, 2012; Perera & DiGiacomo, 2013; Petrides, Frederickson, & Furnham, 2004; Salovey & Mayer, 1990) conclude that emotional intelligence skills positively impact academic ability, problem solving, motivation, and behavior.

Chapter Three will provide information on the target audience for data; what data were collected and how it was collected to investigate if a correlation exists between students' self-assessed level of trait emotional intelligence, COMPASS score, and ability to complete a developmental English course.

CHAPTER THREE: METHODOLOGY

INTRODUCTION

Current data indicates that retention in developmental education is low (Bailey, 2009; Bailey, Jeong, & Cho, 2010b; Complete College America, 2012; Scott-Clayton, 2012a; Scott-Clayton & Rodriquez, 2012), and previously cited studies (Bettinger & Long, 2009; Hodara, Jaggars & Karp, 2012; Hughes & Scott-Clayton, 2011; Scott-Clayton, 2012a) reflect the inaccuracy in using one assessment tool to determine college readiness and placement into college-level classes based on cognitive, academic skills alone. In order to provide a comprehensive snapshot of a student's preparedness to enter a college-level course, could including a noncognitive assessment, such as emotional intelligence, provide supportive information in making that placement decision?

The focus of this study is to determine whether a correlation exists between students' level of trait emotional intelligence (noncognitive skills) (Petrides, Frederickson, & Furnham, 2004), COMPASS Reading placement scores (cognitive skills), and their ability to successfully complete a developmental English course in reading. Each variable will be examined in depth within this chapter. The researcher will describe and present rationale for this research, to include (a) the research problem, (b) research questions, (c) hypotheses, (d) research design, (e) correlational study methodology, (e) sampling, (f) data collection process and protocols, (g)

limitations of the study, (h) delimitations of the study, (i) validity and reliability, (j) data analysis, and (k) conclusion.

The methodology chapter provides the design and criteria which guided the research process. Of importance was to establish credibility and transparency of the research study through the articulation of a logical and systematic manner. Moreover, the research methodologies and strategies that were utilized establish the accountability and framework of a sound body of research.

RESEARCH PROBLEM

Community colleges have an open-door approach to educating a very diverse population (AACC, 2017; Cohen, Brawer, & Kisker, 2014). As a result, challenges exist when assessing students' preparedness for direct entry into a college-level course as well as placing students into the correct course sequence to ensure their success in college (Bettinger & Long, 2009; Hodara, Jaggars & Karp, 2012; Hughes & Scott-Clayton, 2011; Scott-Clayton, 2012a). Because there is no universal definition for college readiness, community colleges have used standardized placement exams to assess a student's preparedness for entry into a college-level course (Bettinger, Boatman & Long, 2013, p. 96; Fields & Parsad, 2012; Scott-Clayton, 2012b). Consistent with the research cited in Chapter Two (Hodara, Jaggars, & Karp, 2012; Hughes & Scott-Clayton, 2011; Scott-Clayton, 2012a, 2012b; Scott-Clayton & Rodriquez, 2012), use of a single assessment tool to determine academic preparedness does not adequately place a student in either development education or college-level courses, and/or predict a student's success in a college-level course. It is suggested noncognitive skills may provide additional

information and a comprehensive assessment in determining a student's preparedness for college-level coursework (Belfield and Crosta, 2012; Hodara, Jaggars, & Karp, 2012).

RESEARCH QUESTIONS

This study focused on a specific student population that consisted of those who were placed into a developmental English course in reading, ENG 021 (College Reading II), at Joliet Junior College in the spring 2016 semester. The purpose of this study was to search for possible answers to the following research questions. The questions were designed to determine if a correlation exists between a student's level of trait emotional intelligence, their COMPASS Reading placement score, and their ability to complete ENG 021. Outcomes were contained in terms of the completion of the developmental English course, ENG 021. The noncognitive skills assessment is trait emotional intelligence and the cognitive skills assessment is a standardized placement exam, such as the COMPASS placement exam. The following research questions reflect on the possible relationship between the cognitive and noncognitive skill assessments with regard to the course completion outcome:

1. Can a noncognitive skills assessment coupled with a standardized placement exam provide an accurate assessment of a student's preparedness to enter into college-level English courses?
 - a. Does a correlation exist between a student's COMPASS Reading placement score and their ability to successfully complete a developmental English course in reading?
 - b. How does trait emotional intelligence correlate to a student's COMPASS Reading placement score?
 - c. How does trait emotional intelligence correlate to a student's completion of developmental English course, ENG 021 (College Reading II)?

2. Can trait emotional intelligence be used, in conjunction with an existing standardized placement tool, to assess placement into college-level English courses?

As a result of these questions, the researcher concluded the following hypotheses:

- Students who have a higher level of trait emotional intelligence will also have a higher COMPASS Reading placement exam score.
- Students who have a higher level of trait emotional intelligence will successfully complete a developmental English course in reading.

Therefore, it is anticipated a relationship will exist between the variables.

RESEARCH DESIGN

While research is the systematic collection and/or study of evidence, research methods are the means in which to answer a question, solve a problem, or create knowledge (Vogt, 2007). The anticipated results assist the researcher in determining which methodology is appropriate for a particular problem, supported by the knowledge it intends to create.

Both qualitative and quantitative methods were reviewed for research appropriateness. Merriam (2009) compared the characteristics of qualitative and quantitative research to illuminate some of the basic differences between the two research approaches. Qualitative research focuses on the nature or essence of the data: "Words and pictures rather than numbers are used to convey what the researcher has learned about a phenomenon," (Merriam, 2009, p. 16). Quantitative research is numerical and focuses on how much, and how many, and the findings are precise.

Table 1: Research methodology attributes

Focus	QUANTITATIVE	QUALITATIVE
	NUMERICAL	WORDS; PICTURES; FEELINGS
Data Collection	Specific; Document Analysis; Observation; Surveys; Interviews; Experiments	Interviews (asking); Observations (watching); Documents (reviewing)
Measurement	Numerical: Interval; Ratio	Categorical: Patterns; Nominal; Ordinal
Analysis	Deductive; Statistical; Descriptive; Associational (correlation); Inferential	Inductive; Interactive process leading to further questions

Data are collected utilizing several approaches for both methodologies. Quantitative data are gathered and deductively analyzed to determine its meaning in order to answer a question, solve a problem, or build upon knowledge. The seven types of quantitative research design are listed in order of the least intrusive to the most intrusive: “The main types of research design are (1) document analysis, (2) secondary analysis of data, such as census data, (3) naturalistic observation, (4) surveys, (5) interviews, (6) experiments and quasi-experiments, and (7) participant observation” (Vogt, 2007, p. 8). Qualitative data, however, is collected “through interviews, observations, and documents” (Merriam, 2009, p.85) or in unpretentious terms asking, watching, and reviewing. The data are evaluated by the researcher as relevant to the study and is not merely precise data available and waiting to be collected and analyzed.

Quantitative data can be assessed via interval and/or ratio levels of measurement. For example, data measured in interval includes student survey responses obtained using a Likert scale and data measured in ratio levels include a student’s completion grade in a developmental education course or standardized placement score. Comparatively, qualitative data are rich in description consisting of words reflecting feelings and opinions, and can be

measured through patterns identified through responses and/or observations. Data, therefore, is measured based on its relevancy to the research project and by the researcher.

Analysis for each approach varies; the primary mode of analysis for quantitative research is deductive and statistical, versus inductive for qualitative research. According to Vogt (2007), quantitative statistical analysis consists of three types: descriptive, associational, and inferential. Descriptive focuses on describing and summarizing data. Associational investigates the relationship between variables (bivariate equals two variables, while multivariate equals three or more variables), such as correlations. Inferential statistics determine if the descriptive and associational statistic should be applied to the general population. Analysis for this research study will be centered on associational (correlations) and inferential.

Since qualitative research is inductive, analysis occurs simultaneously during data collection. Analysis is an interactive process; questions are refined and reformulated based on the information collected while interviewing (asking), observing (watching), and reading documents (reviewing). Initial responses could redirect the research which could then require a review and revision of questions.

The quantitative research approach was the most appropriate means to analyze academic standardized placement test scores aligning with trait emotional intelligence assessments to determine whether a correlation or relationship with successful completion of a developmental English course in reading exists. Data gathered for this research will be conducted through an online survey instrument, which will capture detailed data and student responses regarding emotional intelligence measured at the interval level using a Likert scale.

Completion of a developmental education course will require ratio levels of measurement because a true zero point will have value in the instance of a student not completing the course. Associational quantitative data analysis allows the researcher the ability to answer the question as to whether a correlation or relationship between the three variables: students' level of trait emotional intelligence (noncognitive skills), COMPASS Reading placement score (cognitive skills), and their ability to successfully complete a developmental English course in reading.

CORRELATIONAL STUDY METHODOLOGY

Accuracy of placement and student retention in developmental education is in question (Bettinger & Long, 2009; Hodara, Jaggars & Karp, 2012; Hughes & Scott-Clayton, 2011; Scott-Clayton, 2012a). Consideration to include other noncognitive assessments, such as trait emotional intelligence, to accurately place students in developmental education is greatly needed (Belfield & Crosta, 2012; Hodara, Jaggars, and Karp, 2012). Reform is necessary in order to improve college-level course entry and completion to ensure student success (Bailey, Jaggars, & Jenkins, 2015; Complete College America, 2012; Crisp & Delgado, 2014; Hughes & Clayton, 2011; Rutschow & Schneider, 2011; Roksa, Jenkins, Jaggars, & Zeidenberg, 2009).

The outcome or dependent variable in this research is the successful completion (earned a grade of "C" or higher) in a developmental English course in reading. This is the primary focus of this research study. Factors which may predict and influence the outcome, or the dependent variable, are both the independent variable of the student's level of academic ability and the mediating variable of the student's level of trait emotional intelligence. An

independent variable, such as COMPASS Reading placement score which assesses academic ability, may be used to predict the successful completion of a developmental English course in reading. However, a mediating variable, such as trait emotional intelligence, may impact the influence of the student's academic ability to successfully complete a developmental English course in reading.

Table 2: *Research variables*

VARIABLES		DESCRIPTION
Dependent	Successful completion	Earned a grade of "C" or higher in a developmental English course in reading (ENG 021, College Reading II).
Independent	COMPASS Reading placement score	Student's assessed level of academic ability - cognitive skills
Mediating	Trait emotional intelligence	Student's self-assessed level of emotional intelligence - noncognitive skills

This quantitative research design is correlational and the research seeks to explain the degree in which the dependent variable (successful completion in a developmental English course in reading), the independent variable (student's level of academic ability defined by COMPASS Reading placement score) and the mediating variable (student's level of trait emotional intelligence) are related through (1) strength, (2) direction, and (3) magnitude.

Strength of the relationship between the dependent, independent, and mediating variables will be determined by the correlation coefficient outcome (using the statistical formula known as Pearson's r): "The correlation coefficient is used to describe how two distributions of scores are related to each other" (Vogt, 2007, p. 19). Strength will show if there is a relationship between the variables in this research study, and if so, how strong the

relationship is between them. Strength can range from 1.0 (strong positive relationship) to -1.0 (strong inverse relationship), with zero indicating no relationship at all.

Direction describes the movement of the variables in relationship to each other. This movement can be described as either positive, moving together in the same direction or inverse, moving in opposite directions. When variables shift in a positive direction as one variable increases, it causes the other variable to increase as well. Likewise, if one variable shifts in a negative direction, a similar shift will occur in the other. In variables which move in an inverse direction, as one variable increases or decreases, this causes the other variable to move in the opposite direction and either decrease or increase.

While strength and direction can tell us if there is a relationship between the variables, magnitude tells us the substantive significance of this relationship. Magnitude describes the shared variance, or impact, of the independent variable (COMPASS Reading placement score) and/or mediating variable (trait emotional intelligence) on the dependent variable (successful completion in a developmental English course in reading). This is computed through the Coefficient of Determination, or R^2 . R^2 can range from 0 to +1; the higher the percentage, the greater the impact or magnitude of the independent/mediating variables on the dependent variable. For example, if $R^2 = .59$, this would mean 59% of the variance in the dependent variable can be explained by the variance in the independent/mediating variables. However, if $R^2 = .26$, this would mean only 26% of the variance in the dependent variable can be explained by the variance in the independent/mediating variables. That would leave a high percentage, 74%, unexplained, therefore resulting in a low impact or magnitude.

The general population, which would be affected by the outcomes of this research study, are students who are required to take a single standardized placement exam to determine placement into a developmental education sequence of classes. The researcher was formerly employed at Joliet Junior College (JJC), located in Joliet, IL, for nearly 24 years, so access to the dependent and independent variable data for this research was convenient and possible.

A total of 302 students were enrolled in JJC during the 2016 spring semester in developmental English course ENG 021 (College Reading II) and comprised a non-probability, purposive sample. A non-probability, purpose sample is “gathered deliberately, with a purpose in mind, but not randomly” (Vogt, 2007, p. 81). Therefore, each of the students enrolled in ENG 021 who were not minors and had a COMPASS Reading placement score had the opportunity to voluntarily participate in an online survey to assess their level of trait emotional intelligence. ENG 021 (College Reading II) was selected as the developmental education course because students should possess the skills and ability to comprehensively read and respond to the survey questions posed for this research study.

DATA COLLECTION PROCESS AND PROTOCOLS

The researcher followed the protocol and attained approval from the Ferris State University Internal Review Board (IRB) and the Joliet Junior College director of institutional research to proceed with collecting data. The Ferris State University and Joliet Junior College IRB approval letters are included in Appendix A.

In cooperation with the Joliet Junior College director of institutional research, the researcher collected data on the sample population prior to soliciting voluntary participation in the online survey to assess trait emotional intelligence. Student data were collected through the JJC database, Ellucian's Datatel Colleague, by the JJC director of institutional research and included: student email, student ID, and COMPASS Reading placement exam score. This data were provided to the researcher in January 2016. Subsequently, the end of the spring 2016 semester in June 2016, ENG 021 completion and final grade data from Datatel Colleague for each student was provided to the researcher by the director of institutional research.

Using an online survey designed by the researcher and distributed using SurveyMonkey, students in the sample were solicited for voluntary participation in the research by completing the survey. An optional, voluntary drawing for a \$100 Walmart gift card was offered as incentive for participation.

Table 3: *Data Collection Timeline*

DATE	ACTIVITY
January 12, 2016	Received student data from JJC director of institutional resources. Sent online survey via email to 293 students enrolled in Developmental Reading II (ENG 021) at JJC inviting them to voluntarily participate in this research study by completing the survey.
January 13, 2016	Emailed poster to JJC English department secretary to distribute to English faculty to promote and encourage student participation in the research study.
January 19, 2016	Received additional student data from JJC director of institutional resources. Emailed reminder to 277 students who had not responded to the January 12, 2016, request for participation. Sent online survey via email to an additional 9 students who enrolled in ENG 021 after January 12, 2016. Emailed JJC Developmental Reading faculty a poster to encourage student participation in the research study.
January 27, 2016	Emailed reminder to 279 students who had not responded to either the January 12 or January 19, 2016, request for participation.

DATE	ACTIVITY
February 2, 2016	JJC Reading Coordinator emailed the ENG 021 faculty the poster and encouraged them to have their students view their student emails and read the email requesting their participation in the research study.
February 10, 2016	Emailed reminder to 243 students who had not responded to any previous request for participation to date.
February 22, 2016	Closed online survey to participants. Received responses from 73 participants.
March 15, 2016	Randomly drew a student participant name to receive a \$100 Walmart gift card and notified student via email to pick up gift card in vice president, administrative service's office.
March 23, 2016	Sent an email reminder to student to pick-up \$100 Walmart gift card in vice president, administrative service's office
March 28, 2016	Student picked-up gift card in vice president, administrative service's office
June 8, 2016	Received data from JJC's director of institutional research containing student final grades for ENG 021.

The online survey (Appendix B) contained the following elements: informed consent, COMPASS assessment questions, emotional intelligence description, and five component definitions, 30 statements (six for each component) with five-point Likert scale to self-assess level of trait emotional intelligence, demographic questions, and the option to enter the drawing for the \$100 Walmart gift card.

Limitations of the Study

The limitations of this research study have been identified and are considered characteristics which may impact the interpretation of the research findings. Out of 302 students, only 71 responded to the request to participate in the research study. This could have been a result of collecting data during one semester only, coupled with the researcher's absence in personally soliciting participation from the sample population. Students self-assessed their level of trait emotional intelligence using a subjective online survey; therefore,

their current mental state at the time they completed the survey could have impacted the results.

Delimitations of the Study

Delimitations of this study were selections made by the researcher and have been identified as follows:

- The researcher limited the standardized placement assessment to COMPASS based on familiarity and experience.
- Data were collected from a single institution, again, due to researcher familiarity and convenience.
- Participants solicited for this research study were limited to the developmental education course ENG 021, College Reading II. This decision was made solely on the students' greater ability to read and comprehend the research questions posed to them.
- The researcher selected Daniel Goleman's theory on emotional intelligence as a framework to develop the research based on the researcher's familiarity.
- Participants self-assessed their level of trait emotional intelligence given 30 statements related to five components of emotional intelligence (self-awareness, self-regulation, motivation, empathy, and social skills) using a self-assessment survey developed by the researcher; consequently, results are not validated by a credible agency/institution.

Validity and Reliability

Variables are well-defined and consistent throughout the research process, providing validity to the study. Internal validity is ensured by the study design and methodology in which to collect the data and quantitative analysis of findings. Data received from Joliet Junior College is valid and reliable. The sample population and instrument(s) used remained constant throughout the research.

Reliability is threatened due to the difficulty of replicating the research with the same sample population and due to the small number of students who choose to participate. Because this research uses a nonprobability convenience sample, external validity is threatened because students were selected based on a specific course at a specific period in time, voluntary participation, and the offer of an incentive in hopes to increase participation. Reliability of this specific research will also be difficult to replicate due to the diversity of a student body and/or similarity of student demographics, along with the number of participants.

Internal validity is also threatened as students who volunteer to participate may also possess test anxiety and/or are not comfortable with online tests or assessments. To assist with the study, the researcher provided detailed information up-front to the participants on the purpose of the survey and length of time to complete to help minimize any apprehensions.

DATA ANALYSIS

The researcher used IBM software entitled Statistical Package for the Social Sciences (SPSS) to analyze the data. Data were analyzed using both Pearson's r and linear regression since the dependent and independent/mediating variables were measured at interval or scale levels and the research is correlational. Data were also analyzed using Kendall's tau-b for the correlation coefficient because the emotional intelligence statement variables are measured as ordinal. The research is focused on correlational analysis of the data between the variables in order to draw the following conclusions:

- Is the data statistically significant?
- If so, what is the strength of the relationship?

- What is the direction or association of the variables (positive or inverse)?
- What is the magnitude of significance (the shared variance of two variables through R2 or Coefficient of Determination)?
- What is the level of generalizability of the data to the targeted population?
- What is the substantive impact of the independent variables (COMPASS Reading placement score) and mediating variable (trait emotional intelligence) and on the dependent variable (student's successful completion in a developmental English course in reading)?

Regression analysis was conducted to determine how the variables are related and comparative importance of variables because both dependent and independent variables are at the interval or scale level. Adjusted R2 will determine fit of the variables researched. Multicollinearity will also determine if the independent/mediating variables (COMPASS Reading placement scores and trait emotional intelligence levels) are highly correlated as an outcome of this research. Descriptive statistics on the sample will include for those who voluntarily participated:

- COMPASS Reading placement score
- Trait emotional intelligence level
- ENG 021 outcome (pass or fail).

Inferential statistics used to project generalization among the target population would include review of the multicollinearity between COMPASS Reading placement scores and the level of trait emotional intelligence to infer trait emotional intelligence levels could be used to determine placement into a developmental English course in reading.

CONCLUSION

Based on the purpose of the research to determine if a correlation exists between a student's level of trait emotional intelligence (noncognitive skills), COMPASS Reading placement score (cognitive skills), and their ability to successfully complete a developmental English course in reading, the researcher chose to conduct a correlational study method using quantitative analysis. For this study, the researcher hypothesized a statistically significant positive correlation between a student's level of trait emotional intelligence and COMPASS Reading placement exam score. Additionally, the researcher also hypothesized a statistically significant positive correlation between a student's level of trait emotional intelligence and their ability to successfully complete a developmental English course in reading. It is also hypothesized the magnitude of impact between variables will be of significance.

This research is anticipated to influence decision makers at community colleges on the viability of moving toward a comprehensive assessment process to determine preparedness for entry into college-level courses as opposed to relying on a single standardized assessment exam. The research will also serve as an introduction to noncognitive skills assessment as a complementary component to that process. In Chapter Four, the researcher presents the results, findings, and analysis of the data collected.

CHAPTER FOUR: FINDINGS, RESULTS, AND ANALYSIS

INTRODUCTION

The purpose of this correlational methodology study was to search for possible answers to the questions below. More specifically, the study's aim was to determine whether a correlation exists between a student's level of trait emotional intelligence, their COMPASS Reading placement score, and their ability to complete a developmental education English course in reading. Data were analyzed by means of SPSS and executing bivariate and multivariate correlation coefficients to measure the relationship between the variables. This chapter will present the findings, results, and analysis of the data collected and examined.

RESEARCH QUESTIONS

The following research questions focus on creating a comprehensive student assessment to determine placement into college-level courses utilizing both cognitive and noncognitive skills and abilities.

1. Can noncognitive skills assessment coupled with a standardized placement exam provide an accurate assessment of a student's preparedness to enter into college-level English courses?
 - a. Does a correlation exist between a student's COMPASS Reading placement score and their ability to successfully complete a developmental English course in reading?
 - b. How does trait emotional intelligence correlate to a student's COMPASS Reading placement score?

- c. How does trait emotional intelligence correlate to a student's completion of developmental English course, ENG 021 (College Reading II)?
2. Can trait emotional intelligence be used, in conjunction with an existing standardized placement tool, to assess placement into college-level English courses?

PURPOSE OF THIS STUDY

The research conducted for this study is expected to add to the body of research examining a potential correlation between a student's ability to successfully complete a developmental English course in reading, their COMPASS Reading placement exam score, and level of trait emotional intelligence. Earlier studies in 2012, by the Community College Research Center (CCRC) and Belfield and Crosta, focused on the accuracy and validity of placement tests respectively. Findings indicated the rate of potential errors in placing students in the appropriate course are significant in both math and English (Belfield & Crosta, 2012, p. 39; Scott-Clayton, 2012, p. 37), and assessment placement exams did not predict positive course grades for students in developmental education classes. This research builds on those earlier studies to include noncognitive assessments with standardized placement exams to develop a comprehensive evaluation process of a student's cognitive and noncognitive skills and abilities.

DATA ANALYSIS PROCESS

The researcher uploaded the data collected through a SurveyMonkey 11-question survey into IBM's Statistical Package for the Social Sciences (SPSS) then manually entered participant COMPASS scores and course outcome data. These data were provided to the

researcher by JJC's director of institutional research as noted in Chapter Three; the data analysis conducted for this research study was then performed using SPSS.

The study data were analyzed to determine strength of relationship and direction. Strength represents whether a relationship between the variables in this research study exists, and if so, how strong that relationship is between each variable. Strength can range from 1.0 (strong positive relationship) to -1.0 (strong inverse relationship), with zero indicating no relationship at all. Direction describes the movement of the variables in relationship to each other. This movement can be described as either positive, moving together in the same direction, or inverse, moving in opposite directions. In variables which move in an inverse direction, as one variable increases or decreases, this causes the other variable to move in the opposite direction and either decrease or increase.

Statistical significance was determined between the variables. If significance is determined to be less than 0.05 ($p < .05$), the correlation is statistically significant and less than 5% of the results are due to chance. A significance determined less than 0.01 ($p < .01$) is also highly statistically significant and because less than 1% of the results are due to chance, the correlation can be generalized to the target population.

RESEARCH STUDY FINDINGS

The findings of this research were surprising to the researcher based on the heavy reliance by community colleges to use standardized placement exams such as COMPASS to assess a student's preparedness for entry into a college-level course. The hypotheses connected to each of the research questions anticipated that students with a higher level of

emotional intelligence would have a higher COMPASS placement exam score and successfully complete a developmental reading course. The following provides detailed information on the findings and results for both research questions and their related hypothesis.

Research Question #1: Findings

Research question #1 asked the following: Can a noncognitive skills assessment coupled with a standardized placement exam provide an accurate assessment of a student's preparedness to enter into college-level English courses? The null hypothesis connected to research question #1 is: Students, who have a higher level of trait emotional intelligence, will also have a higher COMPASS Reading placement exam score.

To determine if there is any validity to this question, the researcher first looked at the COMPASS Reading Scores for the study participants ($N = 71$). A minimum score of 66 is required to be eligible to enroll in ENG 021 at Joliet Junior College, and the mean COMPASS Reading Score for participants is 63.83. Based on the data distribution being skewed to the left in Figure 1, participants did not readily enter into ENG 021 due to their low scores ($n=34$), but rather had to complete one or more developmental reading courses prior to enrolling in ENG 021. See COMPASS Reading Score Table in Appendix C. However, it should also be noted in Appendix C the number of students who did enter directly in ENG 021 ($n = 37$). This data questions the accuracy of the COMPASS Reading Score with a student's ability to pass or fail a developmental English course in reading.

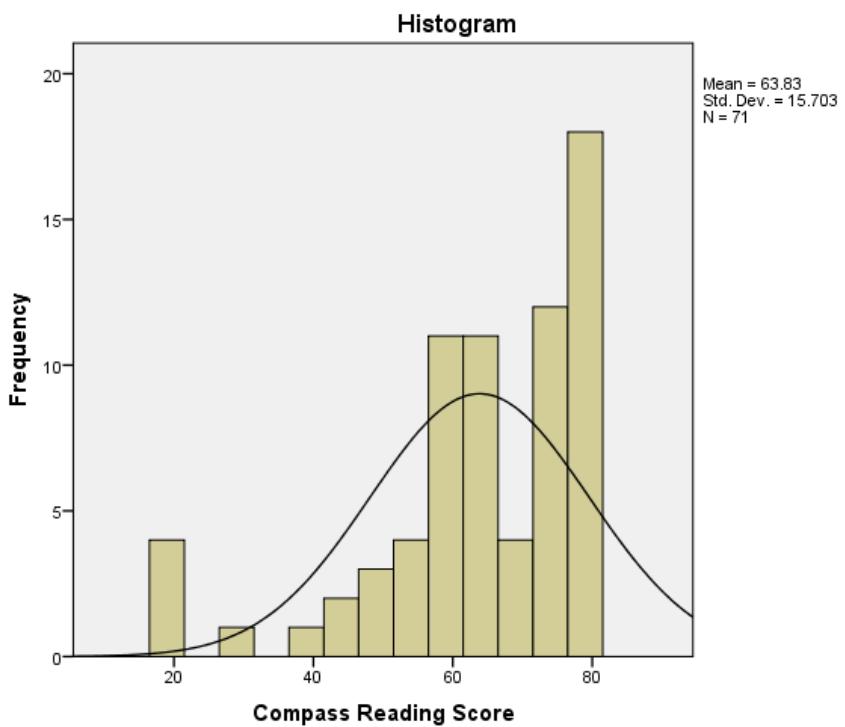


Figure 1. COMPASS Reading Placement Scores.

Question #1a

The researcher sought to answer research question #1a as stated: *Does a correlation exist between a student's COMPASS Reading placement score and their ability to successfully complete a developmental English course in reading?* Based on the results from the Kendall's tau-b correlation analysis in Table 4, a statistically significant relationship between the COMPASS Reading Score and Pass or Fail variables does not exist. The correlation coefficient was determined to be .029 on a scale of -1 to 1. Therefore, based on these results, it appears a student's COMPASS Reading Score is not a predictor in a student's ability pass or fail a developmental English course in reading.

Table 4: COMPASS Reading Score and Pass or Fail Correlation

		PASS OR FAIL	COMPASS READING SCORE
Pass or Fail	Correlation Coefficient	1	0.029
	Sig. (2-tailed)		0.773
	N	71	71
COMPASS Reading Score	Correlation Coefficient	0.029	1
	Sig. (2-tailed)	0.773	
	N	71	71

Question #1b

Research question #1b stated the following: *How does trait emotional intelligence correlate to a student's COMPASS Reading placement score?* Like COMPASS Reading Score, the researcher reviewed the trait emotional intelligence results. The range of response totals is 30 to 150 (Appendix D). The data distribution Figure 2 depicts a high kurtosis, or the measurement of the tails of distribution, value of 4.506 indicating heavy tails, or outliers. Participants self-assessed their level of trait emotional intelligence very similarly at mid-range at a higher frequency than those who self-assessed themselves low or high.

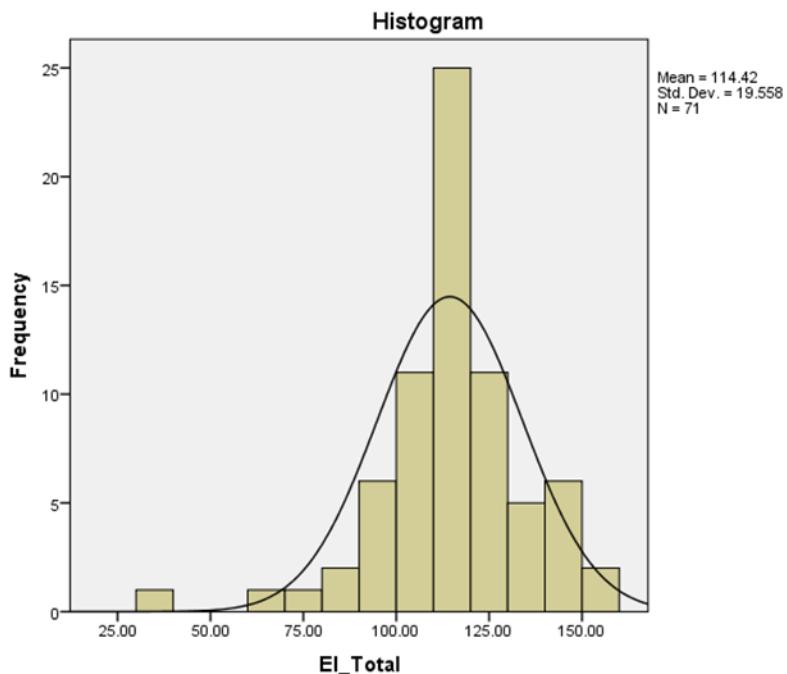


Figure 2. Trait Emotional Intelligence Scores.

Pearson's r correlation of -.062 on scale of -1 to 1 shows the correlation is not statistically significant ($p = .608$) between a student's COMPASS Reading Score and their responses to the trait emotional intelligence self-assessment (EI_Total). Similarly, the researcher conducted a Kendall's tau-b analysis to see if a correlation existed between the COMPASS Reading Score and the mean of the emotional intelligence component statement responses (EI_Mean). Again, no correlation of statistical significance ($p = .420$) exists between the COMPASS Reading Score and trait emotional intelligence variables.

Furthermore, the researcher conducted an analysis of the COMPASS Reading Score and the means for each emotional intelligence component statement response. Table 5 indicates there is no correlation of statistical significance between the COMPASS Reading Score and the emotional intelligence component statement means.

Table 5: COMPASS Reading Score and Emotional Intelligence Component Means

		COMPASS READING SCORE
SA_Mean	Pearson Correlation	-0.037
	Sig. (2-tailed)	0.761
	N	71
SREG_Mean	Pearson Correlation	0.012
	Sig. (2-tailed)	0.922
	N	71
Mot_Mean	Pearson Correlation	-0.193
	Sig. (2-tailed)	0.108
	N	71
Em_Mean	Pearson Correlation	-0.014
	Sig. (2-tailed)	0.911
	N	71
SS_Mean	Pearson Correlation	-0.047
	Sig. (2-tailed)	0.695
	N	71

Finally, the researcher conducted an analysis of the COMPASS Reading Score and the set of six statements for each of the five emotional intelligence components. Two statements indicated a statistical significance at the 0.05 level of significance as shown in Table 6. The correlational relationship the statements have with the COMPASS Reading Score is inverse. As the trait emotional intelligence levels increase, the COMPASS Reading Score decreases.

Table 6: Statistically Significant Emotional Intelligence Statements with COMPASS Reading Score

EMOTIONAL INTELLIGENCE COMPONENT	STATEMENT	STATISTICAL SIGNIFICANCE	CORRELATION COEFFICIENT
Self-Awareness	I know when my thoughts are turning negative and make a strong effort to be positive.	.021	-.213*
Self-Motivation	I am always able to motivate myself to do difficult tasks.	.025	-.204*

* Correlation is significant at the 0.05 level (2-tailed).

Based on the data analysis conducted, it is determined that a student's level of trait emotional intelligence and their COMPASS Reading Score have no correlation or significance to each other. The null hypothesis is rejected due to the inverse relationship between COMPASS Reading Score and EI_Total (Table 7) and EI_Mean (Table 8) indicating as the level of trait emotional intelligence increases, the COMPASS Reading Score decreases, thus disproving the hypothesis that students who have a higher level of trait emotional intelligence, will also have a higher COMPASS Reading placement exam score.

Table 7: COMPASS Reading Score and EI_Total Correlation

		COMPASS READING SCORE	EI_TOTAL
COMPASS Reading Score	Pearson Correlation	1	-0.062
	Sig. (2-tailed)		0.608
	N		71
EI_Total	Pearson Correlation	-0.062	1
	Sig. (2-tailed)		0.608
	N		71

Table 8: COMPASS Reading Score and EI_Mean Correlation

		COMPASS READING SCORE	EI_MEAN
COMPASS Reading Score	Correlation Coefficient Sig. (2-tailed) N	1.000 71	-0.067 0.420 71
EI_Mean	Correlation Coefficient Sig. (2-tailed) N	-0.067 0.420 71	1.000 71

Question #1c

Research question #1c is stated as follows: *How does trait emotional intelligence correlate to a student's completion of developmental English course, ENG 021 (College Reading II)?* The researcher analyzed, using Kendall's tau-b, the mediating variables EI-Total and EI_Mean to determine if a correlation existed with the dependent variable, Pass or Fail. The data analysis results were the same for both mediating variables. There is an extremely high statistically significant correlation between the dependent and mediating variables ($p = .006$) at the 0.01 level of significance which permits the results to be cautiously generalized for the target population. A correlation coefficient of .272 on a scale of -1 to 1 indicates a positive relationship between the variables. Thus, if the emotional intelligence component statement responses totals, or response means, increase, so will the student's ability to pass a developmental English course in reading. This is contrary to the data results when the COMPASS Reading Score was analyzed for correlation with the ability to pass or fail the course.

Further data analysis was conducted to determine the correlation between the emotional intelligence component means and the dependent variable, Pass or Fail (Table 9).

Table 9: Pass or Fail and Emotional Intelligence Component Means Statistical Significance

EMOTIONAL INTELLIGENCE COMPONENT MEAN	STATISTICAL SIGNIFICANCE	CORRELATION COEFFICIENT
Self-Awareness (SA_Mean)	.021	.239*
Self-Regulation (SREG_Mean)	.002	.327**
Motivation (Mot_Mean)	.005	.283**

* Correlation is significant at the 0.05 level (2-tailed).

** Correlation is significant at the 0.01 level (2-tailed).

In Table 9, two emotional intelligence component means were highly statistically significant at the 0.01 level of significance and the results can be generalized cautiously to the target population. The positive correlation coefficients indicate the student's ability to pass a developmental English course in reading will increase when any of these emotional intelligence components means increase. These results are contrary to the COMPASS Reading Score which was an inverse relationship.

The researcher analyzed each emotional intelligence component statement to determine the level of correlation and statistical significance with the dependent variable (Table 10).

Table 10: Highly statistically significance Emotional Intelligence Statements with Pass or Fail Variables

EMOTIONAL INTELLIGENCE COMPONENT	STATEMENT	STATISTICAL SIGNIFICANCE	CORRELATION COEFFICIENT
Self-Awareness	I reflect and learn from my experiences.	.007	.309**
	I have guiding awareness of my values and goals.	.016	.272*
Self-Regulation	I meet commitments and keep promises.	.005	.310**
	I handle setbacks effectively and bounce back quickly.	.005	.309**
Self-Motivation	I can kick-start myself into action when appropriate.	.004	.322**

EMOTIONAL INTELLIGENCE COMPONENT	STATEMENT	STATISTICAL SIGNIFICANCE	CORRELATION COEFFICIENT
	I set measurable goals and take calculated risks.	.012	.283*
	I am persistent in going after the things I want despite obstacles.	.016	.266*
	I am ready to seize opportunities.	.024	.254*
Empathy	I am attentive to emotional cues and listen to others well.	.002	.342**
	I show sensitivity and understand others' perspective by putting myself in their shoes.	.037	.234*
Social Skills	I promote a friendly cooperative climate in groups or organizations.	.025	.250*
	I recognize the need for change and remove barriers	.042	.225*

* Correlation is significant at the 0.05 level (2-tailed).

** Correlation is significant at the 0.01 level (2-tailed).

Self-regulation has the greatest impact on a student's ability to pass the course based on the highly statistical significance at the 0.01 level of significance (Table 10). Motivation greatly impacts a student's ability to pass the course with four statements being statistically significant in their correlation. Social skills are the least impactful on a student's ability to pass a developmental English course in reading based on the 0.05 level of significance.

It is determined based on the data analysis that trait emotional intelligence is a predictor with a student's ability to pass a developmental English course in reading. Therefore, the higher the level of trait emotional intelligence, the greater possibility of a student's ability to pass a developmental English course in reading.

Research Question #2: Findings

Research question #2 stated the following: Can trait emotional intelligence be used, in conjunction with an existing standardized placement tool, to assess placement into college-level English courses? The null hypothesis related to research question #2 is: Students who have a higher level of trait emotional intelligence will successfully complete a developmental English course in reading.

The researcher analyzed the strength of the relationship between the dependent variable, Pass or Fail, and the independent and mediating variables, COMPASS Reading Score and EI_Mean. Table 11 shows statistical significance ($p = .026$) at the 0.05 level of significance between the three variables; however, this is contributed to the mediating variable EI_Mean being statistically significant ($p = .011$) at the 0.05 level of significance; COMPASS Reading Score is not statistically significant ($p = .284$) as shown in Table 12.

Table 11: ANOVA Table among the Variables

MODEL		SUM OF SQUARES	df	MEAN SQUARE	F	SIG.
1	Regression	1.465	2	0.732	3.859	.026 ^b
	Residual	12.902	68	0.190		
	Total	14.366	70			

a. Dependent Variable: Pass or Fail

b. Predictors: (Constant), EI_Mean, COMPASS Reading Score

Table 12: *Coefficients Table among the Variables*

MODEL	UNSTANDARDIZED COEFFICIENTS		BETA	T	SIG.
	B	STD. ERROR			
(Constant)	-0.311	0.386		-0.806	0.423
COMPASS Reading Score	0.004	0.003	0.124	1.080	0.284
1 EI_Mean	0.210	0.080	0.302	2.622	0.011

a. Dependent Variable: Pass or Fail

Further analysis using a t-Test supports the statistical significance of the mediating variable labeled EI_Mean in regard to the dependent variable, and no statistical significance for COMPASS Reading Score in the Independent Samples Test (Table 13).

Table 13: *Independent Samples Test to Compare COMPASS Reading Score and EI_Mean Variables*

	LEVENE'S TEST FOR EQUALITY OF VARIANCES		t-TEST FOR EQUALITY OF MEANS					95% CONFIDENCE INTERVAL OF THE DIFFERENCE	
	F	SIG.	t	df	SIG. (2-TAILED)	MEAN DIFFERENCE	STD. ERROR DIFFERENCE	LOWER	UPPER
COMPASS Reading Score									
Equal variances assumed	4.623	0.035	-0.883	69	0.380	-3.663	4.149	-11.941	4.615
Equal variances not assumed			-0.770	27.299	0.448	-3.663	4.756	-13.417	6.091
EI_Mean									
Equal variances assumed	0.992	0.323	-2.557	69	0.013	-0.42333	0.16558	-0.75365	-0.09302
Equal variances not assumed			-2.463	32.316	0.019	-0.42333	0.17190	-0.77334	-0.07333

T-Tests were also run for the emotional intelligence component means to further understand the areas of statistical significance among the mediating variable, emotional intelligence. All

means in Table 14 were statistically significant with the exception of empathy (Em_Mean) and social skills (SS_Mean).

Table 14: *Independent Samples Test to Compare Emotional Intelligence Means*

	LEVENE'S TEST FOR EQUALITY OF VARIANCES		t-TEST FOR EQUALITY OF MEANS					95% CONFIDENCE INTERVAL OF THE DIFFERENCE	
	F	SIG.	t	df	SIG. (2-TAILED)	MEAN DIFFERENCE	STD. ERROR DIFFERENCE	LOWER	UPPER
SA_Mean									
Equal variances assumed	2.543	0.115	-2.314	69	0.024	-0.39918	0.17253	-0.74337	-0.05500
Equal variances not assumed			-2.048	27.926	0.050	-0.39918	0.19489	-0.79844	0.00007
SREG_Mean									
Equal variances assumed	0.012	0.914	-2.834	69	0.006	-0.52810	0.18636	-0.89987	-0.15633
Equal variances not assumed			-2.965	38.334	0.005	-0.52810	0.17808	-0.88851	-0.16769
Mot_Mean									
Equal variances assumed	0.020	0.888	-2.674	69	0.009	-0.48725	0.18224	-0.85082	-0.12369
Equal variances not assumed			-2.765	37.339	0.009	-0.48725	0.17625	-0.84425	-0.13026
Em_Mean									
Equal variances assumed	3.716	0.058	-1.903	69	0.061	-0.36487	0.19178	-0.74746	0.01772
Equal variances not assumed			-1.736	29.326	0.093	-0.36487	0.21021	-0.79460	0.06486
SS_Mean									
Equal variances assumed	6.015	0.017	-1.655	69	0.103	-0.33725	0.20383	-0.74388	0.06937
Equal variances not assumed			-1.414	26.468	0.169	-0.33725	0.23855	-0.82719	0.15268
EI_Mean									
Equal variances assumed	0.992	0.323	-2.557	69	0.013	-0.42333	0.16558	-0.75365	-0.09302

	LEVENE'S TEST FOR EQUALITY OF VARIANCES		T-TEST FOR EQUALITY OF MEANS					95% CONFIDENCE INTERVAL OF THE DIFFERENCE	
	F	SIG.	t	df	SIG. (2-TAILED)	MEAN DIFFERENCE	STD. ERROR DIFFERENCE		
							LOWER	UPPER	
Equal variances not assumed			-2.463	32.316	0.019	-0.42333	0.17190	-0.77334	-0.07333

Further analysis was run using a one-way ANOVA (Table 15) on the dependent variable, Pass or Fail, with the independent variable, COMPASS Reading Score, and mediating variable, EI_Mean. COMPASS Reading Score was not statistically significant with the dependent variable, Pass or Fail, in Table 15.

Table 15: ANOVA Table Comparing COMPASS Reading Score and EI_Mean Variables

		SUM OF SQUARES	df	MEAN SQUARE	F	SIG.
COMPASS Reading Score	Between Groups	192.733	1	192.733	0.779	0.380
	Within Groups	17067.239	69	247.351		
	Total	17259.972	70			
EI_Mean	Between Groups	2.575	1	2.575	6.537	0.013
	Within Groups	27.176	69	0.394		
	Total	29.750	70			

An ANOVA and Eta Squared analysis (Tables 16 and 17) was conducted with the dependent variable, Pass or Fail, and mediating variable, EI_Total. Both analyses (Tables 15 and 16) show a statistical significant correlation ($p = .013$) at the 0.05 level of significance with a student's ability to pass a developmental English course in reading and a student's level of trait emotional intelligence.

Table 16: ANOVA Table Comparing EI_Total and Pass or Fail Variables

		SUM OF SQUARES	df	MEAN SQUARE	F	SIG.
EI_Total * Pass or Fail	Between (Combined) Groups	2317.124	1	2317.124	6.537	0.013
	Within Groups	24458.200	69	354.467		
	Total	26775.324	70			

Table 17: Eta Squared Measuring Association of EI_Total and Pass or Fail Variables

	ETA	ETA SQUARED
EI_Total * Pass or Fail	0.294	0.087

Finally, the researcher conducted analysis by running an ANOVA analysis between COMPASS Reading Score and EI_Total to determine if they were statistically significant to each other. Table 18 shows they are not.

Table 18: ANOVA Table Comparing EI_Total and COMPASS Reading Score Variables

		SUM OF SQUARES	df	MEAN SQUARE	F	SIG.
EI_Total * COMPASS Reading Score	Between (Combined) Groups	10340.157	31	333.553	0.792	0.747
	Within Groups	16435.167	39	421.415		
	Total	26775.324	70			

Therefore, the researcher concludes based on the data analysis results, that trait emotional intelligence is a predictor with a student's ability to pass or fail a developmental English course in reading and can be used in conjunction with an existing placement tool to determine placement into college-level English courses. The researcher failed to reject the null

hypothesis, which signifies students who have a higher level of emotional intelligence, will successfully complete a developmental reading course.

PARTICIPANT INFORMATION

Participant information is an overview of the demographics for those students enrolled in ENG 021 in the spring 2016 semester at JJC who voluntarily participated in the research study. Of the 302 students invited to participate, one student opted out, two students attempted the survey without completing (partial responses were deleted) and 71 students chose to voluntarily participate by completing the survey, N = 71. Of the population who participated in the study, females (n = 46, 65%) outnumbered the males (n = 25, 35%) nearly double (see Table 19). Of the participants, 90% fell into the 18-25 age range (n=64).

Table 19: *Age of Participants*

	N	PERCENT
18-25	64	90.1
26-35	3	4.2
36-45	2	2.8
46-55	1	1.4
Prefer not to answer	1	1.4
Total	71	100

Joliet Junior College students are permitted to retake the COMPASS Reading placement exam. Since this research study focuses on the assessment and placement process for entry into college-level courses, participants were asked to identify the number of times they attempted the COMPASS Reading placement test prior to taking the ENG 021 course in the spring 2016 semester. As a result, 61% (n=43) have only taken the COMPASS Reading placement test one time prior to enrolling in the ENG 021 course, with 35% (n=25) taking it two

times (see Table 20). Those who took the COMPASS Reading placement test three or more times were insignificant at 3%.

Table 20: *Attempts at COMPASS*

	N	PERCENT
1 time	43	60.6
2 times	25	35.2
3 or more times	2	2.8
Don't know	1	1.4
Total	71	100

Students then rated their level of satisfaction with their COMPASS Reading placement test score. Table 21 shows over half of the participants were either dissatisfied or very dissatisfied (n= 37, 52%), with an additional 31% being neither satisfied nor dissatisfied (n=22). Only 17% (n=12) were either satisfied or very satisfied.

Table 21: *Satisfaction with COMPASS Score*

	N	PERCENT
Very Dissatisfied	12	16.9
Dissatisfied	25	35.2
Neither Satisfied or Dissatisfied	22	31
Satisfied	10	14.1
Very Satisfied	2	2.8
Total	71	100

Participants were asked the number of times they enrolled in the ENG 021 (College Reading II) course at JJC. A majority of the students (n=59, 83%) indicated this was the first time they enrolled and attempted to complete ENG 021 at JJC (see Table 22). Only 10% (n=7) indicated this was their second attempt at completing the course.

Table 22: *Number of Times Previously Enrolled in ENG 021*

	N	PERCENT
0 - This is my first time enrolling in ENG 021	59	83.1
1 time	7	9.9
2 times	3	4.2
3 times	1	1.4
Don't know	1	1.4
Total	71	100

The researcher analyzed the number of times enrolled in ENG 021 with the ability to pass or fail the course using Kendall's tau-b to determine if a correlation existed between the two variables. Table 23 shows the correlation coefficient resulted in a weak, inverse relationship (-.121) between the number of times a student enrolls in ENG 021 and their ability to pass or fail the course. The variables are not statistically significant, and therefore, the probability of the results being due to chance is great.

Table 23: *Number of Times Enrolled in ENG 021 with the Ability to Pass or Fail the Course*

		PASS OR FAIL	TIMES ENROLLED IN ENG 021
Pass or Fail	Correlation Coefficient	1.000	-0.121
	Sig. (2-tailed)		0.299
	N	71	71
Times Enrolled in ENG 021	Correlation Coefficient	-0.121	1.000
	Sig. (2-tailed)	0.299	
	N	71	71

DESCRIPTIVE STATISTICS

Descriptive statistics provide an overview of the data results and analysis for the participants' COMPASS Reading placement score and trait emotional intelligence score.

COMPASS Reading Placement Score: Results

The COMPASS Reading placement score is identified as an independent variable in this research study. Statistical analysis for this independent variable shows in Figure 1 (earlier in this chapter) the mean is 63.83, the median is 66, and because multiple modes exists, the smallest mode value is 77. The value of skewness is -1.435 and the kurtosis, or the measurement of the tails of distribution, value is 1.909. A complete listing of the COMPASS Reading placement scores can be found in Appendix C.

COMPASS Reading Placement Score: Analysis

Figure 1 shows the data distribution for the COMPASS Reading placement score is slightly skewed to the left due to outlier scores of 19 and 28 (see Appendix C). Because students are required to have a minimum COMPASS Reading score of 66 to enroll in ENG 021, College Reading II, at Joliet Junior College, the researcher can only assume students enrolled in ENG 021 and scored below these scores, successfully completed the pre-requisite, course ENG 020, College Reading I.

Trait Emotional Intelligence Score: Results

The trait emotional intelligence score is identified as the mediating variable in this research study. To measure trait emotional intelligence, participants were asked to rate their level of agreement on 30 statements categorized by five components of emotional intelligence based on Daniel Goleman's model of emotional intelligence: (1) self-awareness, (2) self-regulation, (3) motivation, (4) empathy, and (5) social skills. Participants were presented with six statements relating to each component in which to rate themselves using a Likert scale

where 1 = Strongly Disagree to 5 = Strong Agree. Emotional intelligence component statements are listed in the online survey in Appendix B.

The researcher calculated the trait emotional intelligence response statement totals for each participant. Figure 2 (earlier in this chapter) shows the mean is 114.42, the median is 116.00, and because multiple modes exist, the smallest mode is 112.00. The value of skewness is -1.298 and the kurtosis value is 4.506. A complete listing of the trait emotional intelligence scores can be found in Appendix D.

Trait Emotional Intelligence Score: Analysis

Figure 2 above depicts the data distribution to be skewed to the left as a result of an outlier score of 30 (see Appendix D). Two participants self-assessed their level of emotional intelligence at the maximum score of 150 which indicates they strong agree with all 30 emotional intelligence component statements. Multiple modes existed with five participants for each of these scores: 112, 117, and 120.

RESEARCH QUESTION #1: RESULTS AND ANALYSIS

Research question #1 inquired the following: Can a noncognitive skills assessment coupled with a standardized placement exam provide an accurate assessment of a student's preparedness to enter into college-level English courses? In order to answer this question, answers were needed to research questions #1a, #1b, and #1c.

COMPASS Reading Placement Score and Pass or Fail: Results

Research question #1a posed the following question: Does a correlation exist between a student's COMPASS Reading placement score and their ability to successfully complete a developmental English course in reading? Statistical analysis was conducted using SPSS by running a bivariate correlation analysis to determine Kendall's tau-b (coefficient correlation) of the dependent variable, the successful completion of a developmental English course in reading labeled Pass or Fail, and the independent variable, COMPASS Reading placement score. Table 4 above shows the results of this statistical analysis.

COMPASS Reading Placement Score and Pass or Fail: Analysis

The Kendall's tau-b correlation of .029 indicated in Table 4 above shows there is an extremely weak, positive relationship between the two variables and they are not statistically significant ($p = .773$) indicating there is a high probability the results are due to chance. The positive relationship indicates as the COMPASS Reading Score increases, so does the ability to pass the course. Likewise, if the COMPASS Reading score decreases, the ability to pass also decreases.

COMPASS Reading Placement Score and Trait Emotional Intelligence: Results

Research question #1b posed the following question: How does trait emotional intelligence correlate to a student's COMPASS Reading placement score? For the purpose of this research, trait emotional intelligence was analyzed by the following approaches:

- The total sum of the trait emotional intelligence scores labeled variable EI_Total

- The sum of each participant's 30 statement responses divided by the total number of statements (n=30) labeled variable EI_Mean
- The mean for each emotional intelligence component group of statements and labeled these variables SA_Mean (self-awareness), SREG_Mean (self-regulation), Mot_Mean (motivation), Em_Mean (empathy), and SS_Mean (social skills)
- Each emotional intelligence statement grouped by component.

The data were analyzed to determine a correlation between the independent variable, COMPASS Reading Score, and the mediating variable, trait emotional intelligence labeled EI_Total. Table 7 (earlier in this chapter) shows the results of this statistical analysis. Because both variables are measured at scale, Pearson's r correlation was applied.

COMPASS Reading Placement Score and Trait Emotional Intelligence: Analysis

The variables are not statistically significant ($p = .608$) and a very weak, inverse relationship of $-.062$ as reflected in Table 7. This inverse relationship indicates as one variable increases, the other will decrease.

COMPASS Reading Placement Score and Trait Emotional Intelligence Overall Mean: Results

To further the study, the researcher calculated the trait emotional intelligence mean for every participant based on their response for each of the 30 emotional intelligence component statements (see Appendix B). This mediating variable is labeled EI_Mean and is the sum of a participant's 30 statement responses divided by the total number of statements (n=30). Using the independent variable COMPASS Reading Score and the mediating variable EI_Mean, the researcher analyzed the data using a bivariate correlational analysis to determine Kendall's tau-b for the coefficient correlation because the COMPASS Reading Score is measured as scale and the EI_Mean is measured as ordinal (see Table 8 earlier in this chapter).

COMPASS Reading Placement Score and Trait Emotional Intelligence Overall Mean: Analysis

Much like the trait emotional intelligence total (EI_Total) in Table 7, the correlation between COMPASS Reading Score and EI_Mean in Table 8 is not statistically significant ($p = .420$) indicating a high probability that the results are due to chance. The strength of the relationship is extremely weak at $-.067$ and the direction is inverse.

COMPASS Reading Placement Score and Emotional Intelligence Component Means: Results

To determine if a correlation exists between a student's level of trait emotional intelligence based on the five emotional intelligence components and a student's COMPASS Reading Score, the researcher analyzed the 30 statements in groups of six pertaining to each of the five components. The researcher calculated the mean using SPSS for each emotional intelligence component group of statements and labeled these variables SA_Mean (self-awareness), SREG_Mean (self-regulation), Mot_Mean (motivation), Em_Mean (empathy), and SS_Mean (social skills). Using the variables of COMPASS Reading Score and the individual component means, a bivariate correlational analysis was run to determine Pearson's r, or the coefficient correlation, because all variables are measured at scale (see Table 5 above).

COMPASS Reading Placement Score and Emotional Intelligence Component Means: Analysis

The data results in Table 5 show no relationship of statistical significance concerning the emotional intelligence component means and COMPASS Reading Score. Therefore, the correlations indicate a high probability that the results are due to chance. The greatest relationship is the inverse correlation between motivation mean (Mot_Mean) and COMPASS Reading Score at $-.193$ on a scale of -1 to 1, followed by the inverse correlation with the social

skills mean (SS_Mean) at -.047. The weakest relationship is the positive correlation between the self-regulation mean (SREG_Mean) and COMPASS Reading Score at .012.

COMPASS Reading Placement Score and Emotional Intelligence Statements

The researcher analyzed each emotional intelligence component group of statements to determine if a correlation exists with COMPASS Reading Score. A bivariate correlational analysis was run to determine Kendall's tau-b for the correlation coefficient because the statement variables are measured as ordinal and the COMPASS Reading Score is measured as scale.

Self-Awareness Statements: Results

Self-awareness is the ability to know one's self and values, as well as to recognize implications and consequences of emotions and actions. The researcher considered each, individual emotional intelligence statement for the self-awareness component. Table 24 reflects the data results using Kendall's tau-b among the independent variable, COMPASS Reading Score, and the mediating variable, emotional intelligence statements for the self-awareness component.

Table 24: *COMPASS Reading Score and Self-Awareness Statements Correlation*

		COMPASS READING SCORE
I know which emotions I feel and why.	Correlation Coefficient Sig. (2-tailed) N	-0.076 0.418 71
I can tell when my emotions are affecting my performance.	Correlation Coefficient Sig. (2-tailed) N	0.097 0.303 71

		COMPASS READING SCORE
I have guiding awareness of my values and goals.	Correlation Coefficient Sig. (2-tailed) N	-0.088 0.352 71
I am aware of my strengths and weaknesses.	Correlation Coefficient Sig. (2-tailed) N	-0.005 0.957 71
I reflect and learn from my experiences.	Correlation Coefficient Sig. (2-tailed) N	0.013 0.895 71
I know when my thoughts are turning negative and make a strong effort to be positive.	Correlation Coefficient Sig. (2-tailed) N	-.213* 0.021 71

*. Correlation is significant at the 0.05 level (2-tailed).

Self-Awareness Statements: Analysis

The self-awareness statement “I know when my thoughts are turning negative and make a strong effort to be positive” indicates a correlation of statistical significance ($p = .021$) at the 0.05 level of significance, with the COMPASS Reading Score in Table 24. Kendall’s tau-b correlation for this emotional intelligence self-awareness statement is -.213, on a scale of -1 to 1, reflecting a weak, inverse relationship direction. An extremely weak, inverse relationship (-.005) scarcely exists, if at all, with the statement “I am aware of my strengths and weaknesses.”

Self-Regulation Statements: Results

Self-regulation can be likened to self-control; the ability to manage our emotions and to think before acting. The researcher considered each, individual emotional intelligence statement for the self-regulation emotional intelligence component. Table 25 reflects the data

results using Kendall's tau-b among the independent variable, COMPASS Reading Score, and the mediating variable, emotional intelligence statements for the self-regulation component.

Table 25: COMPASS Reading Score and Self-Regulation Statements Correlation

		COMPASS READING SCORE
I can think clearly and stay focused under pressure.	Correlation Coefficient Sig. (2-tailed) N	0.066 0.468 71
I am open to new ideas and information.	Correlation Coefficient Sig. (2-tailed) N	-0.054 0.565 71
I can manage impulsive feelings and remain in control.	Correlation Coefficient Sig. (2-tailed) N	-0.058 0.534 71
I handle setbacks effectively and bounce back quickly.	Correlation Coefficient Sig. (2-tailed) N	-0.057 0.530 71
I deal with anxiety, stress, anger and fear in a calm manner.	Correlation Coefficient Sig. (2-tailed) N	-0.077 0.399 71
I meet commitments and keep promises.	Correlation Coefficient Sig. (2-tailed) N	-0.066 0.474 71

Self-Regulation Statements: Analysis

While none of the statements indicated any statistical significance in Table 25, the statement demonstrating the greatest relationship with a correlation coefficient of -.077 on a scale of -1 to 1 is "I deal with anxiety, stress, anger and fear in a calm manner." The direction of this relationship is inverse. The weakest relationship with COMPASS Reading Score is "I am open to new ideas and information" with a correlation coefficient of -.054 on a scale of -1 to 1, and an inverse direction.

Motivation Statements: Results

Effective students have this drive to achieve not for financial gains, but to fulfill their own beliefs and desire to continue to learn, along with make things better; they do not accept status quo (Goleman, 1996, p. 14). The researcher considered each individual emotional intelligence statement for the motivation component. Table 26 reflects the data results using Kendall's tau-b among the independent variable, COMPASS Reading Score, and the mediating variable, emotional intelligence statements for the motivation component.

Table 26: *COMPASS Reading Score and Motivation Statements Correlation*

	COMPASS READING SCORE	
I can kick-start myself into action when appropriate.	Correlation Coefficient Sig. (2-tailed) N	-0.109 0.244 71
I set measurable goals and take calculated risks.	Correlation Coefficient Sig. (2-tailed) N	-0.127 0.176 71
I never waste time.	Correlation Coefficient Sig. (2-tailed) N	-0.116 0.203 71
I am persistent in going after the things I want despite obstacles.	Correlation Coefficient Sig. (2-tailed) N	-0.123 0.181 71
I am ready to seize opportunities.	Correlation Coefficient Sig. (2-tailed) N	-0.068 0.468 71
I am always able to motivate myself to do difficult tasks.	Correlation Coefficient Sig. (2-tailed) N	-.204* 0.025 71

*. Correlation is significant at the 0.05 level (2-tailed).

Motivation Statements: Analysis

One statement, “I am always able to motivate myself to do difficult tasks,” indicated a statistical significance ($p = .025$) at the 0.05 level of significance and a weak, inverse relationship of -.204 on a scale of -1 to 1 in Table 26. This was followed by the statement of “I set measurable goals and take calculated risks,” with a weak, inverse relationship of -.127. The statement “I am ready to seize opportunities,” indicates an extremely weak, inverse relationship of -.068.

Empathy Statements: Results

Empathy is the ability to recognize and understand the feelings and emotions of others, and perhaps the most easily recognized component of emotional intelligence. The researcher considered each, individual emotional intelligence statement for the empathy/social awareness component. Table 27 reflects the data results using Kendall’s tau-b among the independent variable, COMPASS Reading Score, and the mediating variable, emotional intelligence statements for the empathy component.

Table 27: *COMPASS Reading Score and Empathy Statements Correlation*

	COMPASS READING SCORE
I am attentive to emotional cues and listen to others well.	Correlation Coefficient Sig. (2-tailed) N
I accurately read key power relationships and detect social networks.	Correlation Coefficient Sig. (2-tailed) N
I can pick up social cue indicating others’ needs or wants.	Correlation Coefficient

		COMPASS READING SCORE
	Sig. (2-tailed) N	0.866 71
I show sensitivity and understand others' perspective by putting myself in their shoes.	Correlation Coefficient Sig. (2-tailed) N	0.010 0.915 71
I respect and relate well to people with diverse backgrounds.	Correlation Coefficient Sig. (2-tailed) N	-0.056 0.553 71
I can accurately read others' non-verbal cues and moods.	Correlation Coefficient Sig. (2-tailed) N	0.054 0.560 71

Empathy Statements: Analysis

Similar to the self-regulation component, the results of this analysis in Table 27 show there is no correlation of statistical significance between the six statements of empathy and the COMPASS Reading Score which indicates a high probability the results are due to chance. The statement demonstrating the highest relationship with a correlation coefficient of -.056 on a scale of -1 to 1 is “I respect and relate well to people with diverse backgrounds.” The direction of this relationship is inverse. This statement is followed by the two emotional intelligence statements which each have the same correlation coefficient of .054; however, one is inverse (-.054) and one is positive (.054). “I accurately read key power relationships and detect social networks” has an inverse relationship direction at -.054 and the other statement, “I can accurately read others’ non-verbal cues and moods,” has a positive relationship direction with .054. The statement, “I show sensitivity and understand others’ perspective by putting myself

in their shoes," has an extremely, weak positive relationship with a correlation coefficient of .010 on a scale from -1 to 1.

Social Skills Statements: Results

While an effective student possessing social skills may seem friendly, it is his or her innate ability to network with key individuals and create relationships in order to draw upon their resources and support when needed that is the true essence of social skills. The researcher considered each, individual emotional intelligence statement for the social skills component. Table 28 reflects the data results using Kendall's tau-b among the independent variable, COMPASS Reading Score, and the mediating variable, emotional intelligence statements for the social skills component.

Table 28: *COMPASS Reading Score and Social Skills Statements Correlation*

		COMPASS READING SCORE
I handle myself very good in social situations.	Correlation Coefficient Sig. (2-tailed) N	-0.053 0.572 71
I promote a friendly, cooperative climate in groups or organizations.	Correlation Coefficient Sig. (2-tailed) N	-0.028 0.764 71
I am able to raise morale and make others feel good.	Correlation Coefficient Sig. (2-tailed) N	0.004 0.970 71
I build rapport with people and have close friendships.	Correlation Coefficient Sig. (2-tailed) N	-0.068 0.466 71
I recognize the need for change and remove barriers.	Correlation Coefficient Sig. (2-tailed) N	-0.002 0.979 71
I handle difficult people and situations with tact and diplomacy.	Correlation Coefficient Sig. (2-tailed) N	-0.043 0.639 71

Social Skills Statements: Analysis

Similar to the self-regulation and empathy components, the results of this analysis in Table 28 represent no correlation of statistical significance between the six statements of social skills and the COMPASS Reading Score which indicates a high probability the results are due to chance. The statement demonstrating the highest relationship with a correlation coefficient of -.068 on a scale of -1 to 1 is “I build rapport with people and have close friendships.” The direction of this relationship is inverse. A scarce, positive relationship exists, if at all, with the statement “I am able to raise morale and make others feel good,” at .004 on a scale ranging from -1 to 1.

Pass or Fail and Trait Emotional Intelligence: Results

Research question #1c poses the following question: How does trait emotional intelligence correlate to a student’s completion of developmental English course, ENG 021 (College Reading II)? As with the independent variable, COMPASS Reading Score, the researcher analyzed the dependent variable, successful completion of a developmental English course in reading labeled Pass or Fail, with the mediating variable, trait emotional intelligence, to determine if a statistically significant correlation existed. Once again, trait emotional intelligence was analyzed by the following approaches:

- The total sum of the trait emotional intelligence scores labeled variable EI_Total
- The sum of each participant’s 30 statement responses divided by the total number of statements (n=30) labeled variable EI_Mean
- The mean for each emotional intelligence component group of statements and labeled these variables SA_Mean (self-awareness), SREG_Mean (self-regulation), Mot_Mean (motivation), Em_Mean (empathy), and SS_Mean (social skills)

- each emotional intelligence statement grouped by component.

Table 29 shows the results of this statistical analysis of the dependent variable, successful completion of a developmental English course in reading labeled Pass or Fail, and the mediating variable, trait emotional intelligence score total. This scale variable is labeled as EI_Total. The researcher conducted a Kendall's tau-b to compute the correlation coefficient because the Pass or Fail variable is measured as nominal and the EI_Total variable is measured as scale.

Table 29: Pass or Fail and EI_Total Correlation

		PASS OR FAIL	EI_TOTAL
Pass or Fail	Correlation Coefficient	1.000	.272**
	Sig. (2-tailed)		0.006
	N	71	71
EI_Total	Correlation Coefficient	.272**	1.000
	Sig. (2-tailed)	0.006	
	N	71	71

**. Correlation is significant at the 0.01 level (2-tailed).

Pass or Fail and Trait Emotional Intelligence: Analysis

Table 29 shows that a highly statistically significant correlation ($p = .006$) at the 0.01 level of significance exists between the EI_Total and Pass or Fail variables and results can be generalized for the target population cautiously due to the low number of participants, along with a positive relationship based on the correlation coefficient of .272 on a scale of -1 to 1. The variables move in the same direction; if one increases or decreases, so will the other.

Pass or Fail and Trait Emotional Intelligence Overall Mean: Results

The mediating variable labeled EI_Mean is the sum of a participant's emotional intelligence component statement responses divided by the total number of statements (n=30). Once again, the mediating variable data were analyzed for each of the 30 statements grouped by the five components of emotional intelligence (see Appendix B). The researcher analyzed the data using a bivariate correlational analysis to determine Kendall's tau-b for the coefficient correlation because the Pass or Fail variable is measured as nominal and the EI_Mean is measured as ordinal (see Table 30).

Table 30: *Pass or Fail and EI_Mean Correlation*

		PASS OR FAIL	EI_MEAN
Pass or Fail	Correlation Coefficient	1.000	.272**
	Sig. (2-tailed)		0.006
	N	71	71
EI_Mean	Correlation Coefficient	.272**	1.000
	Sig. (2-tailed)	0.006	
	N	71	71

**. Correlation is significant at the 0.01 level (2-tailed).

Pass or Fail and Trait Emotional Intelligence Overall Mean: Analysis

Unlike COMPASS Reading Score, Table 30 shows a correlation of statistical significance ($p = .006$) at the 0.01 level of significance exists between the dependent variable and mediating variable; therefore, the results can be cautiously generalized to the target population. The correlation between the variables Pass or Fail and EI_Mean is positive at .272 on a scale from -1 to 1 and moves in the same direction. If the EI_Mean increases due to a higher agreement with the emotional intelligence statements, the Pass rate will increase for students as well.

However, if EI_Mean decreases due to lower agreement with emotional intelligence statements, the Pass rate will also decrease.

Pass or Fail and Emotional Intelligence Component Means: Results

The researcher analyzed each emotional intelligence component group of statements to determine if a correlation exists with the dependent variable labeled Pass or Fail. A bivariate correlational analysis was run to determine Kendall's tau-b for the correlation coefficient because the statement variables are measured as ordinal and Pass or Fail is measured as nominal (see Table 31).

Table 31: Pass or Fail and Emotional Intelligence Component Means

		PASS OR FAIL
SA_Mean	Correlation Coefficient Sig. (2-tailed) N	.239* 0.021 71
SREG_Mean	Correlation Coefficient Sig. (2-tailed) N	.317** 0.002 71
Mot_Mean	Correlation Coefficient Sig. (2-tailed) N	.283** 0.005 71
Em_Mean	Correlation Coefficient Sig. (2-tailed) N	0.166 0.104 71
SS_Mean	Correlation Coefficient Sig. (2-tailed) N	0.115 0.258 71

*. Correlation is significant at the 0.05 level (2-tailed).

**. Correlation is significant at the 0.01 level (2-tailed).

Pass or Fail and Emotional Intelligence Component Means: Analysis

Three mediating variables indicate statistical significance with correlation to the dependent variable labeled Pass or Fail (Table 31). The first two variables are the means for both self-regulation (SREG_Mean) and motivation (Mot_Mean) variables. Each variable indicates a probability at the 0.01 level of significance ($p = .002$ and $p = .005$, respectively), showing a high statistical significance for both. The third statistically significant variable, self-awareness mean (SA_Mean), has a probability at the 0.05 level of significance ($p = .021$). While this is not as statistically significant as self-regulation and self-motivation, it remains a low probability of the results related to chance.

Table 31 also shows the highest, positive relationship exists between the dependent variable, Pass or Fail, and the SREG_Mean variable with a correlation coefficient of .317 on a scale of -1 to 1. Second highest is the Mot_Mean variable with a correlation coefficient of .283, followed by SA_Mean at .239. As the means increase or decrease for each of these mediating variables, so will the Pass or Fail variable. The weakest correlational relationship is the social skills means variable, SS_Mean, with a correlation coefficient of .115 on a scale of -1 to 1.

Pass or Fail and Emotional Intelligence Component Statements

As with the data analysis for independent variable, COMPASS Reading Score, the researcher analyzed the 30 emotional intelligence statements grouped in five components, with the dependent variable, Pass or Fail, to determine if a correlation exists using SPSS. A bivariate correlation analysis was conducted to identify statistically significant correlations

between the dependent variable, Pass or Fail, and the mediating variable, trait emotional intelligence, which was comprised of 30 emotional intelligence statements.

Self-Awareness Statements: Results

The researcher considered each, individual emotional intelligence statement for the self-awareness component. Table 32 reflects the data results using Kendall's tau-b among the dependent variable, Pass or Fail, and the mediating variable, emotional intelligence statements for the self-awareness component.

Table 32: Pass or Fail and Self-Awareness Statements Correlation

	PASS OR FAIL	
I know which emotions I feel and why.	Correlation Coefficient Sig. (2-tailed) N	0.084 0.455 71
I can tell when my emotions are affecting my performance.	Correlation Coefficient Sig. (2-tailed) N	0.156 0.168 71
I have guiding awareness of my values and goals.	Correlation Coefficient Sig. (2-tailed) N	.272* 0.016 71
I am aware of my strengths and weaknesses.	Correlation Coefficient Sig. (2-tailed) N	0.180 0.111 71
I reflect and learn from my experiences.	Correlation Coefficient Sig. (2-tailed) N	.309** 0.007 71
I know when my thoughts are turning negative and make a strong effort to be positive.	Correlation Coefficient Sig. (2-tailed) N	0.102 0.358 71

*. Correlation is significant at the 0.05 level (2-tailed).

**. Correlation is significant at the 0.01 level (2-tailed).

Self-Awareness Statements: Analysis

The self-awareness statement “I reflect and learn from my experiences,” is statistically significant ($p = .007$) at the 0.01 level of significance, and has a positive correlation coefficient of .309 on a scale of -1 to 1 with the variable Pass or Fail (see Table 32). “I have guiding awareness of my values and goals,” self-awareness statement is also statistically significant ($p = .016$) at the 0.05 level of significance, and a positive correlation coefficient of .272 on a scale of -1 or 1 with the variable Pass or Fail. The statement which has the weakest correlation is “I know which emotions I feel and why,” due to a correlation coefficient of .084 on a scale of -1 to

1. The dependent variable, Pass or Fail, moves in the same direction as the mediating variables, emotional intelligence statements, in that if either one increases or decreases, the other will follow.

Self-Regulation Statements: Results

The researcher considered each, individual emotional intelligence statement for the self-regulation component. Table 33 reflects the data results using Kendall’s tau-b among the dependent variable, Pass or Fail, and the mediating variable, emotional intelligence statements for the self-regulation component.

Table 33: *Pass or Fail and Self-Regulation Statements Correlation*

	PASS OR FAIL	
I can think clearly and stay focused under pressure.	Correlation Coefficient Sig. (2-tailed) N	0.202 0.066 71
I am open to new ideas and information.	Correlation Coefficient Sig. (2-tailed) N	0.199 0.077 71
	Correlation Coefficient	0.153

		PASS OR FAIL
I can manage impulsive feelings and remain in control.	Sig. (2-tailed) N	0.169 71
I handle setbacks effectively and bounce back quickly.	Correlation Coefficient Sig. (2-tailed) N	.309** 0.005 71
I deal with anxiety, stress, anger and fear in a calm manner.	Correlation Coefficient Sig. (2-tailed) N	0.196 0.073 71
I meet commitments and keep promises.	Correlation Coefficient Sig. (2-tailed) N	.310** 0.005 71

**. Correlation is significant at the 0.01 level (2-tailed).

Self-Regulation Statements: Analysis

Table 33 illustrates two self-regulation statements, “I meet commitments and keep promises,” and “I handle setbacks effectively and bounce back quickly,” are both highly statistically significant ($p = .005$) at the 0.01 level of significance and can be generalized for the target population; however, cautiously due to the low number of participants. Likewise, both statements also reflect a positive relationship with a correlation coefficient of .310 and .309 respectively on a scale of -1 to 1. The least correlated self-regulation statement with the variable Pass or Fail is “I can management impulsive feelings and remain in control,” with a positive correlation coefficient of .153 on a scale of -1 to 1.

Motivation Statements: Results

The researcher considered each of the six individual emotional intelligence statements for the motivation component. Table 34 reveals the data results using Kendall’s tau-b among

the dependent variable, Pass or Fail, and the mediating variable, emotional intelligence statements for the motivation component.

Table 34: Pass or Fail and Motivation Statements Correlation

		PASS OR FAIL
I can kick-start myself into action when appropriate.	Correlation Coefficient Sig. (2-tailed) N	.322** 0.004 71
I set measurable goals and take calculated risks.	Correlation Coefficient Sig. (2-tailed) N	.283* 0.012 71
I never waste time.	Correlation Coefficient Sig. (2-tailed) N	0.111 0.311 71
I am persistent in going after the things I want despite obstacles.	Correlation Coefficient Sig. (2-tailed) N	.266* 0.016 71
I am ready to seize opportunities.	Correlation Coefficient Sig. (2-tailed) N	.254* 0.024 71
I am always able to motivate myself to do difficult tasks.	Correlation Coefficient Sig. (2-tailed) N	0.149 0.174 71

*. Correlation is significant at the 0.05 level (2-tailed).

**. Correlation is significant at the 0.01 level (2-tailed).

Motivation Statements: Analysis

Four of the six motivation statements indicate levels of statistical significance in Table 34. “I can kick-start myself into action when appropriate,” is highly statistically significant ($p = .004$) at the 0.01 level of significance. With a probability at the 0.05 level of significance, “I set measurable goals and take calculated risks” ($p = .012$), “I am persistent in going after the things I want despite obstacles,” ($p = .016$), and “I am ready to seize opportunities,” ($p = .024$) are all

statistically significant. The correlation coefficients for these four statements indicate a positive relationship with .322, .283, .266 and .254 respectively on a scale of -1 to 1. The motivation statement which correlates with the variable Pass or Fail the weakest is "I never waste time," with a correlation coefficient of .111 on a scale ranging from -1 to 1.

Empathy Statements: Results

The researcher considered each of the six individual emotional intelligence statements for the empathy component. Table 35 reveals the data results using Kendall's tau-b among the dependent variable, Pass or Fail, and the mediating variable, emotional intelligence statements for the empathy component.

Table 35: Pass or Fail and Empathy Statements Correlation

			Pass or Fail
I am attentive to emotional cues and listen to others well.	Correlation Coefficient Sig. (2-tailed) N	.342** 0.002 71	
I accurately read key power relationships and detect social networks.	Correlation Coefficient Sig. (2-tailed) N	0.145 0.193 71	
I can pick up social cue indicating others' needs or wants.	Correlation Coefficient Sig. (2-tailed) N	0.134 0.228 71	
I show sensitivity and understand others' perspective by putting myself in their shoes.	Correlation Coefficient Sig. (2-tailed) N	.234* 0.037 71	
I respect and relate well to people with diverse backgrounds.	Correlation Coefficient Sig. (2-tailed) N	0.105 0.351 71	
I can accurately read others' non-verbal cues and moods.	Correlation Coefficient Sig. (2-tailed) N	0.063 0.570 71	

*. Correlation is significant at the 0.05 level (2-tailed).

**. Correlation is significant at the 0.01 level (2-tailed).

Empathy Statements: Analysis

In Table 35, one empathy statement, “I am attentive to emotional cues and listen to others well,” is highly statistically significant ($p = .002$) at the 0.01 level of significance and results can be cautiously generalized for the target population. Following closely is the empathy component statement “I show sensitivity and understand others’ perspective by putting myself in their shoes,” with a statistical significance ($p = .037$) at the 0.05 level of significance. Both of these statements reflect a strong, positive relationship with correlation coefficients of .342 and .234, respectively, on a scale of -1 to 1. The empathy statement reflecting the weakest correlation coefficient of .063 on a scale from -1 to 1 with the variable Pass or Fail is “I can accurately read others’ non-verbal cues and moods.”

Social Skills Statements: Results

The researcher considered each of the six individual emotional intelligence statements for the social skills component. Table 36 reveals the data results using Kendall’s tau-b among the dependent variable, Pass or Fail, and the mediating variable, emotional intelligence statements for the social skills component.

Table 36: Pass or Fail and Social Skills Statements Correlation

		PASS OR FAIL
I handle myself very good in social situations.	Correlation Coefficient Sig. (2-tailed) N	0.138 0.217 71
I promote a friendly, cooperative climate in groups or organizations.	Correlation Coefficient Sig. (2-tailed) N	.250* 0.025 71

			PASS OR FAIL
I am able to raise morale and make others feel good.	Correlation Coefficient Sig. (2-tailed) N	0.108 0.335 71	
I build rapport with people and have close friendships.	Correlation Coefficient Sig. (2-tailed) N	-0.028 0.799 71	
I recognize the need for change and remove barriers.	Correlation Coefficient Sig. (2-tailed) N	.225* 0.042 71	
I handle difficult people and situations with tact and diplomacy.	Correlation Coefficient Sig. (2-tailed) N	0.075 0.499 71	

*. Correlation is significant at the 0.05 level (2-tailed).

**. Correlation is significant at the 0.01 level (2-tailed).

Social Skills Statements: Analysis

Unlike the other emotional intelligence components, the social skills component does not indicate a highly statistically significant variable with a probability at the 0.01 level of significance with a variable of Pass or Fail (see Table 36). Two social skills statements which are statistically significant with a probability at the 0.05 level of significance are “I promote a friendly cooperative climate in groups or organizations” ($p = .025$), and “I recognize the need for change and remove barriers” ($p = .042$). Both of these social skills statements reflect a positive relationship with correlation coefficients of .250 and .225, respectively, on a scale of -1 to 1. Again, unlike the other components, social skills has one statement “I build rapport with people and have close friendships,” which reflects an inverse relationship with a correlation coefficient

of -.028 and the weakest relationship with the variable Pass or Fail on a scale of -1 to 1 among the six statements.

RESEARCH QUESTION #2: RESULTS AND ANALYSIS

Research question #2 asked the following: Can trait emotional intelligence be used, in conjunction with an existing standardized placement tool, to assess placement into college-level English courses? The researcher conducted a linear regression analysis as a predictive model to determine if the variables are related without influence. The dependent variable, Pass or Fail, was analyzed the independent variable, COMPASS Reading Score, and the mediating value, trait emotional intelligence mean labeled EI_Mean.

Table 37: Model Summary Which Identifies Fit Among the Variables

MODEL	R	R SQUARE	ADJUSTED R SQUARE	STD. ERROR OF THE ESTIMATE
1	.319 ^a	0.102	0.076	0.436

a. Predictors: (Constant), EI_Mean, COMPASS Reading Score

Table 37 is the Model Summary which identifies fit among the variables. According to the adjusted R square of .076 (7.6%), this reflects the coefficient of determination, or the explained variance, in which the student's ability to pass a development English course in reading is affected by their COMPASS Reading Score and or trait emotional intelligence identified as EI_Mean.

ANOVA is an acronym for the Analysis of Variance between variables. The ANOVA table (see Table 11 above) indicates there is a statistical significance ($p = .026$) at the 0.05 level of significance among the variables. The Coefficients table (see Table 12 above) further breaks down the significance and indicates only EI_Mean is statistically significant ($p = .011$) at the 0.05

level of significance. The COMPASS Reading Score is not statistically significant. The Standardized Coefficients Beta shows EI_Mean has a greater relative importance (.302) than COMPASS Reading Score (.124) on the dependent variable of Pass or Fail. The Unstandardized Coefficients B determines that for every one point the variable EI_Mean increases, the dependent variable, Pass or Fail, increases by .210.

INFERENTIAL STATISTICS

Inferential statistics analyze the descriptive and associational statistics to determine the likelihood of the variables to be true to a general population. This type of statistic looks at a correlation beyond being *statistically* significant to determine if it is *practically* significant (Vogt, 2007, p. 11). Due to the low number of participants ($N = 71$) in this study, it is significant to present inferential statistics.

The dependent, independent, and mediating variables were analyzed using an Independent t-Test to compare the means (Table 38). Of the 71 participants, 51 passed the course and 20 failed the course.

Table 38: *Independent t-Test to Compare COMPASS Reading Score and EI_Mean Variables with Pass or Fail*

	PASS OR FAIL	N	MEAN	STD. DEVIATION	STD. ERROR MEAN
COMPASS Reading Score	Fail Course	20	61.20	19.349	4.327
	Pass Course	51	64.86	14.110	1.976
EI_Mean	Fail Course	20	3.5100	0.66632	0.14899
	Pass Course	51	3.9333	0.61221	0.08573

The Independent Samples Test (see Table 13 above) shows the COMPASS Reading Score is not statistically significant for equal variances assumed (.380) and equal variances not assumed (.448). The dependent variable, Pass or Fail, was analyzed with the Independent t-Test to compare the means with each of the five emotional intelligence component means, and the overall emotional intelligence mean variables (see Table 14 above). The Independent Samples Test in Table 14 above shows the Em_Mean and SS_Mean components are not statistically significant for equal variances assumed ($p = .061$ and $p = .103$, respectively) at the 0.05 level of significance and equal variances not assumed ($p = .093$ and $p = .169$, respectively) at the 0.05 level of significance. All of the remaining emotional intelligence means were statistically significant.

Using a one-way ANOVA, the dependent variable, Pass or Fail, was analyzed the independent variable, COMPASS Reading Score, and the mediating variable, trait emotional intelligence labeled EI_Mean (see Table 15 above). The ANOVA table above (Table 15) indicates the COMPASS Reading Score is not statistically significant ($p = .380$) with the dependent variable, Pass or Fail; however, the EI_Mean variable is statistically significant ($p = .013$) at the 0.05 level of significance.

Additionally, the researcher conducted an ANOVA and Eta Squared (which measures effect size) analysis on the dependent variable, Pass or Fail, and the mediating variable, trait emotional intelligence labeled EI_Total (see Table 16 above). The ANOVA table above (Table 16) indicates statistical significant ($p = .013$) at the 0.05 level of significance exists between EI_Total and Pass or Fail variables. Furthermore, the Measures of Association (see Table 17

above) indicates 8.7% of the variance in Pass or Fail can be explained by trait emotional intelligence (EI_Total).

The researcher conducted an ANOVA (see Table 18 above) analysis on the mediating variable, trait emotional intelligence labeled EI_Total, and the independent variable, COMPASS Reading Score. The ANOVA table above (Table 18) indicates there is no statistical significance ($p = .747$) between these two variables.

CONCLUSION

The findings and results in the research study were enlightening to the researcher, most notably; the COMPASS Reading Score was not a predictor to a JJC student passing a developmental English course in reading for a study this size. This is most surprising given standardized placement testing, such as COMPASS or ACCUPLACER, is the dominant means for assessing preparedness for college-level courses and determining placement. The extremely weak correlation coefficient (.029) on a scale of -1 to 1, between these variables could be a result of the low number of study participants ($N = 71$).

Not surprising was the correlation and statistical significance of a student's trait emotional intelligence and the ability to pass a developmental English course in reading. Drs. Veitch and Justice (2012) concluded from a study they conducted in Texas identifying a relationship between emotional intelligence skills and academic achievement the following:

Emotions help students earn better grades. Students are more successful when they are emotionally involved in their education (Elder, 1997). Students who are interested in a subject become more focused on learning everything about it. Their emotions help motivate them to learn as much as possible. That is why teachers try to engage students in the classroom. They want to make a connection that will motivate the

student to learn. Without these feelings/emotions, students cannot focus on their ultimate education goal to completion. (p. 188)

Self-regulation and motivation are the strongest emotional intelligence predictors of a student being able to pass a developmental English course in reading. Social skills demonstrated to be the weakest predictor.

It is believed that emotional intelligence can be improved upon through training (Sparkman, Maulding, & Roberts, 2012). Curriculum and instruction can be integrated with emotional intelligence skills (Veitch & Justice, 2012). As more research is conducted on noncognitive skills and education, trait emotional intelligence skills are anticipated to be prevalent. Chapter Five will address how these findings contribute to the body of existing research, limitations and delimitations of this study, and recommendations for further research.

CHAPTER FIVE: CONCLUSIONS AND RECOMMENDATIONS

REVIEW OF THE STUDY

Community colleges are open access, allowing students an opportunity to enter into higher education regardless of academic level and as a result of a populist movement in the 1880s to create access to higher education for all people, not just the elite. Chapter One provided an in-depth detail of the origin of open access and the resulting balancing act placed on community colleges to accept all students and safeguard student success and completion. The responsibility ultimately becomes one of the community college to assess the level of college-preparedness of incoming students and place them in courses which align with their skills and abilities. Based on research, for a majority of community colleges, measuring college preparedness of students is primarily completed through a single standardized placement exam, such as COMPASS or ACCUPLACER, which measures a student's cognitive ability. Research also indicates freshmen entering community colleges are finding they are being placed into developmental education courses because their level of preparedness to enter a college-level courses is deficient, simply based on their standardized placement exam scores.

Examination of the validity and accuracy of standardized placement exams has transpired with research findings reflecting that students are being over- and under-placed into developmental education courses. The search for a reliable predictor of developmental education course outcomes has led scholars to suggest and propose the inclusion of

noncognitive assessments to be used in addition to a single, standardized placement exam. Studies by researchers Belfield, Crosta, Scott-Clayton, and others as provided in the Literature Review (Chapter Two), have investigated the use of a student's high school grade point average (GPA) in addition to a standardized placement exam. Their findings represent the inclusion of an additional measure such as a high school GPA increases the validity in predicting developmental education course outcomes. Including noncognitive assessments as an additional measure has been suggested to provide insights into a student's characteristics such as motivation and learning habits (Boylan, Bonham, & White, 1999; Hodara, Jaggars, & Karp, 2012). This research study examined a noncognitive assessment by means of trait emotional intelligence, as an additional resource to determine college preparedness and predict developmental education course outcomes.

This quantitative research design, which is correlational, sought to explain the degree in which the dependent variable (successful completion in a developmental English course in reading), the independent variable (student's level of academic ability defined by COMPASS Reading placement score), and the mediating variable (student's level of trait emotional intelligence) are related. Students who were enrolled in Joliet Junior College's ENG 021, College Reading II course, had a COMPASS Reading score, and were 18 years of age or older were provided the opportunity to participate in the study. Of the 302 students who met the study requirements, 71 participated and completed the online survey.

Chapter Four delivered the overall results of the online survey responses and the analysis of the data relating to the variables. The data demonstrated a correlation of statistical significance between the students' level of trait emotional intelligence and their ability to pass a

developmental English course in reading. As the students' level of trait emotional intelligence increases, their probability for successfully completing a developmental English course in reading is eminent.

Surprisingly, the results between the students' COMPASS Reading score and their ability to pass a developmental English course in reading show an extremely weak, not statistically significant, relationship. In addition, no correlational relationship between the COMPASS Reading placement score and level of trait emotional intelligence was demonstrated. However, a positive relationship (.272) between the trait emotional intelligence and a student's ability to pass a developmental English course in reading was demonstrated with high statistical significance, $p = .006$ at the 0.01 level of significance. A student's ability to pass a development English course in reading becomes greater, as his or her level of trait emotional intelligence increased.

CONTRIBUTION TO RESEARCH

Research cited in Chapter Two (Belfield & Crosta, 2012; Scott-Clayton, 2012b) concentrated on the validity of standardized placement tests to accurately assess college-readiness and to predict course grades in developmental education classes. Their studies researched the outcomes of including a student's high school grade point average (GPA) in assessing placement into a college-level course. Conclusions from this specific research indicate adding a second cognitive assessment improved accuracy in assessing and placing students.

This study utilized a noncognitive assessment to contribute to the body of existing research and to inspire further exploration into the development of a comprehensive assessment of students which uses multiple measurements to determine placement. Furthermore, research (Bradberry & Greaves, 2009; Ciarrochi, Chan, & Bajgar, 2001; Goleman, 1996, 2006; Joshith, 2012; Lynn Veitch & Justice, 2012) states that emotional intelligence skills can be taught to students expanding maturity levels for noncognitive skills. Lynn Veitch and Justice (2012) also indicate that emotional intelligence can be learned and should be integrated into a college curriculum.

Through self-awareness, students who recognize and are aware of their learning needs, and can articulate those needs to the instructor, will increase their success in the classroom. This dialogue may strengthen the ability for the instructors to talk with the student and provide the additional support needed, as well as be cognizant and sensitive of learning issues and needs. Students who self-regulate their emotions are better able to manage their stress and remain focused on their academics. If a student fails an examination, the ability to self-regulate emotions allows the student an opening to move forward past the disappointment in a way that does not derail them from his or her academic endeavors.

Students who are motivated have the ability to keep themselves academically on track; define their goals; and track their progress toward achieving their desired outcomes. Motivated students will adjust and tweak their academic progress as needed to continue on their path to achieving their goals. Determination and time management contribute to the success in reaching those goals.

Empathy provides the ability to understand feelings and emotions of others. Students who are empathetic have the ability to ascertain the tone and manner in which an instructor or fellow classmate may address them regarding an assignment. Possessing the ability to read or understand the emotions of others allows the student to differentiate between the information provided without adding a tone or level of negativity or emotion to it which would thwart their academic efforts. Having a positive outlook also provides students with the ability to develop relationships with their instructors and classmates which can be beneficial to their academic progress.

INTERPRETATIONS OF THE FINDINGS

Research Question 1: Implications

Data results and findings for the 71 participants were analyzed in an effort to answer research question 1: can a noncognitive skills assessment coupled with a standardized placement exam provide an accurate assessment of a student's preparedness to enter into college-level English course? To arrive at an answer for this question, the succeeding analyses were conducted on the data to ascertain whether correlations of statistical significance existed among the variables.

The study attempted to determine whether a correlation existed between the students' COMPASS Reading placement score and their ability to successfully complete a developmental English course in reading. Research results in Chapter Four, Table 4, indicate an extremely weak relationship exists with no statistical significance; therefore, it is concluded a correlation does

not exist between students' COMPASS Reading placement scores and their ability to successfully complete a developmental English course in reading.

Data collected for this research were further analyzed to determine if students' trait emotional intelligence correlates to their COMPASS Reading placement score. Tables 7 and 8 in Chapter Four both support no statistical significance between these two variables, and the relationship is inverse indicating as the students' level of trait emotional intelligence increases, their COMPASS Reading placement score decreases.

Lastly, the study focused on the correlation between trait emotional intelligence and a student's ability to complete a developmental English course in reading, specifically ENG 021 (College Reading II) at JJC. Tables 29 and 30 in Chapter Four demonstrate data analysis that supports a highly statistically significant probability ($p = .006$ at the 0.01 level of significance) and a positive relationship between the variables. As the students' level of trait emotional intelligence increases, so will their ability to complete the developmental English course in reading.

The data analysis revealed trait emotional intelligence to be correlated to a student's ability to pass a developmental English course in reading. Surprisingly, the COMPASS Reading placement score was not an accurate predictor for a student's grade in developmental education. The findings were then comparable with research conducted by Belfield and Crosta (2012).

Implications of this study indicate that using an assessment tool with questionable accuracy for placement may result in students spending time and money enrolling in courses they may not have otherwise needed. Research has shown low retention and completion rates

for students who are placed in developmental education (Ari, Fisher-Ari, & Paul, 2016; Bailey, 2009; Bailey, Jeong, & Cho, 2010a; Bettinger & Long, 2009; Complete College America, 2012; Scott-Clayton 2012b). As more students are placed in developmental education, increasing and meeting graduation rates will be progressively difficult to attain as community colleges face this uphill battle with retention.

Research Question 2: Implications

In an effort to move toward a comprehensive assessment of a student's preparedness to enter a college-level course, this study sought to answer the question: can trait emotional intelligence be used, in conjunction with an existing standardized placement tool, to assess placement into college-level English courses?

Data results and findings provided in Chapter Four, Tables 11 to 17, represent the relationship between the variables on multiple levels. Overall, data points to trait emotional intelligence having a statistical significance with a student's ability to complete a developmental English course in reading (see Tables 11, 13, and 15). The Standardized Coefficients Beta data in Table 12, demonstrates trait emotional intelligence has a greater relative importance (.302) than COMPASS Reading Score (.124) on a student's ability to complete a developmental English course in reading. The Unstandardized Coefficients B determines that for every one point that trait emotional intelligence (EI_Mean) increases, a student's ability to complete a developmental English course in reading (Pass or Fail) will increase by .210.

Findings from this study further support the value of adding additional assessments and noncognitive tests to determine a student's preparedness to enter into a college-level course.

Standardized placement exams have demonstrated inaccuracies in placement and are not valid predictors of a student's grade in a developmental education course. Therefore, including a secondary assessment, cognitive or noncognitive, could provide a comprehensive picture of a student's ability and preparedness to be successful in a college-level course.

Recommendations

Community colleges that are not aware of the inaccuracies or implications of using a single standardized placement exam must focus their attention on how students are assessed for enrollment into college-level courses. Redesign of developmental education in community colleges has traditionally focused on acceleration or supplemental instruction programs, aimed to expedite a student's time in developmental education courses. While these programs are necessary and valuable, colleges must also consider how students are placed in developmental education upon enrollment. Accurately placing students in the correct course aligned to their cognitive and noncognitive abilities may positively impact student success by increasing retention and completion rates. There is a strong probability that institutions of higher education and students alike will save money currently spent on developmental education.

LIMITATIONS OF THE STUDY

This research study has a number of limitations. The researcher was not present at the institution to personally encourage and engage the students to participate. The small number of the participants ($N = 71$) did not allow the researcher to confidently apply statistically significant findings to the general population. This study invited 302 students to participate which resulted in a 24% participation response rate.

Students self-assessed their level of emotional intelligence on 30 statements covering five components of emotional intelligence. The online survey was subjective; therefore, partiality on behalf of the students' mental state at the time they completed the survey could have impacted the results. In addition, participants solicited for this research study were limited to developmental education course ENG 021, College Reading II; this decision was made on the assumption students have a greater ability to read and comprehend the research questions posed to them. Developmental education courses in writing, mathematics, and supplemental instruction were not considered for this research study.

DELIMITATIONS OF THE STUDY

Delimitations of this study were selections made by the researcher and have been identified as follows:

- Based on familiarity and experience, the study limited the standardized placement exam to COMPASS.
- Data were collected from a single institution, again, due to researcher familiarity and convenience.
- The study was based on one specific model of emotional intelligence, Daniel Goleman's, as a foundation for the research.
- The survey tool used to collect data on trait emotional intelligence was developed by the researcher.

RECOMMENDATIONS FOR FUTURE RESEARCH

This research study provides an insight into the possibility of noncognitive assessments being used to increase and improve the accuracy of standardized placement exams to assess students. The data analysis suggests several approaches for future research.

Accuracy of placement scores vary among English, reading, and mathematics; this study focused on reading. Research similar connections using developmental education courses in the disciplines of English and/or mathematics.

The ENG 021 course in this study did not incorporate developmental education supports. Research similar connections using accelerated and supplemental instruction approaches to developmental education courses.

The selected target population for this study was based on convenience and was limited in size and scope. Select a larger, random population for sampling to be able to generalize statistically significant results to a general population, at state or national levels.

A single community college, serving approximately 35,000 credit and non-credit students, was used for research in this study. Develop similar studies at community colleges of various sizes and locations ranging from small, rural institutions to multi-campus, urban college districts.

Lynn Veitch and Justice (2012) conducted research which identified relationships between emotional intelligence, gender, and ethnicity in three rural east Texas community colleges. Research similar connections using demographic features of the participants, such as age, ethnicity, and gender.

This research study utilized an emotional intelligence self-assessment that was constructed by the researcher. To expand the significance of the results, conduct a research study using a standardized, vetted assessment for emotional intelligence.

Because COMPASS was discontinued by ACT, Inc. as of December 2016, new research using this standardized placement exam is no longer an option. Thus, future studies should investigate correlations with the standardized placement exams ACCUPLACER.

This research study focused on one retention factor: student completion of a developmental English course in reading. Expand the research to track the student's progress through a sequence of developmental education courses or entry into a college-level course.

It is believed that emotional intelligence can be improved upon through training (Sparkman, Maulding, & Roberts, 2012). Curriculum and instruction can be integrated with emotional intelligence skills (Veitch & Justice, 2012). Research the integration of emotional intelligence in curriculum and instruction.

Investigate legislative bills, such as the California Assembly's Committee on Higher Education's bill AB 705 which "would require all [California] community colleges to use high school grades as an important part of the placement decision" (Gordon, 2017, n.p.). Research the impact and outcomes of legislation focused on placement in developmental education.

Study the efforts, results, and outcomes of the Multiple Measures Assessment Project (MMAP), which concentrates on the development and implementation of a state-wide assessment process using multiple measures to determine placement.

CONCLUSION

Developmental education has moved to the forefront of issues facing community college leaders due to an estimated 50% to 60% of incoming students requiring remediation based on their assessment. The research presented in the study offers the possibility for

community colleges to consider using multiple measures in the process of assessing a student's level of preparedness to place students into college-level classes accurately and endorse student success. Two-year institutions should not be reacting to the influx of freshman requiring developmental education courses once they arrive on campus, but instead should be identifying proactive solutions with kindergarten through grade 12 (K-12) partners to integrate student success into a continuum of education. It is incumbent upon community colleges to begin preparing students before they arrive on campus and partner with K-12 education leaders to ensure students are equipped to enter into college-level courses.

Using multiple measures to assess college readiness provides the institution with a comprehensive representation of students' skills and abilities in order to guarantee academic resources and supports are offered and accessible to meet their requirements to achieve student success and completion. Wrap-around services such as tutoring, counseling, and accommodations can be identified and targeted to the student based on their needs. Utilizing a noncognitive assessment in combination with the standardized placement exam will deliver significant information that may be absent and undistinguishable from a standardized placement exam alone.

Community colleges need to have an understanding of their mission to be flexible and adaptable, to meet the needs of the communities they serve, and to provide educational opportunities for all who are interested, in order to thrive and sustain in an ever-changing world. Student success and completion are threatened if the inaccurate placement of students in developmental education courses continues. The placement process needs to be adapted

and reconfigured by community colleges to ensure the validity and accuracy of assessing students for college-level courses and safeguard student success for everyone.

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APPENDIX A: INSTITUTIONAL REVIEW BOARD APPROVAL

FERRIS STATE UNIVERSITY

Institutional Review Board for Human Subjects in Research

Office of Academic Research, 220 Ferris Drive, PHR 308 • Big Rapids, MI 49307

Date: November 20, 2015

To: Dr. Judy Mitchell, Dr. Sandra Balkema and Paige Vanderhyden
From: Dr. Gregory Wellman, IRB Chair
Re: IRB Application #151102 (*Academic Placement: Assessing Emotional Intelligence as an indicator for Academic Preparedness for Developmental English*)

The Ferris State University Institutional Review Board (IRB) has reviewed your application for using human subjects in the study, "*Academic Placement: Assessing Emotional Intelligence as an indicator for Academic Preparedness for Developmental English*" (#151102) and determined that it meets Federal Regulations Expedited-category 2G. This approval has an expiration of one year from the date of this letter. **As such, you may collect data according to the procedures outlined in your application until November 20, 2016.** Should additional time be needed to conduct your approved study, a request for extension must be submitted to the IRB a month prior to its expiration.

Your protocol has been assigned project number (#151102), which you should refer to in future correspondence involving this same research procedure. Approval mandates that you follow all University policy and procedures, in addition to applicable governmental regulations. Approval applies only to the activities described in the protocol submission; should revisions need to be made, all materials must be approved by the IRB prior to initiation. In addition, the IRB must be made aware of any serious and unexpected and/or unanticipated adverse events as well as complaints and non-compliance issues.

Understand that informed consent is a process beginning with a description of the study and participant rights with assurance of participant understanding, followed by a signed consent form. Informed consent must continue throughout the study via a dialogue between the researcher and research participant. Federal regulations require each participant receive a copy of the signed consent document and investigators maintain consent records for a minimum of three years.

As mandated by Title 45 Code of Federal Regulations, Part 46 (45 CFR 46) the IRB requires submission of annual reviews during the life of the research project and a Final Report Form upon study completion. Thank you for your compliance with these guidelines and best wishes for a successful research endeavor. Please let us know if the IRB can be of any future assistance.

Regards,

Ferris State University Institutional Review Board
Office of Academic Research, Academic Affairs



JOLIET JUNIOR COLLEGE

1901

RE: Paige Vanderhyden Consent to Conduct Research at Joliet Junior College
Doctorate in Community College Leadership – Ferris State University

Thursday, November 19, 2015

Dear Paige,

We welcome opportunities for individuals to conduct research at Joliet Junior College.

Accept this as a letter of endorsement from the Office of Institutional Research and Effectiveness and consent to conduct your research at JJC pending your final approval through the Ferris State University Institutional Review Board.

If you have any questions or need any further information please feel free to contact me.

Sincerely,

A handwritten signature in black ink, appearing to read "Joseph Offermann".

Joseph Offermann
Director of Institutional Research & Effectiveness
Joliet Junior College
Joliet, IL 60431
(815) 280-2211
jofferma@jjc.edu

cc. Dr. Margaret Boudreau – Interim Vice President of Academic Affairs
Dr. Judy Mitchell - Vice President, Administrative Services

APPENDIX B: ONLINE SURVEY

EMAIL INTRODUCTION and INFORMED CONSENT

My name is Paige Vanderhyden, and I am a doctoral student at Ferris State University in Big Rapids, Michigan. I am inviting you to participate in a research study by completing a voluntary, online survey about academic placement into developmental education.

Participants, who complete the survey, will have the option to enter their name into a drawing for a \$100 Walmart gift card.

The following outlines the purposes of the study and provides a description of your involvement and rights as a participant:

- I consent that I am over the age of 18. If I am under the age of 18, I will stop and NOT consent to participate in the research study.
- I consent to participate in a research study conducted by Paige M. Vanderhyden, a doctoral student at Ferris State University, located in Big Rapids, Michigan.
- I understand the study is entitled Academic Placement: Assessing Emotional Intelligence as an indicator for Academic Preparedness for Developmental English. The purpose of this study is to research and analyze emotional intelligence assessment scores as an indicator of academic preparedness for students enrolled in English 021 (College Reading II).
- I understand that my participation will consist completing an online survey lasting approximately 10 to 15 minutes.
- I understand I may exit the survey at any time and none of my responses will be recorded.
- I understand that my participation is voluntary and can be discontinued at any time until the completion of the dissertation.
- I understand that my information will be kept confidential by the researcher during the research study and up to two years following defense of dissertation when said information will be destroyed. I understand that only the researcher, Paige M. Vanderhyden, will have access to a secured file cabinet in which will be kept all transcripts, documents, and field notes from the survey in which I participated.
- I understand there are no anticipated risks or benefits to me, no greater than that encountered in daily life. Further, the information gained from this study could be used to assist in the identification of alternative academic placement assessments for developmental education courses, in addition to giving guidance for student completion initiatives and institution-wide planning for strategic planning purposes.
- Participation or non-participation in this study will not impact my relationship with Joliet Junior College in any way.

I understand that in the event I have questions or require additional information I may contact the researcher: Paige M. Vanderhyden, 372 Chalfonte Ave., Grosse Pointe Farms, MI 48236. Phone: 815.474.9329 or E-mail: paigevanderhyden@gmail.com.

If you have any concerns or questions before or during participation that you feel have not been addressed by the researcher, you may contact my Primary Advisor and Dissertation Chair: Dr. Judith L. Mitchell, Joliet Junior College, 1215 Houbolt Road, Joliet, IL 60431. Phone: 815.280.6647 or E-mail: jmitchel@jjc.edu. You may also contact the Institutional Research Board (IRB) at Ferris State University: Ferris State University Institutional Review Board, 220 Ferris Drive, PHR 308, Big Rapids, MI 49307. Phone: (231) 591-2553. Email: IRB@ferris.edu

By clicking on the link below to begin the survey, you consent to participate in this research study. You may print or save a copy of this page for your records.

ONLINE QUESTIONNAIRE

COMPASS

The ACT Compass® placement tests are used to determine your academic readiness for entry into college-level English and Math courses.

1. Thinking only about the Compass **Reading** placement test, how many times did you take the Compass **Reading** placement test?

1 time
2 times
3 or more times
Do not know

2. How satisfied, overall, are you with the score you received for the Compass Reading placement test?

1 - Very Dissatisfied – go to q.3
2 – Dissatisfied – go to q.3
3 - Neither Satisfied nor Dissatisfied
4 - Satisfied
5 - Very satisfied

3. If you responded “Very Dissatisfied” or “Dissatisfied” for question 2, please explain why.

4. Prior to this current English 021 (College Reading II) class, how many times have you enrolled in English 021 at Joliet Junior College?

0 – This is my first time enrolling in English 021

1 time

2 times

3 times

4 or more times

Do not know

5. If you enrolled in English 021 (College Reading II) prior to the current semester at Joliet Junior College, what is the primary reason you did not previously complete English 021?

Failing grade or not getting the grade I wanted/needed

Did not understand the subject

Fell behind in homework

Did not attend class

Do not recall

Other

EMOTIONAL INTELLIGENCE

“Emotional Intelligence is the ability to understand, accept and recognize our own emotions and feelings, including their impact on ourselves and other people and to use this knowledge to improve our own behaviours as well as to manage and improve our relationship with others” (Ann Cartwright and Amanda Solloway, 2007).

Emotional Intelligence, or EI, is based on five components: Self-Awareness, Self-Regulation, Self-Motivation, Empathy, and Social Skills.

Self-awareness is the ability to know one’s self and values, as well as to recognize implications and consequences of emotions and actions.

Self-regulation can be likened to self-control; the ability to manage our emotions and to think before acting.

Motivation is the ability to use your deepest emotions to move and guide you towards your goals. This ability enables you to take the initiative and to persevere in the face of obstacles and setbacks.

Empathy is not sympathy; it is the ability to recognize and understand the feelings and emotions of others.

Social Skills is the ability to manage, influence and inspire emotions in others.

The following 30 statements, representing each of the five EI components, may be randomly presented and participants will answer using a Likert scale where 1 = Strongly Disagree, 2 = Disagree, 3 = Neither Agree nor Disagree, 4 = Agree, and 5 = Strongly Agree for each of the 30 statements.

Self-Awareness:

1. I know which emotions I feel and why.
2. I can tell when my emotions are affecting my performance.
3. I have guiding awareness of my values and goals.
4. I am aware of my strengths and weaknesses.
5. I reflect and learn from my experiences.
6. I know when my thoughts are turning negative and make a strong effort to be positive.

Self-Regulation:

7. I can think clearly and stay focused under pressure.
8. I am open to new ideas and information.
9. I can manage impulsive feelings and remain in control.
10. I handle setbacks effectively and bounce back quickly.
11. I deal with anxiety, stress, anger and fear in a calm manner.
12. I meet commitments and keep promises.

Self-Motivation:

13. I can kick-start myself into action when appropriate.
14. I set measurable goals and take calculated risks.
15. I never waste time.
16. I am persistent in going after the things I want despite obstacles.
17. I am ready to seize opportunities.
18. I am always able to motivate myself to do difficult tasks.

Empathy/Social Awareness:

19. I am attentive to emotional cues and listen to others well.
20. I accurately read key power relationships and detect social networks.
21. I can pick up social cue indicating others' needs or wants.
22. I show sensitivity and understand others' perspective by putting myself in their shoes.
23. I respect and relate well to people with diverse backgrounds.
24. I can accurately read others' non-verbal cues and moods.

Social Skills:

25. I handle myself very good in social situations.
26. I promote a friendly, cooperative climate in groups or organizations.
27. I am able to raise morale and make others feel good.
28. I build rapport with people and have close friendships.
29. I recognize the need for change and remove barriers.
30. I handle difficult people and situations with tact and diplomacy.

DEMOGRAPHICS

Please indicate your gender: Male Female

Please select your age range:

- 18-20
- 21-25
- 26-30
- 31-35
- 36-40
- 41-45
- 46-50
- 51-55
- 56-60
- 61 or older
- Prefer not to answer

As a participant of this survey, would you like to enter your name into a drawing for a \$100 Walmart gift card?

Yes No

If yes, please provide your name:

The winner of the drawing will be notified by email.

Thank you for completing the survey and participating in this research study!

APPENDIX C: COMPASS READING SCORE

COMPASS READING SCORE

	Frequency	Percent	VALID PERCENT	CUMULATIVE PERCENT
19	4	5.6	5.6	5.6
28	1	1.4	1.4	7.0
38	1	1.4	1.4	8.5
44	1	1.4	1.4	9.9
46	1	1.4	1.4	11.3
48	1	1.4	1.4	12.7
50	1	1.4	1.4	14.1
51	1	1.4	1.4	15.5
53	1	1.4	1.4	16.9
55	2	2.8	2.8	19.7
56	1	1.4	1.4	21.1
57	2	2.8	2.8	23.9
58	3	4.2	4.2	28.2
59	1	1.4	1.4	29.6
60	3	4.2	4.2	33.8
61	2	2.8	2.8	36.6
62	3	4.2	4.2	40.8
63	2	2.8	2.8	43.7
64	1	1.4	1.4	45.1
65	2	2.8	2.8	47.9
66	3	4.2	4.2	52.1
69	3	4.2	4.2	56.3
70	1	1.4	1.4	57.7
72	3	4.2	4.2	62.0
73	2	2.8	2.8	64.8
74	1	1.4	1.4	66.2
75	3	4.2	4.2	70.4
76	3	4.2	4.2	74.6
77	6	8.5	8.5	83.1
78	3	4.2	4.2	87.3
79	3	4.2	4.2	91.5
80	6	8.5	8.5	100.0
Total	71	100.0	100.0	

APPENDIX D: EMOTIONAL INTELLIGENCE PARTICIPANT STATEMENT TOTALS

EI_Total

	Frequency	Percent	Valid Percent	Cumulative Percent
30.00	1	1.4	1.4	1.4
62.00	1	1.4	1.4	2.8
73.00	1	1.4	1.4	4.2
84.00	1	1.4	1.4	5.6
86.00	1	1.4	1.4	7.0
90.00	2	2.8	2.8	9.9
91.00	1	1.4	1.4	11.3
98.00	1	1.4	1.4	12.7
99.00	2	2.8	2.8	15.5
103.00	2	2.8	2.8	18.3
105.00	2	2.8	2.8	21.1
106.00	1	1.4	1.4	22.5
107.00	3	4.2	4.2	26.8
108.00	1	1.4	1.4	28.2
109.00	2	2.8	2.8	31.0
111.00	2	2.8	2.8	33.8
112.00	5	7.0	7.0	40.8
113.00	2	2.8	2.8	43.7
114.00	2	2.8	2.8	46.5
115.00	1	1.4	1.4	47.9
116.00	2	2.8	2.8	50.7
117.00	5	7.0	7.0	57.7
118.00	2	2.8	2.8	60.6
119.00	4	5.6	5.6	66.2
120.00	5	7.0	7.0	73.2
121.00	2	2.8	2.8	76.1
124.00	1	1.4	1.4	77.5
128.00	2	2.8	2.8	80.3
129.00	1	1.4	1.4	81.7
130.00	1	1.4	1.4	83.1
132.00	1	1.4	1.4	84.5
134.00	1	1.4	1.4	85.9
137.00	1	1.4	1.4	87.3
139.00	1	1.4	1.4	88.7
140.00	2	2.8	2.8	91.5
141.00	3	4.2	4.2	95.8
147.00	1	1.4	1.4	97.2
150.00	2	2.8	2.8	100.0
Total	71	100.0	100.0	