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# Learning engagement of students in clinical healthcare internships

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**Learning engagement of students in clinical healthcare internships**

by

**Robert J. Loch**

A dissertation submitted to the graduate faculty  
in partial fulfillment of the requirements for the degree of

**DOCTOR OF PHILOSOPHY**

Major: Education (Educational Leadership)

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Iowa State University

Ames, Iowa

2013

## DEDICATION

I dedicate this dissertation to:

my amazing wife

Suzy

who knew I could do this

and gave me the courage to accomplish it;

my children

Henry and Ava

who were willing to relinquish the computer

so their dad could finish his dissertation

and understood that dad had homework, too!

my parents (Gil and June)

who instilled in me the value of an education;

and

my in-laws (LeRoy, Lorene, Sharon, and Dan)

who were always at the ready to lending a helping hand

with everything that needed to get done!

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**ABSTRACT**

Students who select healthcare education enter an environment that can be different from general liberal arts education. There is a rigor and prescription that is unique to healthcare education curriculum. This study examined how student learning engagement may vary for students at differing stages of their healthcare education and whether or not students have no plans, plan to, or have already participated in a clinical healthcare internship.

This research study was conducted at a small, private, not-for-profit, non-residential, Catholic affiliated healthcare college in the Midwest. The Community College Survey of Student Engagement (CCSSE) was used to ascertain if differences existed among the five established benchmarks of student engagement for students who have no plans, plan to, and have participated in a clinical healthcare internship. The nature of the clinical environment offers students an informal curriculum which gives them greater flexibility in developing learning opportunities (Brown et al., 2010). Taking advantage of these opportunities requires motivation on the part of the student and was the basis for grounding this study in self-determination theory (Reeve, 2012).

Since a community college tool was used at a private, special focus institution this study also looked at institutional reports provided by CCSSE to reveal any differences between the institution researched, other small colleges and the 2008 CCSSE cohort. Analysis of variance was applied to determine if differences existed within each benchmark for the groups of students who have not, nor plan to, plan to or have participated in a clinical healthcare internship.



The results revealed that the institution researched demonstrated greater engagement in the benchmarks of Active and Collaborative Learning and Academic Challenge, and less engagement for the benchmark Support for Learners, when compared to other small colleges and the 2008 CCSSE cohort. The results also revealed that students who have not, nor plan to participate in a clinical healthcare internship are significantly less engaged in the benchmarks of Student Effort and Academic Challenge. The results demonstrate a need to identify students with no plans to participate in a clinical healthcare internship early on and actively support the development of academic goals.

## CHAPTER 1. INTRODUCTION

### Overview and Problem Statement

Students in clinical internships face a dichotomy of experiences related to student engagement. They are often torn between feelings of excitement to finally put theory into practice and utter fear of the dynamic and unpredictable clinical environment they are about to enter. It has been well documented that clinical internships are a source of increased stress (Chan, 2002; McAllister & McKinnon, 2008; Li, Wang, Lin, & Lee, 2011). In general, healthcare professionals experience more stress-related health issues than professionals not in healthcare (McAllister & McKinnon, 2008). In addition to stresses innate to the profession, students transitioning from the classroom to the clinical environment are being socialized to a new environment that is fast paced and dynamic (Li et al., 2011).

Despite these challenges there is an aspect to clinical education that places some locus of control on the student. The clinical environment provides an informal curriculum that can complement the formal curriculum structure provided by the program. There are a variety of opportunities that are unplanned and present themselves on a daily basis that enrich the learning of students if they choose to engage in them (Brown et al., 2010). This setting generates an expectation that students will take an active role in their clinical learning (Chan, 2002). It has been demonstrated that students in internships, in general, demonstrate better learning engagement (Miller, Rycek, & Fritson, 2011).

The expectation of active participation was the premise for grounding the following research study in Self Determination Theory (SDT) and agentic engagement (Reeve, 2012;

Reeve & Tseng, 2011). This study adds to the limited body of research on learning engagement for students specifically in clinical healthcare internships.

### **Purpose of the Study**

The purpose of this study was to determine if student learning engagement differs for students who have done, plan to do, or have not done nor plan to participate in a clinical healthcare internship. The study is grounded in Reeve's SDT (2012) and agentic engagement, a fourth aspect of student engagement (Reeve & Tseng, 2011). Specifically, this research sought to identify if differences exist between students at the institution researched who have done, plan to do, or have not done nor plan to participate in a clinical healthcare internship for the five CCSSE benchmarks of Support for Learners, Student-Faculty Interaction, Academic Challenge, Student Effort, and Active and Collaborative Learning (McClenney, 2007). In addition, the unique application of a community college tool in a private, health focused institution prompted the investigation of how the institution compared as a whole to colleges of a similar size as well as national results.

### **Significance**

This study is potentially significant because students transitioning to clinical healthcare internships experience a variety of changes that ultimately can impact their learning engagement. Student learning engagement paves the way for success (Hu, 2011). A better understanding of student learning engagement while in clinical healthcare internships can inform healthcare programs and institutions how to better support and encourage learning engagement of this student population. Very little literature currently exists in regards to this topic. This study adds to this limited body of literature.

## **Theoretical Framework**

This study was grounded in SDT; a theoretical framework designed to explain converging aspects of motivation (Reeve, 2012). Five mini theories consider factors that impact the universal psychological needs of autonomy, competence, and relatedness, and how they affect motivation (Milyavskaya & Koestner, 2010; Reeve, 2012). When applied to the concept of student engagement a fourth construct of engagement develops to complement behavioral, emotional, and cognitive engagement. The fourth construct, agentic engagement, is useful in using motivation to explain an apparent achievement gap not previously explained by the traditional three constructs of engagement (Reeve & Tseng, 2011). SDT is useful in rationalizing how students in healthcare education thrive in a stressful clinical environment that offers less structured curriculum than one would find in a traditional classroom. Together SDT and agentic engagement provide the foundation for this research study.

## **Research Questions**

A quantitative approach was utilized to collect and analyze data to answer the following questions:

1. How do the demographic and academic characteristics of students who participated in this study differ? More specifically, how do these characteristics differ for students who have done, plan to do, or have not done, nor plan to participate in a clinical healthcare internship?
2. Does student learning engagement overall differ between students in the study, colleges of similar sizes and national benchmark results?

3. Does participating in a clinical healthcare internship influence students' perceptions of the student learning engagement aspect of active participation?
4. Does participating in a clinical healthcare internship influence students' perceptions of the student learning engagement aspect of effort put forth?
5. Does participating in a clinical healthcare internship influence students' perceptions of the student learning engagement aspect of academic challenges?
6. Does participating in a clinical healthcare internship influence students' perceptions of the student learning engagement aspect of student-faculty interactions?
7. Does participating in a clinical healthcare internship influence students' perceptions of the student learning engagement aspect of support for learning?

### **Methodology**

A cross-sectional design with students from a small, private, not-for-profit, non-residential, Catholic affiliated, health science college in the mid-west were surveyed in the spring semester of 2008. The institution will be referred to as Confluence College. The study was comprised of a sample of 326 participants out of a total population of 737, for a participation rate of 44.2%. The study used the Community College Survey of Student Engagement (CCSSE) which is an existing instrument that has been tested for reliability and validity (Creswell, 2009). This study is unique in that the CCSSE survey was not administered at a "traditional" community college as the title of the instrument would suggest. Rather, it was administered at Confluence College due to the fact that the associate degree was the degree most awarded and the local community college was the regional competitor. Descriptive and inferential statistics were used to assess differences between

students who have done, plan to do, and have not done nor plan to participate in a clinical healthcare internship. Institutional reports generated by CCSSE were used to determine how the research populations differ from colleges of a similar size and national datasets.

### **Definition of Terms**

The following terms were defined for this research:

***Agentic engagement:*** "...students' intentional, proactive, and constructive contribution into the flow of the instruction they receive" (Reeve, 2012, p. 161).

***Certificate:*** An academic award for a program that is greater than one year but less than two years in duration (Confluence College, 2013).

***Clinical healthcare internship:*** Supervised practice in a healthcare environment as negotiated by the academic and healthcare institution to provide practical experience for students (Westerber & Wickersham, 2011; National Association of Colleges and Employers, 2012).

***Clinical instructor:*** A licensed or certified clinician who works directly with students within the clinical healthcare internship setting, and oversees the education of the student and the care given to patients within a clinical setting (Kelly, 2007).

***Short term certificate:*** An academic award for a program that is equal to or less than one semester in duration (Confluence College, 2013).

***Student learning engagement:*** The extent that a student actively participates in activities and experiences that contribute to the learning process (Marti, 2008).

### **Limitations and Delimitations**

Applying CCSSE to a small, private, not-for-profit, non-residential, Catholic affiliated college with a special focus in healthcare is unique and potentially presents limitations. CCSSE was created to address the diversity one would expect to find at a community college (McClenney, 2007). The population researched lacks the diversity associated with a community college and is restricted to healthcare programs. While it is important to recognize these differences, it should also be noted that healthcare programs exist within community colleges. Therefore, it is reasonable to assume that CCSSE is an adequate tool for assessing student learning engagement at a health science college.

This study was delimited to a target population of students in clinical healthcare internships. The study does not seek, nor does it claim, that these results are transferable to all types of internships. The study was designed to investigate only students in healthcare programs at a small, private, not-for-profit, non-residential, Catholic affiliated college with a special focus in healthcare.

### **Summary**

The purpose of this study was to determine if student learning engagement differs for students who have done, plan to do, or have not done, nor plan to participate in clinical healthcare internships at a health science college. This study includes a review of literature, study methodology, results, and discussion. Chapter 2 includes a review of literature that is related to clinical healthcare internships, SDT, student learning engagement, and the constructs of the five CCSSE benchmarks. The methodology applied to this study is detailed in Chapter 3. The results of the study are presented in Chapter 4. Chapter 5 contains a

discussion related to the results and the implications the results may have on practice and future research.



## CHAPTER 2. LITERATURE REVIEW

### Introduction

It has been well-documented that student learning engagement is related to student success in higher education. Increased student learning engagement leads to higher retention and completion rates (Tinto, 1993). Student learning engagement can exist in many forms and differs for each student. One factor of student learning engagement is the environment in which students learn. The environment can be very different for students in clinical healthcare internships as compared to a traditional didactic classroom. This research sought to explore how student learning engagement might differ for those students in clinical healthcare internships. Research of clinical healthcare internships may demonstrate that students in clinical healthcare internships have a need and an opportunity to construct their own learning engagement opportunities. The motivation to construct and engage in these opportunities has been termed Agency, and is a theorized fourth dimension of student learning engagement utilized by Self Determination Theory. Agency speaks to a student's motivation and how he or she may take control of and develop his or her own learning. Since agency is difficult to assess, it has been postulated that increased agency leads to increased engagement (Reeve, 2012). Thus, this study utilized CCSSE, a well-established tool for student learning engagement as a measure of a student's underlying motivation to construct learning opportunities and engage in the learning process (McClenney, 2007). In this study, CCSSE was the student learning engagement tool of choice for the year 2008 at the Confluence College due to the higher percentage of associate degrees awarded and for comparison to regional competitors which included the local community college. The results

were used to explore if student learning engagement differs for those students who have done, plan to do, or have not done, nor plan to participate in a clinical healthcare internship. This information can be used for policy and curriculum development to better engage student learning in clinical healthcare internships.

### **Clinical Healthcare Internship**

Clinical healthcare internships enable students to apply theory to practice in a supervised real life environment that supports the development of essential skills (Price, Hastie, Duffy, Ness, & McCallum, 2011) and socializes them to the profession (Deketelaere, Kelcktermans, Struyg, & De Leyn, 2006). Healthcare programs often build a theoretical foundation in the classroom; gaining the knowledge, attitudes, and skills needed for the clinical healthcare internship. The clinical healthcare internship usually requires the student to be placed in a clinical environment that is detached and disassociated from the college or university. While these clinical environments may be closely related in a business sense the students view them as different campuses and entities. Placement in a clinical healthcare internship results in a feeling of isolation and detachment from the college and university, as well as from the lecturers that the students have built relationships with (Price et. al., 2011).

### **Institution**

One unique aspect of this study was the fact that Confluence College is not a community college. Therefore, an in-depth look at the institution was warranted. This institution is a small, private, not-for-profit, non-residential, Catholic-affiliated college that focuses on educating healthcare workers and is located in the Midwest (National Center for Educational Statistics [NCES], 2012). The academic organizational structure for the

institution is comprised of three academic divisions; the Division of Allied Health, the Division of Liberal Arts and Sciences, and the Division of Nursing. The Division of Allied Health is comprised of professional programs in healthcare other than nursing. The Division of Liberal Arts and Sciences offers a bachelor degree in Health Care Administration. The Division of Liberal Arts and Sciences also offers courses needed for program curricula and program prerequisites. The Division of Nursing offers both associate and bachelor of science degrees in Nursing. At the conclusion of this research study, Confluence College had migrated the three divisions to become three schools and added a bachelor of science in health science degree within the School of Liberal Arts and Sciences.

Within these three academic subunits, there are 12 academic programs (see Table 2.1). These programs may award a certificate, an associate or bachelor of science degrees. All of the academic programs are highly prescriptive, with few options for elective courses. In this study, a certificate implies a program that is more than one year in length, but shorter in duration than an associate of science degree. Some programs may even offer multiple awards. For example, a student may earn a certificate in Medical Assisting and go on to earn an associate of science degree in Medical Assisting. In addition to the previous awards, the institution offers four short-term certificate programs. These programs are one semester in length or shorter. The short-term certificates courses were not selected for the administration of CCSSE and were not included in this study.

The institution had a robust campus for its modest enrollment of 737 students in the academic programs (excluding short-term certificate programs) during the Spring 2008 semester. During the Spring 2008 semester, nursing students represented 61.9% of the enrollment, allied health students represented 17.4% of the enrollment and 20.6% of students

Table 2.1. Academic award by academic program

<b>Division/Program</b>	<b>Bachelor of Science</b>	<b>Associate of Science</b>	<b>Certificate</b>	<b>Short-term Certificate</b>
<b><i>Division of Allied Health</i></b>				
Allied Health	X			
Diagnostic Medical Sonography		X		
Emergency Medical Services-Paramedic		X	X	
Medical Assistant		X	X	
Nuclear Medicine Technologist			X	
Physical Therapist Assistant		X		
Polysomnographic Technology		X	X	
Radiologic Technology		X		
Surgical Technology		X	X	
Emergency Medical Technician-Basic				X
Medical Billing and Coding				X
Nursing Assistant				X
Pharmacy Technician				X
<b><i>Division of Liberal Arts &amp; Sciences</i></b>				
Healthcare Administration	X			
<b><i>Division of Nursing</i></b>				
Nursing	X	X		

were seeking a bachelor of science degree in Healthcare Administration or were undeclared and not enrolled in a program (see Table 2.2). In the same semester, 63.3% of students were seeking associate of science degrees, 11% were seeking bachelor of science degrees, 7.3% were seeking certificates, and 18.3% were not yet admitted to an academic program. The data do not reflect short-term certificate students.

Table 2.2. Percent enrollment by academic program

<b>Division/Program</b>	<b>Bachelor of Science</b>	<b>Associate of Science</b>	<b>Certificate</b>
<b><i>Division of Allied Health</i></b>			
Allied Health	0.0%		
Diagnostic Medical Sonography		3.5%	
Emergency Medical Services-Paramedic		0.3%	5.2%
Medical Assistant		0.4%	0.8%
Nuclear Medicine Technologist			0.8%
Physical Therapist Assistant		0.0%	
Polysomnographic Technology		0.8%	0.0%
Radiologic Technology		3.9%	
Surgical Technology		1.2%	0.5%
<b><i>Division of Liberal Arts &amp; Sciences</i></b>			
Healthcare Administration	2.3%		
<b><i>Division of Nursing</i></b>			
Nursing	8.7%	53.2%	

NOTE: 18.3% were undeclared and not admitted to a program.

Students are admitted to the college and then to programs, as opposed to declaring a major. Often times the entrance requirements for programs are more rigorous than those for the college. Many of the programs have programmatic accreditation in addition to the college's regional accreditation with the North Central Association of the Higher Learning Commission. These programmatic accreditations can limit enrollments to ensure adequate education and clinical participation. Limited enrollment in these programs leads to a competitive admissions environment and many programs interview their students as part of the application process.

The campus is an urban campus and is not a residential campus. Confluence College is comprised only of commuter students. Often times the clinical experience is further complicated by the fact that the student often needs to commute to a healthcare facility located away from campus. The location and commuter status of the institution researched helps to mitigate any potential barriers of transitioning from a residential student to a commuter student. Therefore, students transitioning from didactic theory based coursework in the classroom; to practical applications in the clinical environment already possess experience as a commuter. However, commuting student populations innately have their own challenges to engaging in student learning (Pike & Kuh, 2005).

Commuter students are less likely than residential students to participate in college activities and they interact with other students and faculty less frequently (Lonn, Teasley & Krumm, 2010). Commuting can make it difficult to participate in campus activities, meet with classmates, or visit with a faculty member outside of class. The mere fact of being off campus makes it difficult for commuter students to utilize on-campus resources. These students experience a disconnection and marginalization from the campus community (Hintz, 2011). Due to the extensive time commitment of clinical healthcare internships, students may seek support more frequently from those with whom they interact in the clinical environment and visit campus less often. These prolonged absences can exacerbate the disconnection the student may feel.

### **Clinical environment**

Students choose healthcare professions due to a sincere desire to care for people (McAllister & McKinnon, 2008). However, they view clinical as a source of anxiety and

stress (Chan, 2002). Healthcare professionals display a disproportionate amount of stress-related issues such as coronary disease, substance abuse, and elevated suicide rates (McAllister & McKinnon, 2008). This is due, in part, to the fact that the clinical environment is fast paced and always changing. Stress originates from experiencing new clinical situations, patient care, insufficient professional knowledge and skills for the setting, differing clinical instructors, and difficulty transferring classroom theory and lab skills to a real, live setting (Li et al., 2010).

Depending on the healthcare program, a student is usually assigned to a preceptor or clinical instructor. Ultimately, a clinical instructor is assigned responsibility for the student and for the patients for which the student cares. The ratio of clinical instructor to students can vary by program. In the field of nursing there is generally one clinical instructor for eight students (Newton, Jolly, Ockerby, & Cross, 2012). In the field of nuclear medicine technology there needs to be one technologist, one piece of imaging equipment, and five clinical studies per day for a student to attend a clinical site (Joint Review Committee on Education in Nuclear Medicine Technology, 2013). In the latter situation, there is not an assigned clinical instructor, but rather all staff technologists may function as a clinical instructor and that can change weekly or even daily. Multiple clinical instructors compound the complexity of the learning environment allowing for less control and consistency. The lack of consistency can make it difficult to control the clinical environment to support student learning as a professor might be able to do in a traditional classroom. This requires different pedagogies to deliver effective teaching for the differing environments (Kelly, 2007).

## **Clinical navigation**

Transitioning from a classroom environment to a clinical environment is not always seamless and can be quite discomfoting (Deketelaere et al., 2006). A disconnect from the campus is even more evident the longer the clinical healthcare internships. Students feel more abandoned and isolated the longer the clinical healthcare internship (Price et al., 2011). Emerging technologies and ambiguities of practice further complicate the learning environment (Newton et al., 2012). Clinical instructors often have a unique way of accomplishing tasks (Chan, 2002). Evolving technologies, coupled with a lack of standardized clinical procedures, can be frustrating for both the student and the clinical instructor. The student finds it difficult to navigate multiple expectations and multiple approaches to learning a clinical skill.

In addition to developing professional skills, the clinical instructor has a role of socializing the student into the culture of the profession and of the clinical healthcare internship environment (Newton et al., 2012). This needs to be accomplished while, at the same time, the clinical instructor is focused on and responsible for the patient that is being cared for by the student (Deketelaere et al., 2006). Therefore, the clinical environment creates a formal and informal curriculum. The formal curriculum is comprised of the formal objectives outlined in the syllabus. The informal curriculum includes staff interactions and ancillary tips and knowledge transfer that can make the education more robust but is not standardized. The informal curriculum provides a wealth of opportunities though it is incidental and not intentional on the part of the clinical instructor (Brown et al., 2010). The informal curriculum fluctuates based on the student, the clinical instructor, and the environment. The informal curriculum is different for every student. The clinical social and



political context of the work environment can have a major impact on informal curriculum and on student outcomes (Chan, 2002; Papastavrou, Lambrinou, Tsangari, Saarikoski, & Leino-Kilpi, 2009). The social and political contexts of the clinical environment are beyond the control of the student or the clinical instructor. Opportunities associated with the informal curriculum, and the dynamic social and political environment, create the expectation that the student will take an active role in the teaching and learning process (Chan, 2002). To capitalize on learning opportunities and meet expectations, the students expect the clinical instructor to be aware of the social and political environment as well as give prompt feedback, both positive and negative, for continual improvement (Kelly, 2007). Student learning suffers if either of these expectations is not met (Deketelaere et al., 2006). Despite what seems to be an insurmountable amount of barriers, it is worth noting that Miller et al. found that undergraduate research and internships yielded statistically significant better student learning engagement than service learning or learning groups (2011). This suggests that the complex nature of the clinical environment does not necessarily inhibit student engagement, but rather may even promote it.

### **Theoretical Framework**

The stress and challenges that accompany clinical healthcare internships are well documented (Killam & Heerschap, 2012; McAllister & McKinnon, 2008; Chan, 2002). On the surface these challenges seem to match well with resiliency theory. Resilience is the ability to rebound from adversity, adapt to, and rise above a difficult situation in one's life (McAllister & McKinnon, 2008). By definition, resilience requires individuals to be exposed to adversity to develop the skills and attributes necessary to overcome adversity. Resilience

has been cited as a necessary quality to equip those in the field of nursing to deal with the adversities found within their work environment (Jackson, Firtko, & Edenforough, 2007). While resiliency theory may be applicable to the workplace in which one has spent a considerable amount of time, it may not be appropriate for novices entering the field. In addition, resiliency theory assumes that individuals have encountered adverse situations that have contributed to the development of attributes associated with resilient individuals (McAllister & McKinnon, 2008). In essence, resiliency theory suggests an ability to cope. Thus, as the researcher, I chose to ground this study in a theoretical framework that seeks to explain student motivation to create learning opportunities to move beyond coping; creating the potential to thrive. Stupans, Scutter, and Pearce (2010) stated that "...motivation is a critical component to learning" (p. 360). Self Determination Theory is a multi-faceted motivational theory that is used in this research study and further explained in the sections that follow.

### **Self-determination theory**

This research study is grounded in Self-determination Theory (SDT). SDT is recognized as one of the most comprehensive theories of motivation (Chen & Jang, 2010). SDT has been successfully utilized to investigate motivations in areas such as physical education, politics, healthcare, religion, general education, online education, learning communities, work, and relationships (Beachboard, Beachboard, Li, & Adkison, 2011; Chen & Jang, 2010; Milyavskaya & Koestner, 2010). At present there are no known studies utilizing SDT in the investigation of the engagement of students in clinical healthcare internships.

SDT theory recognizes the universal psychological needs of autonomy, competence and relatedness (Milyavskaya & Koestner, 2010). Autonomy does not directly relate to independence; rather it is the opportunity to exercise choice to personalize one's activities (Janssen, van Vuuren, & de Jong, 2013; Milyavskaya & Koestner, 2010). Competence refers to one's ability to produce desired outcomes and be confident in an environment. Relatedness is an aspect of connectedness with the people and environment during one's everyday activities (Milyavskaya & Koestner, 2010). Autonomy is seen as an intrinsic motivational factor and allows a student to put their personal stamp on an activity. Competence is a source of motivation since students often select activities that have outcomes they feel they can affect. Relatedness mediates motivation in terms of student-faculty relationships in an educational setting. These relationships have been associated with increased self-efficacy, engagement, interest in school, grades, and retention (Beachboard et al., 2011). In particular, it has been shown that faculty support leads to more autonomous motivation in medical students (Milyavskaya & Koestner, 2010).

SDT is a larger theory supported by the intersection of five mini theories (see Figure 2.1) that seek to identify inner motivational resources so that faculty can nurture and vitalize those sources of motivation (Janssen et al., 2013; Reeve, 2012). The five mini theories include: (a) Basic Needs Theory; (b) Organismic Integration Theory; (c) Goal Contents Theory; (d) Cognitive Evaluation Theory; and (e) Causality Orientations Theory (Reeve, 2012). Each mini theory is briefly detailed in Figure 2.1.

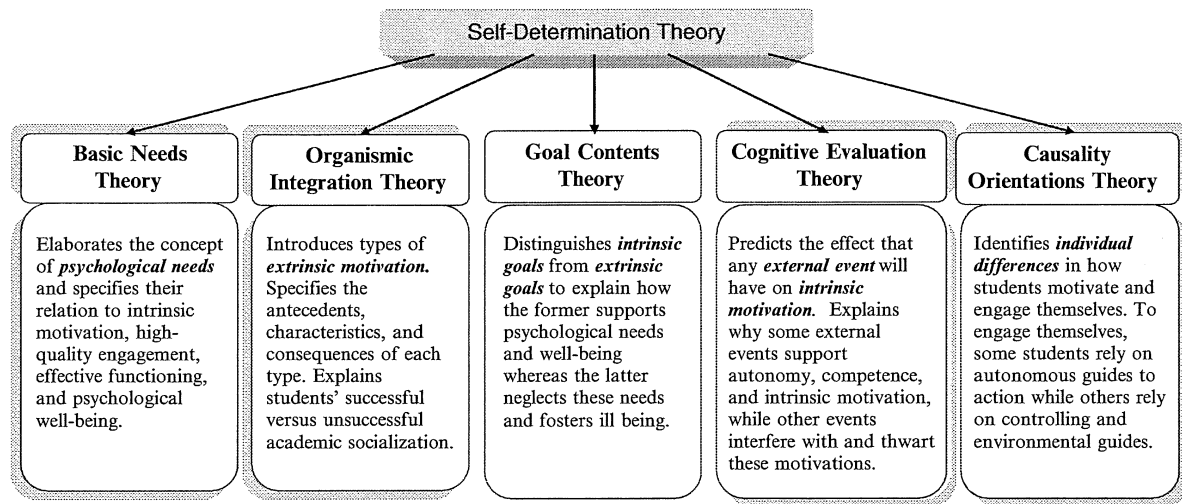


Figure 2.1. Self-determination theory model (Reeve, 2012, p. 153)

### Basic needs theory

Basic needs theory conceptualizes psychological needs and how they relate to intrinsic motivation, quality engagement, effective performance, and psychological well-being. Basic needs theory utilizes the inherent psychological needs of autonomy, competence, and relatedness to why students are intrinsically motivated. SDT benefits from psychological needs satisfaction from the basic needs theory to explain why students give priority to one task over another thus being intrinsically motivated to complete a task (Reeve, 2012).

### Organismic integration

Organismic integration theory contributes a range of different types of extrinsic motivation. Students are extrinsically motivated to engage in activities that are interesting and meet an outcome that differs from the activity they are engaged in. Organismic

integration theory posits four types of external motivation with varying degrees of autonomy; external regulation, introjected regulation, identified regulation, and integrated regulation. External regulation is often an activity associated with a reward or punishment, and the least autonomous. Introjected regulation is fueled by a need to retain self-esteem that is threatened. Identified regulation is an activity that has value and ultimately receives a stamp of approval from the student. Integrated regulation occurs when a student identifies with aspects of the extrinsic motivator and it possesses the greatest amount of autonomy. Organismic integration theory helps to understand why students engage in uninteresting activities and balances basic needs theory. It allows for a distinction to be made between autonomous motivation and controlled motivation to be made within SDT (Reeve, 2012).

### **Goal contents**

Goal contents theory seeks to define what it is students are trying to accomplish. Goals can be intrinsic or extrinsic and can affect motivation and psychological well-being. Intrinsic goals are those that meet psychological needs and include personal growth or developing relationships. Extrinsic goals are counterproductive and have an external locus that does not satisfy psychological needs. Extrinsic goals may include seeking increased social status or acquiring material possessions. Goal contents theory supports SDT by defining what goals better facilitate motivation (Reeve, 2012).

### **Cognitive evaluation**

Cognitive evaluation theory explores how and why external positive reinforcement generates behaviors based on a student's satisfaction with an experience or activity. External events have two aspects, a controlling aspect and an informational aspect, that impact student

intrinsic motivation. A controlling aspect directs the student to a particular outcome or behavior, and minimizes intrinsic motivation. An informational aspect relays feedback to the student regarding competence with the activity. If constructive, this feedback can increase intrinsic motivation. Cognitive evaluation theory supports the SDT framework in that it recognizes not two situations are identical and helps to identify conditions that can support or diminish intrinsic motivation (Reeve, 2012).

### **Causality orientations**

Causality orientations theory examines how differences in individual personalities position the students within the motivational forces that mold their behaviors. Causality orientations theory focuses on the fluid, superficial differences among students that are largely influenced by how they were socialized to the environment. This mini theory can suggest how a student may respond and modify behavior based on the outcomes of an activity. While more of a continuum than a dichotomy, those with an autonomous causality orientation tend to rely on intrinsic motivators and those with a controlled causality orientation rely on extrinsic motivators. Causality orientation theory complements the other four mini theories within SDT by adding the perspective of personality to the overarching SDT (Reeve, 2012).

### **Agency**

Student learning engagement is thought to pave the way to student success in college. What students do both in and outside of class plays a significant role in student learning. This is demonstrated in Astin's theory of involvement, which proposes that students that are more involved reap greater gains from their college experiences (Hu, 2011). The locus of

responsibility for student learning engagement is often placed on the faculty. Faculty create a learning environment and adjust based on student responses. Faculty monitor behavioral, emotional, and cognitive aspects which have become the traditionally recognized concepts of student learning engagement (Reeve & Tseng, 2011).

Reeve and Tseng (2011) found that student achievement was not fully explained by students' behavioral, emotional, and cognitive engagement. Behavioral, emotional, and cognitive engagement are the traditional factors of student learning engagement. An additional dimension of student learning engagement may help to explain the variance. A distinct factor that accounts for the variance was identified and termed agentic engagement (see Figure 2.2). Agentic engagement is defined as a “students’ constructive contribution

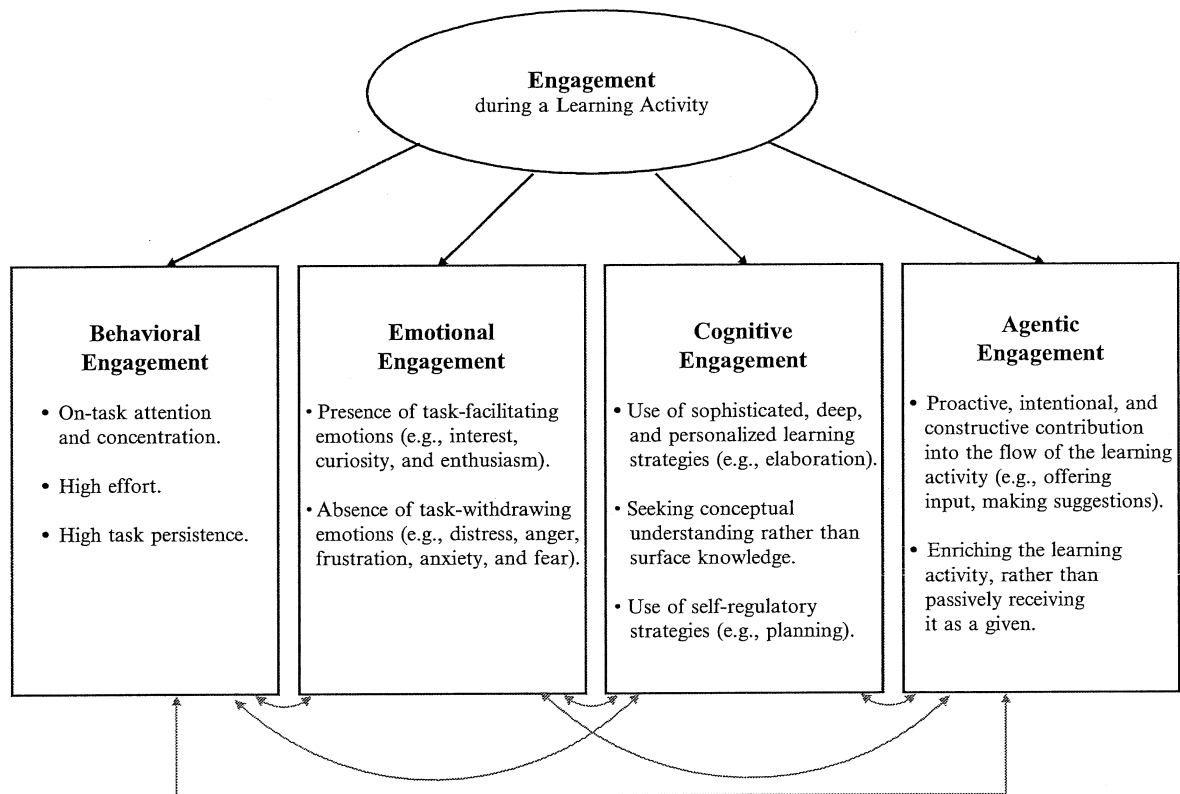


Figure 2.2. Agentic engagement model (Reeve, 2012, p. 151)

into the flow of the instruction they receive” (Reeve & Tseng, 2011, p 258). Agentic engagement posits that students play an active role in student learning based on their motivation and how the environment supports and nourishes that motivation (Reeve & Tseng, 2011). Motivation and engagement are strongly linked. Motivation exhibits an internal locus and engagement exhibits an external outcome. Therefore, researchers often concern themselves with engagement as an observable effect as opposed to the more personal, and less observable motivational cause (Reeve, 2012). The evaluation of student learning engagement can then give insight into how constructs of motivation can be supported to increase student learning engagement.

Agentic engagement is more than seeking instructional help, which is more reactive in nature. It is a proactive construct that seeks to determine how students engage themselves in student learning. Ultimately, it distinguishes the driving forces that students rely on and utilize to enrich their learning experiences. Agentic engagement is comprised of five characteristics that require it to be proactive, intentional, enriches the learning opportunity, contributes to the planning and flow of instruction, and does not connote teacher ineffectiveness (Reeve & Tseng, 2011). The literature suggests clinical healthcare internships require a high degree of these characteristics from students. Therefore, students in clinical healthcare internships display a high degree of agentic engagement and have the potential to be more engaged in the learning process. The current research study utilized the framework of SDT, agentic engagement, and the agency of students in clinical healthcare internships to evaluate student learning engagement.



## Student Engagement

Students who engage in educationally productive activities increase their capacity for learning which leads to greater academic success and persistence (Carini, Kuh, & Klein, 2006; McClenney, 2007). However, the literature on student learning engagement focuses primarily on classroom engagement. No matter where the learning takes place, Pike and Kuh (2005) observed that "...students learn from what they do in college" (p. 186). Since learning can take place in and out of the classroom, student learning engagement can be impacted by the faculty teaching the class, the environment of the classroom, the pedagogy employed by the faculty, the motivation of the student, and the support of the institution (Kuh, Kinzie, Schuh, & Whitt, 2010). The Community College Survey of Student Engagement (CCSSE) was developed in 2001 to help institutions investigate these engagement factors that impact student learning so that data can drive improvements in student learning and retention (McClenney, 2007). The current study utilized CCSSE data to compare the engagement of students who have done, plan to do, and have not nor plan to participate in a clinical healthcare internship.

Clinical education seeks to achieve many of the same learning objectives as a traditional didactic course by applying theory to practice. However, control over the environment and pedagogy in a clinical setting is much less than an instructor would have in a traditional didactic course. The experiences in a clinical setting are largely based on patient needs for any particular day. A multitude of interactive forces shape the clinical setting, often exposing student to unplanned activities (Brown et al., 2010). The lack of control over the clinical setting requires the student to actively engage in the learning opportunities afforded them while in their clinical healthcare internship (Chan, 2002).

The current research sought to determine if student learning engagement differs for students who have done, plan to do, or have not nor plan to participate in a clinical healthcare internship. The lack of control over environment and pedagogy suggests that students may need to seek out opportunities to engage in learning. This motivation to create their own learning experiences creates the potential to engage in learning differently than students in a didactic course. Identifying any differences that may exist will help policy makers and instructors develop policies and methods to support student learning engagement which will lead to higher persistence and academic success.

### **Community College Survey of Student Engagement**

Student engagement is based on the premise that students should maximize their involvement in academic and social experiences throughout their college tenure. This is often measured via their academic and social behaviors (Nora, Crisp, & Matthews, 2011). The Community College Survey of Student Engagement (CCSSE) is an instrument that is widely used by two-year institutions to evaluate student engagement. The survey was developed based on four bodies of literature: (a) Pace's (1984) contribution to student effort and quality college experiences; (b) Astin's (1984) research on student involvement; (c) The principles of good practice in undergraduate education, proposed by Chickering and Gamson (1987; and (d) Kuh's (2001) contributions to the concepts of student engagement (McClenney, 2007; Nora et al., 2011). CCSSE was established in 2001 as a result of the Community College Leadership Program at the University of Texas at Austin. CCSSE was developed to gather information regarding student participation in educationally related activities on an annual basis. The mission for CCSSE is to support and inform effective

practices at community colleges through improved student learning and retention (McClenney, 2007). The survey has recently been revalidated in 2006. The validation research looked at relationships between the engagement measures and outcomes such as course completion, GPA, and graduation. Three sources were utilized to verify consistency across multiple groups. The sources included the Florida community colleges, the CCSSE Hispanic Student Success Consortium, and 24 colleges that were initial participants in the Achieving the Dream initiative. The data supported that the five CCSSE benchmarks of effective educational practice correlated to outcomes in a predictable manner (McClenney, Marti, & Adkins, 2007).

A unique aspect to CCSSE is the ability to benchmark effective educational practices. Benchmarking offers a robust mechanism for identifying strengths and weaknesses, monitoring progress, and developing performance improvements. Each survey item is grounded in literature and has its own annotated bibliography. Survey items were grouped into clusters to generate the five benchmarks of active and collaborative learning, student effort, academic challenge, student-faculty interaction and support for learners (McClenney, 2007). Each of these is explored further in the sections to follow.

### **Active and collaborative learning**

Active involvement in a student's own education creates opportunities for the student to learn more. The student is able to think about the subject material and form opinions and knowledge that he or she can then apply. Through collaboration, opinions and knowledge can be shared to solve problems and master content. This collaboration is a life skill that will serve the student well in multiple aspects of her life.

Items in this benchmark ask about the frequency of involvement with in-class projects and collaboration in and out of class. Data for this benchmark reveal that students typically engage in in-class discussions and work, but give class presentations much less frequently. In addition, students spend relatively little time working with other students outside of class or in their communities (Community College Survey of Student Engagement [CCSSE], 2013b).

### **Student effort**

A student's contribution to her education contributes to goal achievement. The student effort benchmark considers the amount of time spent on various educational activities in various settings. The attainment of educational goals can then be correlated with more time invested.

The items for this benchmark assess the frequency of skills and services utilized to prepare for class. The data for this benchmark suggests students spend time preparing for class, but infrequently use tutoring or complete class readings and assignments (Community College Survey of Student Engagement [CCSSE], 2013d).

### **Academic challenge**

Academic rigor creates an environment that supports creative solutions to challenging problems and elevates the quality of learning. The academic challenge benchmark considers the nature and amount of academic work assigned, the complexity of tasks, and standards faculty utilize to evaluate performance.

Survey items for this benchmark studies students perceptions of their effort to meet expectations, amount of rigorous assignments, amount of work in differing domains of

Bloom's Taxonomy, and institutional valuation of studying. The data for this benchmark reveal that students perceive themselves as hard workers and utilizing complex critical thinking skills, but feel less challenged on exams (Community College Survey of Student Engagement [CCSSE], 2013a).

### **Student-faculty interaction**

Student interaction with faculty members leads to more effective learning and persistence towards educational goals. Interaction on a personal level allows for interactions that facilitate role model and mentor roles that support academic progress. These relationships help to build connections to the institution and develop life skills that facilitate learning beyond college.

Items for this benchmark look at the frequency of student interactions with faculty in various tasks. Data from this benchmark shows that students do not typically have meaningful communications with faculty outside of the classroom but do frequently engage in email communication and feel they receive prompt feedback from faculty regarding their performance (Community College Survey of Student Engagement [CCSSE], 2013e).

### **Support for learners**

Student learning that is supported by the institution leads to better performance and higher satisfaction among students. Services and opportunities that foster social interactions across groups and assist in academic and career preparation have a positive effect on learning and retention.

Survey items for this benchmark assess the frequency students have used academic and career services, as well as students' perceptions of how much the institution supports the

student in various aspects of the college experience. The data for this benchmark support that students feel the institution provides support academically, but feel adequate support for non-academic aspects of the college experience is not present. In addition, very few students report utilizing support services (Community College Survey of Student Engagement [CCSSE], 2013f).

### Summary

This research sought to add to a limited body of research on student learning engagement in clinical healthcare internships. The study used a nationally accepted tool that allows for reproduction. The unique aspects of this study included the use of a community college tool at a small, private, not-for-profit, non-residential, Catholic affiliated, college with a special focus in healthcare and that it is grounded in agentic engagement which is framed by SDT. The purpose of this research study was to examine differences in student engagement for those students in clinical internships to help identify if there are aspects unique to clinical education programs that institutions can foster to support student learning engagement in a clinical setting.

The clinical environment is a stressful one (McAllister & McKinnon, 2008). To complicate the situation students are also transitioning from a classroom environment to a clinical environment and being socialized to a new profession (Newton et al., 2012), while also assuming characteristics of commuter students (Jacoby & Garland, 2004) due to the nature of clinical education. Though these seem to be insurmountable obstacles to student learning engagement, there is evidence that students in clinical healthcare internships are expected to take an active role in their education (Chan, 2002) and have access to an informal

curriculum (Brown et al., 2010) that creates opportunities for elevated student learning engagement.

The literature suggests that students in clinical healthcare internships rely on student motivation to engage in the learning process within a clinical environment. SDT was selected as the foundational theoretical framework to support this research study. SDT is a multifaceted theory, consisting of five mini theories, to explain drivers of internal motivation (Reeve, 2012). The five mini theories converge to explain how students seek and maintain the universal psychological needs of autonomy, competence, and relatedness (Milyavskaya & Koestner, 2010). SDT has also been utilized to develop a fourth aspect of student learning engagement, termed agency. Behavioral, emotional and cognitive engagement has been found to not fully explain student achievement. A fourth aspect of agentic engagement utilizes internal motivation to explain how students constructively contribute to teaching and learning (Reeve & Tseng, 2011). The literature demonstrates an expectation of agentic engagement from students in clinical healthcare internships and is therefore the premise of this research study.

Student motivation is difficult to directly measure. However, the level of student learning engagement is an outcome of motivation and can be measured (Reeve, 2012). Student learning engagement at two-year institutions is often assessed using the CCSSE survey (Nora et al., 2011). While traditionally CCSSE is thought of as being utilized within community colleges, this study is unique in that CCSSE is administered at a small, private, not-for-profit, non-residential, Catholic affiliated college with a special focus in healthcare. CCSSE is a reliable and valid instrument that correlates to five benchmarks of effective education (McClenney et al., 2006). CCSSE also enables researchers to make comparisons

to national datasets and like institutions (McClenney, 2007). CCSSE is, therefore, an ideal tool for the investigation of student learning engagement.

There is a paucity of literature investigating the engagement of students participating in internships. In particular, there is even less literature that considers the engagement of students participating specifically in clinical healthcare internships. This research study investigated the engagement of students in clinical healthcare internships. The results of this study will help to identify if there are aspects unique to clinical education programs that institutions can foster to support student motivation, and ultimately student learning engagement, in a clinical setting.



## CHAPTER 3. METHODOLOGY

### Introduction

The purpose of this study was to determine if student learning engagement differs for students who have done, plan to do, or have not done, nor plan to participate in a clinical healthcare internship. Specifically, this research sought to identify if differences exist between students at Confluence College who have done, plan to do, or have not done nor plan to participate in a clinical healthcare internship for the five CCSSE benchmarks of Support for Learners, Student-Faculty Interaction, Academic Challenge, Student Effort, and Active and Collaborative Learning (McClenney, 2007). In addition, the study investigated how Confluence College as a whole compared to colleges of a similar size and to national results.

### Research Questions

A quantitative approach was utilized to collect and analyze data to answer the following questions:

1. How do the demographic and academic characteristics of students who participated in this study differ? Specifically, for students who have done, plan to do, or have not done, nor plan to participate in a clinical healthcare internship.
2. Does student learning engagement overall differ between students in the study, colleges of similar sizes and national benchmark results?
3. Does participating in a clinical healthcare internship influence students' perceptions of the student learning engagement aspect of active participation?

4. Does participating in a clinical healthcare internship influence students' perceptions of the student learning engagement aspect of effort put forth?
5. Does participating in a clinical healthcare internship influence students' perceptions of the student learning engagement aspect of academic challenges?
6. Does participating in a clinical healthcare internship influence students' perceptions of the student learning engagement aspect of student-faculty interactions?
7. Does participating in a clinical healthcare internship influence students' perceptions of the student learning engagement aspect of support for learning?

### **Research Design**

Survey methodology was used to determine if differences in student learning engagement exist for students in clinical healthcare internships. This study focused on students who have done, plan to do, or have not done, nor plan to experience a clinical healthcare internship. A factorial design was utilized to identify three groups: students who have done, plan to do, or have not done, nor plan to participate in a clinical healthcare internship; therefore, between-subject comparisons were made across multiple engagement variables (Creswell, 2009).

The researcher used historical survey data enabling him to remain objective due to the fact the researcher is a faculty member and administrator at Confluence College. The researcher was not present at the time the survey was administered. Surveys are an economical means to collect data on self-reported student perceptions (Creswell, 2009). CCSSE is a paper-pencil survey (see [http://www.ccsse.org/aboutsurvey/docs/CCSR\\_2005.pdf](http://www.ccsse.org/aboutsurvey/docs/CCSR_2005.pdf)) that uses bubble sheets that can be scanned for data aggregation. Once the data is

scanned, a data file can be uploaded to a statistical software package for manipulation and analysis.

This study utilized a cross-sectional design that queried a sample of students from a small, private, not-for-profit, non-residential, Catholic affiliated, health science college in the Midwest. Students were surveyed in the spring semester of 2008. This study is unique in that the CCSSE survey was not administered at a “traditional” community college as the title of the instrument would suggest, but rather at a small, private, not-for-profit, non-residential, Catholic affiliated college with a special focus in health sciences.

### **Sampling**

The study included a sample of 326 participants out of a total population of 737, for a participation rate of 44.2%. The target population was selected from a random cluster sample for the year 2008. The random cluster sample was generated by CCSSE personnel based on data provided by the institution including information about all courses offered in the spring semester of 2008. Course information such as course enrollment, time of course offerings, and course representation in multiple programs was used to identify random courses that would represent the entire population of the institution. Ten liberal arts and science courses were selected, as well as seven program specific courses from the following programs; Nursing, Emergency Medical Services, Medical Assisting, and Radiologic Technology.

For small institutions, enrollments less than 1,500, the targeted population is 20% of total credit enrollment (Community College Survey of Student Engagement, 2013c).

Confluence College met the criteria for small institutions with a total enrollment of less than

1,000 students. Institutions have the opportunity to oversample specific areas or populations. In this study, Confluence College was not oversampled for any particular area or population.

Using a third party, such as CCSSE, to determine the survey sample can be beneficial in mitigating sample bias. However, a lack of understanding of the highly prescriptive programs at the institution researched could lead to undercoverage or duplication errors in sampling. Undercoverage happens when particular participants are unintentionally precluded from participating in the survey based on the sampling procedure (Groves et al., 2009). For example, a course such as Human Anatomy may be germane to almost every program in a health science college. Though the course may be required for a program, the highly prescriptive nature of the program's progression may preclude students in the program from taking that course the semester the survey is administered and ultimately unable to be surveyed. A liaison from CCSSE worked closely with the institution to ensure a working understanding of this phenomenon.

Duplication error occurs when a participant has multiple opportunities to participate in the survey (Groves et al., 2009). The random cluster sample makes it likely that a student may be enrolled in two or more courses that were surveyed. Designated survey administrators at the institution used standard scripts to introduce the survey and to ask any participants who have already completed the survey that year to recuse themselves from participating again to mitigate duplication errors.

### **Instrumentation and Data Collection**

The CCSSE is a survey tool for student engagement that enjoys national recognition for its validity and reliability. CCSSE was created to improve teaching and learning at

community and technical colleges, and is intended for two year and community colleges (Nora et al., 2011). As of 2007, “CCSSE’s survey respondents – approaching 600,000 – cumulatively represent a total credit enrollment of more than 3.4 million students across 548 different community colleges from 48 states, British Columbia, and the Marshall Islands” (McClenney, 2007, p. 139).

The survey instrument reports results in terms of five benchmarks that represent effective practices in education (McClenney, 2007). The five benchmarks are:

- Active and Collaborative Learning
- Student Effort
- Academic Challenge
- Student-Faculty Interaction
- Support for Learners

The benchmarks include groups of survey items that assess student learning engagement as it applies to the respective benchmark (see Table 3.1).

The survey was administered by select survey administrators from the institution researched. The survey administrators were appointed to maintain objectivity and consistency of how the survey was administered and how results were collected. A standard script was read to the survey participants. Following the script, a paper-pencil bubble sheet survey was administered. Completed surveys were placed in a sealed envelope and delivered to CCSSE for scanning and analysis. The survey was administered mid-way through the spring semester in 2008. Raw data and institutional reports for the 2008 administration of CCSSE were utilized for this research study.

Table 3. 1. Survey items for benchmark categories

Category	Item No.	Variable Name	Item Description
<b>Active and Collaborative Learning</b>	4a	CLQUEST	Asked questions in class or contributed to class discussions
	4b	CLPRESEN	Made a class presentation
	4f	CLASSGRP	Worked with other students on projects during class
	4g	OCCGRP	Worked with classmates outside of class to prepare class assignments
	4h	TUTOR	Tutored or taught other students (paid or voluntary)
	4i	COMMPROJ	Participated in a community-based project as a part of a regular course
<b>Student Effort</b>	4r	OOCIDEAS	Discussed ideas from your readings or classes with others outside of class (students, family members, co-workers, etc.)
	4c	REWROPAP	Prepared two or more drafts of a paper or assignment before turning it in
	4d	INTEGRAT	Worked on a paper or project that required integrating ideas or information from various sources
	4e	CLUNPREP	Come to class without completing readings or assignments
	13d1	USETUTOR	Frequency: Peer or other tutoring
	13e1	USELAB	Frequency: Skill labs (writing, math, etc.)
	13h1	USECOMLB	Frequency: Computer lab
<b>Academic Challenge</b>	6b	READOWN	Number of books read on your own (not assigned) for personal enjoyment or academic enrichment
	10a	ACADPRO1	Preparing for class (studying, reading, writing, rehearsing, doing homework, or other activities related to your program)
	4p	WORKHARD	Worked harder than you thought you could to meet an instructor's standards or expectations
	5b	ANALYZE	Analyzing the basic elements of an idea, experience, or theory
	5c	SYNTHESZ	Synthesizing and organizing ideas, information, or experiences in new ways
	5d	EVALUATE	Making judgments about the value or soundness of information, arguments, or methods
	5e	APPLYING	Applying theories or concepts to practical problems or in new situations
	5f	PERFORM	Using information you have read or heard to perform a new skill
	6a	READASGN	Number of assigned textbooks, manuals, books, or book-length packs of course readings
	6c	WRITEANY	Number of written papers or reports of any length
<b>Student-Faculty Interaction</b>	7	EXAMS	To what extent have your examinations challenged you to do your best work
	9a	ENVSCHOL	Encouraging you to spend significant amounts of time studying
	4k	EMAIL	Used email to communicate with an instructor
	4l	FACGRADE	Discussed grades or assignments with an instructor
	4m	FACPLANS	Talked about career plans with an instructor or advisor
	4n	FACIDEAS	Discussed ideas from your readings or classes with instructors outside of class
	4o	FACFEED	Received prompt feedback (written or oral) from instructors on your performance
<b>Support for Learners</b>	4q	FACOTH	Worked with instructors on activities other than coursework
	9b	ENVSUPRT	Providing the support you need to help you succeed at this college
	9c	ENVDIVRS	Encouraging contact among students from different economic, social, and racial or ethnic backgrounds
	9d	ENVNACAD	Helping you cope with your non-academic responsibilities (work, family, etc.)
	9e	ENVSOCAL	Providing the support you need to thrive socially
	9f	FINSUPP	Providing the financial support you need to afford your education
	13a1	USEACAD	Frequency: Academic advising/planning

This study is unique in that a survey tool developed for community college engagement was used at a small, private, not-for-profit, non-residential, Catholic affiliated institution that has a special focus in healthcare. The decision to use CCSSE at Confluence College was based largely on the distribution of enrollment in the different awards offered at the institution. The institution awarded three different bachelor of science degrees that comprised 11.0% of enrollment, 8 associate of science degrees that comprised 87.3%, and 5 certificates that comprised 7.3% of enrollment in the spring semester of 2008. The predominant degree awarded was at the associate level or lower, which is similar to a community college. In addition, the greatest source of competition for awards offered at the institution came from a local community college. CCSSE was a good fit for the college in 2008 to gauge student learning engagement and benchmark the results against institutions that represented the competition. Benchmarking against peer institutions was not available on a national scale considering the make-up and specific focus of the institution.

### **Data Analysis**

Raw data provided by CCSSE is in Excel format. Responses for items associated with each benchmark were averaged for each respondent. The data were then uploaded to JMP 10 for data analysis. The 2008 codebook for the CCSSE instrument was utilized for coding items (see Appendix).

The data were divided into three groups by using the CCSSE item 8a which asks if the student has done, plans to do, or has not done, nor plans to participate in an internship, field experience, co-op experience, or clinical assignment while attending this college. Since the institution researched only offers programs with clinical healthcare internships, it is

reasonable to assume respondents are referring to their participation in a clinical healthcare internship when responding to this item. Students with the response “*I have done*” to survey item 8a were grouped together as students who have experienced a clinical healthcare internship. Students with the response “*I plan to do*” were grouped together as students who plan to experience a clinical healthcare internship. Students with the response “I have not done, nor plan to do” were grouped as students who do not intend on participating in a clinical healthcare internship. Utilizing the codebook and JMP 10 descriptive statistics were used to address research question one. Demographic and academic characteristics of the three groups were evaluated to better understand the populations being studied.

Research question two was evaluated using the weighted mean score from the institutional report provided by CCSSE that compares all students at the institution with those at similar size colleges within the 2008 cohort, and with the entire 2008 CCSSE cohort. The institutional report provides a score for each benchmark by averaging the items that comprise the benchmark. The 2008 CCSSE cohort data were then weighted so that the weighted mean is 50 with a standard deviation of 25 across all benchmarks. The weighted mean was then applied to the institutional data and small college data for comparison across groups.

Analysis of variance (ANOVA) was used to evaluate research questions three through seven. ANOVA is an inferential statistical tool that “...can be robust to violations of its assumptions” (Field, 2009, p. 391). ANOVA can be used to compare three or more groups and can be used to determine if the results from the sample can be generalizable to the entire population. The researcher averaged the responses from the items that comprised each of the five benchmarks (see Table 3.2) and ran an ANOVA test for each benchmark (dependent



Table 3.2. Research design

Research question	Variable		Statistical assessment
	Independent	Dependent	
1	Item 8a INTERN	Items: 2 ENRLMENT, 21 GPA, 28 HAVKID, 29 AGENEW, 30 SEX, 31 MARRY, 34 RERACE	Descriptive
2	Institution, Small Colleges, & 2008 CCSSE Cohort	Benchmarks 1-5: 1 Active and Collaborative Learning, 2 Student Effort, 3 Academic Challenge, 4 Student-Faculty Interaction, 5 Support for Learners	Descriptive
3	Item 8a INTERN	Benchmark 1 (Items: 4a CLQUEST, 4b CLPRESEN, 4f CLASSGRP, 4g OCCGRP, 4h TUTOR, 4i COMMPROJ, 4r OOCIDEAS)	Inferential (ANOVA)
4	Item 8a INTERN	Benchmark 2 (Items: 4c REWROPAP, 4d INTEGRAT, 4e CLUNPREP, 6b READOWN, 10a ACADPRO1, 12d1 USETUTOR, 13e1 USELAB, 13h1 USECOMLB)	Inferential (ANOVA)
5	Item 8a INTERN	Benchmark 3 (Items: 4p WORKHARD, 5b ANALYZE, 5c SYNTHESZ, 5d EVALUATE, 5e APPLYING, 5f PERFORM, 6a READASGN, 6c WRITEANY, 7 EXAMS, 9a ENVSCHOL)	Inferential (ANOVA)
6	Item 8a INTERN	Benchmark 4 (Items: 4k EMAIL, 4l FACGRADE, 4m FACPLANS, 4n FACIDEAS, 4o FACFEED, 4q FACOTH)	Inferential (ANOVA)
7	Item 8a INTERN	Benchmark 5 (Items: 9b ENVSUPRT, 9c ENVDIVRS, 9d ENVACAD, 9e ENVSOCAL, 9f FINSUPP, 13a1 USEACAD, 13b1 USECACOU)	Inferential (ANOVA)

variables) for each response to item 8a (independent variables). The size of the groups utilized in the ANOVA application varied and Lavene's test of homogeneity was used to ensure the three groups have equal variances. A Lavene's test that was not significant identified homogenous samples for comparison and the F value was accepted (Field, 2009).

### **Institutional Review Board Approval and Ethical Issues**

Existing de-identified survey data were used for this research study. Due to the use of existing data, an exemption was granted from the Institutional Review Board (IRB) at Iowa State University and at Confluence College. It is prudent to disclose that the investigator in

this study is the Program Director of a healthcare program at Confluence College. Thus, the investigator took care to remain objective by utilizing historic data and being mindful to not allow personal experiences bias data interpretation.

### **Summary**

The purpose of this study was to determine if student learning engagement differs for students have done, plan to do, or have not done, nor plan to participate in a clinical healthcare internship. Specifically, this research sought to identify if differences exist between students at Confluence College who have done, plan to do, or have not done, nor plan to participate in a clinical healthcare internship for the five CCSSE benchmarks of Active and Collaborative Learning, Student Effort, Academic Challenge, Student-Faculty Interaction, and Support for Learners (McClenney, 2007). In addition, the study investigated how Confluence College as a whole compares to colleges of a similar size and national results.

The study focused on students in clinical healthcare internships at a health science college. The selection of a small, private, not-for-profit, non-residential, Catholic affiliated, college in the mid-west with a special focus in healthcare was intentional. The healthcare designation ensures that those experiencing internships are placed in a clinical healthcare internship in a healthcare setting. This allows for investigation of student learning engagement at an institution where the only type of internship possible is a clinical healthcare internship and does not include internships outside of this setting. The institution selected is also unique in that its mission is focused on healthcare education, not comprehensive like a community college, and uses CCSSE to evaluate student learning engagement.

Findings of this research should increase our understanding of how students engage in their learning at different stages in their healthcare programs. Adding to this body of literature gives healthcare programs with clinical healthcare internships insights into factors that may be unique in a clinical setting and affect student learning engagement. Based on the findings, this information can then be utilized to shape program and institutional policies and develop curriculums that support the development of student motivation that leads to increased student learning engagement.

## CHAPTER 4. RESEARCH FINDINGS

### Introduction

The purpose of this study was to determine if student learning engagement differs for students at different stages of their education in a healthcare program. A small, private, not-for-profit college in the Midwest with a special focus in healthcare was examined for this study. The research utilized engagement data from the CCSSE that was administered to 326 students in the spring semester of 2008. This chapter includes descriptive statistics for the respondents and ANOVA analysis for the average responses to the items included in each of the five benchmarks identified by CCSSE. This chapter also includes results from the institutional report generated by CCSSE which compares colleges of a similar size and the entire CCSSE cohort with the institution researched.

### Descriptive Analysis

The composite results for demographic and academic characteristics (see Table 4.1) reflect data reported for the Integrated Post-secondary Education Data System (IPEDS) for 2008. The student population is predominantly white/non-Hispanic (92.6%), female (87.6%), not married (71.2%), do not have children living with them (69.9%), and between the ages of 22 to 24 (25.6%). The majority is registered as a full-time student (76.1%) and reports a B average for their GPA (35.1%).

Over three quarters of the respondents reported being full-time students. Students who plan to do or have done a clinical healthcare internship were more likely to be full-time with responses being 85 (81.0%) and 151 (76.7%), respectively. Students who have not, nor

Table 4.1. Demographic and academic characteristics of respondents

Item	Total		Have not, nor plan to do		Plan to do		Have done	
	N	%	N	%	N	%	N	%
<b>Enrollment</b>								
Less than full-time	78	23.9	11	47.8	20	19.0	46	23.4
Full-time	248	76.1	12	52.2	85	81.0	151	76.7
<b>GPA</b>								
Pass/Fail Only	-	-	-	-	-	-	-	-
No GPA at this School	2	0.6	1	4.3	-	-	1	0.5
C- or lower	2	0.6	-	-	1	1.0	1	0.5
C	24	7.5	2	8.7	9	8.7	13	6.7
B- to C+	47	14.6	5	21.7	16	15.4	26	13.4
B	113	35.1	5	21.7	39	37.5	69	35.6
A- to B+	91	28.3	10	43.5	29	27.9	52	26.8
A	43	13.4	-	-	10	9.6	32	16.5
<b>Children living with them</b>								
Yes	97	30.1	10	43.5	31	29.8	56	28.9
No	225	69.9	13	56.5	73	70.2	138	71.1
<b>Age</b>								
Under 18	-	-	-	-	-	-	-	-
18 to 19	31	9.7	1	4.3	12	11.7	18	9.3
20 to 21	82	25.6	3	13.0	31	30.1	48	24.9
22 to 24	66	20.6	6	26.1	15	14.6	45	23.3
25 to 29	74	23.1	4	17.4	27	26.2	43	22.3
30 to 39	38	11.9	2	8.7	14	13.6	22	11.4
40 to 49	23	7.2	7	30.4	2	1.9	13	6.7
50 to 64	6	18.8	-	-	2	1.9	4	2.1
65+	-	-	-	-	-	-	-	-
<b>Sex</b>								
Male	40	12.4	2	8.7	21	20.2	17	8.7
Female	283	87.6	21	91.3	83	79.8	178	91.3
<b>Married</b>								
Yes	93	28.8	9	39.1	27	26.0	57	29.2
No	230	71.2	14	60.9	77	74.0	138	70.8
<b>Racial Identification</b>								
American Indian or other Native American	1	0.3	-	-	-	-	1	0.5
Asian, Asian American or Pacific Islander	5	1.5	-	-	2	1.9	3	1.5
Native Hawaiian	-	-	-	-	-	-	-	-
Black or African American, Non-Hispanic	6	1.9	1	4.3	3	2.9	2	1.0
White, Non-Hispanic	299	92.6	22	95.7	93	89.4	183	93.8
Hispanic, Latino, Spanish	6	1.9	-	-	4	3.8	2	1.0
Other	6	1.9	-	-	2	1.9	4	2.1

plan to do a clinical healthcare internship were less likely to be full-time with a response of 12 (52.5%).

The respondents reported earning an average grade of a B for their grade point average. The students who have not, nor plan to do a clinical healthcare internship predominantly, 10 (43.5%), reported earning an A- to B+, with none earning an A. The groups who plan to do and have done a clinical healthcare internship saw a smaller percentage reporting in the A- to B+ range but more in the A range than the previous group. Of the students who plan to do a clinical healthcare internship, 29 (27.9%) reported earning an A- to B+ while 10 (9.6%) reported earning an A. Of the students who have done a clinical healthcare internship, 52 (26.8%) reported earning an A- to B+ while 32 (16.5%) reported earning an A.

The respondents ages varied greatly, with the majority of all respondents ( $n=82$ ; 25.6%) selecting the age range of 20 to 21. This demographic remained the same for the students who plan to do and have done a clinical healthcare internship, with each reporting responses of 31 (30.1%) and 48 (24.9%), respectively for the age range 20 to 21. The students who have not, nor plan to do a clinical healthcare internship were more likely to be in the age range of 40 to 49, with a response of 7 (30.4%).

The gender mix of the college is predominantly female ( $n=283$ ; 87.6%), and is reflected in all groups of respondents. The students who have not, nor plan to do, who plan to do and who have done a clinical healthcare internship, all reported being female ( $n=21$ ; 91.3%), ( $n=83$ ; 79.8%), and ( $n=178$ ; 91.3%), respectively.

The distribution of respondents who are married is similar to that of those that have children living with them. Overall, 97(30.1%) have children living with them and 93(28.8%)

of respondents are married. Those students who plan to do, 31 (29.8%), or have done, 56 (28.9%), a clinical healthcare internship reported having children live with them. The same groups reported being married, 27 (26.0%) and 57 (29.2%), respectively. Students who have not, nor plan to do a clinical healthcare internship reported having children live with them, 10 (43.5%), and being married, 9 (39.1%).

Respondents were predominantly white, non-Hispanic across all groups. Among all respondents, 1 (0.3%) identified with the race American Indian or other Native American, 5 (1.5%) identified with the race Asian, Asian American or Pacific Islander, 6 (1.9%) identified with the race Black or African American, Non-Hispanic, 299 (92.6%) identified with the race White, Non-Hispanic, 6 (1.9%) identified with the race Hispanic, Latino, Spanish, and 6 (1.9%) identified with the race category of Other. Within the group have not, nor plan to do a clinical healthcare internship two racial identifications were represented; 1 (4.3%) identified with Black or African American, Non-Hispanic and 22 (95.7%) identified with White, Non-Hispanic. The students who plan to do a clinical healthcare internship represented five racial identities; 2 (1.9%) identified with Asian, Asian American or Pacific Islander, 3 (2.9%) identified with Black or African American, Non-Hispanic, 93 (89.4%) identified with White, Non-Hispanic, 4 (3.8%) identified with Hispanic, Latino, Spanish and 2 (1.9%) identified with Other. The group of respondents that have done a clinical healthcare internship identified with six racial identities; 1 (0.5%) identified with American Indian or other Native American, 3 (1.5%) identified with Asian, Asian American or Pacific Islander, 2 (1.0%) identified with Black or African American, Non-Hispanic, 183 (93.8%) identified with White, Non-Hispanic, 2 (1.0%) identified with Hispanic, Latino, Spanish, and 4 (2.1%) identified with Other.

### Benchmark Analysis

The creators of CCSSE validated five benchmarks that are each comprised of multiple survey items (McClenney, 2007). The researcher used the response item related to internships, which is not a benchmark item, to develop three academically different groups to compare; those who have not, nor plan to, those who plan to do, and those who have done a clinical healthcare internship. The items for each benchmark were averaged for each respondent and the means for the three groups described were compared using ANOVA.

ANOVA is a robust inferential statistical tool that controls both type I and type II errors well. However, considering the difference of population sizes of the samples a Levene's test for homogeneity was applied to ensure the groups were comparable. A significant Levene's test for homogeneity suggests the groups are not comparable. In all cases the Levene's test for homogeneity was not significant and therefore further tests for homogeneity was not required (Field, 2009). Following the ANOVA, a post-hoc test for between group differences was performed. Tukey-Kramer HSD is the post-hoc choice in educational literature because it adjusts for multiple comparisons while not being too conservative (Ploutz-Snyder, 2005).

The benchmark Active and Collaborative Learning is comprised of seven survey items (see Table 4.2) that address areas such as collaboration with classmates and contributions to actively participating in class (CCSSE, 2013b). Levene's test for homogeneity was non-significant ( $p < 0.05$ ) and the variances were assumed equal. Significant differences were not found for the benchmark Active and Collaborative Learning  $F(2, 322) = 1.26$ , ns. Post-hoc analysis was not performed due to non-significant ANOVA value.



The student learning engagement benchmark of Student Effort is comprised of eight survey items (see Table 4.4) that inquire about the frequency of use of resources and the amount of time preparing for class (CCSSE, 2013d). Levene's test for homogeneity was non-significant ( $p < 0.05$ ) and the variances were assumed equal. Significant differences existed between the three intern groups,  $F(2, 322) = 4.10, p < 0.05, \omega = 0.02$ . Post-hoc Tukey-Kramer HSD means comparison revealed that students who have not, nor plan to participate in a clinical healthcare internship significantly engaged less in items pertaining to the benchmark of Student Effort than students who plan to do or have done a clinical healthcare internship. No other comparisons were significantly different.

The benchmark of Academic Challenge consists of 10 survey items (see Table 4.6) that include questions about the amount and complexity of assignments and tasks, as well as faculty expectations of performance (CCSSE, 2013a). Levene's test for homogeneity was non-significant ( $p < 0.05$ ) and the variances were assumed equal. The ANOVA revealed that significant differences between the average response of the three groups for the benchmark Academic Challenge existed,  $F(2, 322) = 8.34, p < 0.05, \omega = 0.05$ . Post-hoc Tukey-Kramer HSD means comparison demonstrated that students who have not, nor plan to participate in a clinical healthcare internship significantly engage less with Academic Challenge benchmark items than both students who plan to do or who have done a clinical healthcare internship. Other comparisons did not yield significant differences.

The Student-Faculty Interaction benchmark includes six survey items (see Table 4.8) that address the frequency of various interactions that students have with faculty (CCSSE, 2013e). Levene's test for homogeneity was non-significant ( $p < 0.05$ ) and the variances were assumed equal. The ANOVA did not reveal significant differences between the means of the

three groups for the Student-Faculty Interaction benchmark,  $F(2, 322) = 0.21$ , ns. Post-hoc analysis was not performed due to the non-significant ANOVA value.

The benchmark of Support for Learners contains seven survey items (see Table 4.10) addresses the institutions commitment to providing social supports for students and the frequency that students utilize those supports (CCSSE, 2013f). Levene's test for homogeneity was non-significant ( $p < 0.05$ ) and the variances were assumed equal. The ANOVA did not reveal significant differences between the means of the three groups for the Support for Learners benchmark,  $F(2, 322) = 0.50$ , ns. Post-hoc analysis was not performed due to the non-significant ANOVA value. In addition to ANOVA analysis of the means across differing groups of interns at the institution researched, the means for the institution as a whole are compared to colleges of a similar size and the entire 2008 CCSSE cohort.

### **Institutional Comparison**

The institution researched is arguably different in make-up and mission than most of the community colleges that participate in CCSSE. Given the special focus of Confluence College it is prudent to investigate how it compares to colleges using the same survey instrument. As a participating institution, the Confluence College is provided with a list of those who participated in the 2008 CCSSE cohort, those colleges included in the cohort of colleges of a similar size, and an institutional report of comparisons between these three groups. The institutional report includes a weighted benchmark score comparison and a comparison of the means of each item associated with the benchmark.

The benchmark comparisons are reported as weighted scores where the 2008 CCSSE cohort means were standardized to equal 50 with a standard deviation of 25. This weighted

adjustment was then applied to the data for other small colleges and the data for the institution. Therefore, the reported data mean for the 2008 CCSSE cohort will always be 50. The means for each item associated with each benchmark were reported for the institution, other small colleges, and the 2008 CCSSE cohort. The means of the individual survey items were compared to other small colleges and the 2008 CCSSE cohort, and those that were significant ( $p < 0.001$ ) and exhibited a size effect equal or greater than 0.2 were identified in the report. An effect size of 0.2 is the threshold necessary for identifying a small effect size (Cohen, 1988).

Confluence College ( $M=64.5$ ) exhibited a higher mean than both small colleges (51.4) and the 2008 CCSSE cohort (50.0) for the benchmark of Active and Collaborative Learning (see Table 4.2). While students at other small colleges engage slightly more in collaboration and active learning activities than the 2008 CCSSE cohort, Confluence College demonstrates even more engagement in these learning activities.

Table 4.2. Active and collaborative learning benchmark weighted means comparison

	Confluence College	Other Small Colleges	2008 CCSSE Cohort
Weighted Means	64.5	51.4	50.0

The item analysis of the benchmark Active and Collaborative Learning (see Table 4.3) reveals that students at Confluence College are significantly more likely to make a class presentation, work with classmates outside of class on an assignment, and participate in a community project for class than students at other small colleges or students in the 2008

Table 4.3. Active and collaborative learning benchmark item means comparison

Item	Confluence College	Other Small Colleges	2008 CCSSE Cohort
4a. Asked questions in class or contributed to class discussions	3.01	2.96	2.91
4b. Made a class presentation	2.50	2.05*	2.04*
4f. Worked with other students on projects during class	2.62	2.49	2.47
4g. Worked with classmates outside of class to prepare class assignments	2.45	1.89*	1.86*
4h. Tutored or taught other students (paid or voluntary)	1.35	1.38	1.37
4i. Participated in a community-based project as a part of a regular course	1.80	1.32*	1.30*
4r. Discussed ideas from your readings or classes with others outside of class (students, family members, co-workers, etc.)	2.76	2.57	2.56*

\*Mean is significantly different ( $p < 0.001$ ) than the institution researched with a size effect equal or greater than 0.2.

CCSSE cohort. In addition, the students at Confluence College are significantly more likely to discuss class or readings outside of class than those in the 2008 CCSSE cohort.

There is relatively little difference between the weighted means for the benchmark of Student Effort. Confluence College, small colleges and the 2008 CCSSE cohort reported means of 53.4, 51.2 and 50.0, respectively (see Table 4.4). Overall analysis of this benchmark suggests little difference between the groups in regards to the effort they put forth to engage in their learning.

The individual item analysis demonstrates significant differences for some of the individual Student Effort benchmark items (see Table 4.5). Students at Confluence College are significantly more likely to work on a project that required various sources, spend more

Table 4.4. Student effort benchmark weighted means comparison

	Confluence College	Other Small Colleges	2008 CCSSE Cohort
Weighted Means	53.4	51.2	50.0

Table 4.5. Student effort benchmark item means comparison

Item	Confluence College	Other Small Colleges	2008 CCSSE Cohort
4c. Prepared two or more drafts of a paper or assignment before turning it in	2.37	2.47	2.47
4d. Worked on a paper or project that required integrating ideas or information from various sources	3.14	2.71*	2.71*
4e. Came to class without completing readings or assignments	2.01	1.84*	1.87
6b. Number of books read on your own (not assigned) for personal enjoyment or academic enrichment	1.86	2.06	2.08*
10a. Preparing for class (studying, reading, writing, rehearsing, doing homework, or other activities related to your program)	2.53	1.93*	1.90*
13d1. Frequency: Peer or other tutoring	1.33	1.46	1.46
13e1. Frequency: Skill labs (writing, math, etc.)	1.66	1.75	1.71
13h1. Frequency: Computer lab	2.33	2.16*	2.10*

\*Mean is significantly different ( $p < 0.001$ ) than the institution researched with a size effect equal or greater than 0.2.

time preparing for class and spend more time in the computer lab than students at other small colleges and students in the 2008 CCSSE cohort. Interestingly, students at Confluence College significantly came to class without completing reading assignments more often than those at other small colleges. Students at Confluence College were also less likely to read books that were not assigned than those in the 2008 CCSSE cohort.

A noticeable difference between the weighted means for the benchmark academic challenge exists. The weighted mean for the institution is reported as 66.5 while small colleges report 50.5 and the 2008 CCSSE cohort is standardized to equal 50.0 (see Table 4.6). Students at Confluence College spend more time on complex tasks than students at other small colleges and in the 2008 CCSSE cohort.

Table 4.6. Academic challenge benchmark weighted means comparison

	Confluence College	Other Small Colleges	2008 CCSSE Cohort
Weighted Means	66.5	50.5	50.0

The item analysis reveals significant differences for all items associated with the benchmark of academic challenge (see Table 4.7). Students at Confluence College were significantly more likely to analyze material, synthesize material, make judgments, apply theories to new situations, use information for a new skill, be assigned more readings, write more papers, be challenged on exams, and encouraged to spend significant time studying, than students at other small colleges and students in the 2008 CCSSE cohort. The students at Confluence College were significantly more likely to also work harder to meet expectations than students in the 2008 CCSSE cohort.

Table 4.7. Academic challenge benchmark item means comparison

Item	Confluence College	Other Small Colleges	2008 CCSSE Cohort
4p. Worked harder than you thought you could to meet an instructor's standards or expectations	2.71	2.56	2.53*
5b. Analyzing the basic elements of an idea, experience, or theory	3.11	2.82*	2.84*
5c. Synthesizing and organizing ideas, information, or expressions in new ways	2.97	2.70*	2.71*
5d. Making judgments about the value or soundness of information, arguments, or methods	2.83	2.54*	2.55*
5e. Applying theories or concepts to practical problems or in new situations	3.06	2.65*	2.64*
5f. Using information you have read or heard to perform a new skill	3.16	2.78*	2.75*
6a. Number of assigned textbooks, manuals, books or book-length packs of course readings	3.33	2.89*	2.86*
6c. Number of written papers or reports of any length	3.26	2.84*	2.83*
7. The extent to which you examinations during the current school year have challenged you to do your best work at this college	5.57	5.05*	5.00*
9a. Encouraging you to spend significant amounts of time studying	3.54	2.97*	2.96*

\*Mean is significantly different ( $p < 0.001$ ) than the institution researched with a size effect equal or greater than 0.2.

There was little difference between Confluence College, small colleges, and the 2008 CCSSE cohort for the benchmark of Student-Faculty Interaction. The weighted mean score for the institution was 56.1, compared to 51.8 for small colleges and 50.0 for the CCSSE 2008 cohort (see Table 4.8). This indicates that student-faculty interaction is comparable to that of small colleges and the CCSSE 2008 cohort.

Table 4.8. Student-faculty interaction benchmark weighted means comparison

	Confluence College	Other Small Colleges	2008 CCSSE Cohort
Weighted Means	56.1	51.8	50.0

Among the survey items that comprise the student-faculty interaction benchmark, one demonstrated a significant difference (see Table 4.9). Students at Confluence College were significantly more likely to communicate with their instructors via email than both students at small colleges and in the CCSSE 2008 cohort.

Table 4.9. Student-faculty interaction benchmark item means comparison

Item	Confluence College	Other Small Colleges	2008 CCSSE Cohort
4k. Used email to communicate with an instructor	3.24	2.51*	2.52*
4l. Discussed grades or assignments with an instructor	2.66	2.56	2.52
4m. Talked about career plans with an instructor or advisor	1.98	2.09	2.02
4n. Discussed ideas from your readings or classes with instructors outside of class	1.82	1.78	1.73
4o. Received prompt feedback (written or oral) from instructors on your performance	2.57	2.69	2.66
4q. Worked with instructors on activities other than coursework	1.41	1.44	1.40

\*Mean is significantly different ( $p < 0.001$ ) than the institution researched with a size effect equal or greater than 0.2.

Differences between weighted means for the benchmark Support for Learners were very evident (see Table 4.10). Students at Confluence College reported a weighted mean of 38.9, while small colleges and the CCSSE 2008 cohort reported 51.8 and 50.0, respectively. These results demonstrate that students attending Confluence College have more difficulty connecting with support resources than students at small colleges and within the CCSSE 2008 cohort.

Table 4.10. Support for learners' benchmark weighted means comparison

	Confluence College	Other Small Colleges	2008 CCSSE Cohort
Weighted Means	28.9	51.8	50.0

Item analysis exhibits significant differences in all but one item associated with the benchmark Support for Learners (see Table 4.11). Students at Confluence College are significantly less likely than those at small colleges, or those within the CCSSE 2008 cohort, to find support to succeed, come in contact with diverse populations, find support to cope with non-academic responsibilities, find support to thrive socially, receive financial support, and utilize career counseling less frequently.

### Summary

Student learning engagement consists of a variety of opportunities for students to become actively involved in the learning process. More activity leads to greater engagement which in turn leads to more learning (Carini et al., 2006, McClenney, 2007). An increase in learning engagement plays an integral role in the persistence and retention of students (Tinto, 1993). Since student learning engagement can differ depending on the environment,



Table 4.11. Support for learners' benchmark item means comparison

Item	Confluence College	Other Small Colleges	2008 CCSSE Cohort
9b. Providing the support you need to help you succeed at this college	2.50	2.98*	2.95*
9c. Encouraging contact among students from different economic, social, and racial or ethnic backgrounds	2.19	2.45*	2.47*
9d. Helping you cope with your non-academic responsibilities (work, family, etc.)	1.69	1.97*	1.93*
9e. Providing the support you need to thrive socially	1.79	2.15*	2.11*
9f. Providing the financial support you need to afford your education	1.91	2.48*	2.39*
13a1. Frequency: Academic advising/planning	1.76	1.80	1.75
13b1. Frequency: Career counseling	1.20	1.44*	1.43*

\*Mean is significantly different ( $p < 0.001$ ) than the institution researched with a size effect equal or greater than 0.2.

resources for students, and faculty interaction, this study sought to explore how students' experiences with a clinical healthcare internship at a healthcare college may impact their learning engagement (Kuh et al., 2010). The clinical environment does not offer faculty the same amount of control over the environment and curriculum as they would enjoy in the classroom (Brown et al., 2010). The opportunities to participate in the informal curricular activities that present themselves in a clinical environment, coupled with a student's increased motivation associated with internships, position these students to demonstrate a higher level of agentic engagement (Reeve, 2012). In theory, increased agentic engagement should contribute to overall learning engagement and be reflected in the CCSSE data.

Three levels of internships were evaluated using an ANOVA for significant differences. Survey items for each benchmark were averaged for each respondent and compared, as well as each survey item associated with each benchmark was compared across the intern groups. The intern groups included those who have not, nor plan to, plan to, and have participated in a clinical healthcare internship. Two of the five CCSSE benchmarks

were significantly different. For both the benchmark of Student Effort and Academic Challenge, students who have not, nor plan to participate in a clinical internship were less engaged in those benchmark items than students who plan to or have participated in a clinical healthcare internship. For all cases where individual survey items yielded significant results, the closer a student was to having had participated in a clinical healthcare internship, the more likely they were to demonstrate more engagement with the survey item. The outcomes of these comparisons will be discussed in detail in the following chapter.

This study was unique in that CCSSE was administered at a small, private, not-for-profit, non-residential, Catholic affiliated institution with a special focus in healthcare. Since Confluence College was not a community college it was prudent to examine how the results compared to colleges of similar sizes and to the national 2008 CCSSE cohort data. The demographic and academic background information is consistent with that reported for the institution to the Integrated Post-Secondary Data System and suggests the results of this study are generalizable to Confluence College (NCES, 2013). However, Confluence College is not a community college and exhibits demonstrable differences from other small colleges and colleges in the 2008 CCSSE cohort. In particular, students at the institution researched reported higher engagement levels for the benchmarks of Active and Collaborative Learning and Academic Challenge. Conversely, students at Confluence College reported lower levels of engagement for the benchmark of Support for Learners. The differences between institutions, and the implications they have on the study, are explored further in chapter five.

## CHAPTER 5. SUMMARY AND CONCLUSION

This chapter provides an analysis of the data and research findings, and discussion of the findings and how they relate to policy and practice as well as recommendations for future research. The purpose of this study was to determine if student learning engagement differs for students who have done, plan to do, or have not done, nor plan to participate in a clinical healthcare internship.

This research study is unique since it adds to a limited body of research that investigates the level of student learning engagement among students in clinical healthcare internships. Student learning engagement comes in many forms. By understanding if students at various stages of their healthcare education engage differently in learning, policy, and curriculum, pedagogy can be modified to maximize engagement at the different stages of healthcare education. The more engaged students are, the more successful they will be (Carini et al., 2006).

### Summary

This study may be considered unique for the reason that the CCSEE was administered at a small, private, not-for-profit, non-residential, Catholic affiliated institution that specializes in healthcare education. The CCSSE is a tool that is available to many types of institutions, but is utilized primarily by community colleges. It measures student learning engagement across five benchmarks that have been tested for reliability and validity. The benchmarks measure engagement in the areas of Active and Collaborative Learning, Student Effort, Academic Challenge, Student-Faculty Interactions, and Support for Learners (McClenney, 2007). The benchmarks also allow for comparisons against like institutions and

a national dataset. CCSSE was administered at Confluence College in the spring semester of 2008.

The institutional reports prepared by CCSSE staff were utilized for comparisons of Confluence College, other small colleges, and the 2008 CCSSE cohort. These reports help the researcher understand how Confluence College differs from other institutions participating in CCSSE. The institutional data were analyzed for demographic and academic descriptors, and compared to the 2008 report for the Integrated Post-Secondary Education Data Center to assure respondents represented the institutional make-up, ensuring the results can be generalized to the institution. The data were then analyzed using ANOVA to compare the intern groups of those who have not, nor plan to, who plan to, and who have participated in a clinical healthcare internship across the five CCSSE benchmarks and the individual survey items that make up each benchmark.

## Findings

### Research question 1

*How do the demographic and academic characteristics of students who participated in this study differ? More specifically, how do these characteristics differ for students who have done, plan to do or have not done, nor plan to participate in a clinical healthcare internship.*

The three groups of interns were relatively comparable across grade point average and racial identification. All three intern groups reported an average grade point average of a “B” with the a higher proportion reporting earning an “A” as they plan to, or complete, a clinical healthcare internship. Similarly with racial identification all three intern groups predominantly identified with White, Non-Hispanic, though as students planned to participate in, or have completed, a clinical healthcare internship more racial identifications

were increasingly represented. For example, two categories of racial identification were represented in the intern group that have not, nor plan to do a clinical healthcare internship. The intern groups who plan to or have participated in a clinical healthcare internship represented five and six different racial identities respectively.

Differences that existed across demographic and academic characteristics most often were present with the group of interns that have not, nor plan to participate in a clinical healthcare internship. Students who do not have plans to do a clinical healthcare internship were more likely to be less than full-time, slightly older, more likely to be married, and more likely to have children living with them, than students who plan to or have participated in a clinical healthcare internship. Full-time enrollment for students who do not plan to participate in a clinical healthcare internship was 52.2%, compared to students who plan to (81.0%) and those who have completed (76.7%) a clinical healthcare internship. Among students who have no plans to participate in a healthcare internship 43.5% have children living with them while 29.8% and 28.9% of those who plan to and have completed a clinical healthcare internship respectively have children living with them. Students who do not plan to participate in a clinical healthcare internship report an average age of 25-29, which is slightly older than the average of 22-24 for both students who plan to and have completed a clinical healthcare internship. Students who do not plan to participate in a clinical healthcare internship are also more likely to be married, with 39.1% being married compared to 26.0% of students who plan to, and 29.2% of students who have participated in a clinical healthcare internship.

Confluence College predominantly enrolls female students. However, students who plan to participate in a clinical healthcare internship enroll more males (20.2%) than students

who have no plans to (8.7%) and those who have (8.7%) participated in a clinical healthcare internship.

These findings have potential implications to this research study. In particular, the intern group that has not, nor has plans to participate in a clinical healthcare internship have the potential to be less engaged. Students who are enrolled less than full-time are reported in the literature as being less engaged. In addition, the characteristics of being older, married, and having children resonates with the adult learner. Due to the commitments associated with these adult learner characteristics, engaging these individuals becomes increasingly challenging (Kuh et al., 2010). The fact that these students do not have plans to participate in a clinical healthcare internship also has an impact on engagement, since it has been demonstrated that students who participate in internships are more engaged than those in learning groups or completing service learning projects (Miller et al., 2011). Clearly, students who have not, nor plan to participate in a clinical healthcare internship have the potential to be less engaged in their learning.

## **Research question 2**

*Does student learning engagement overall differ between students in the study, colleges of similar sizes and national benchmark results?*

The unique aspect of utilizing CCSSE at a small, private, not-for-profit, non-residential, Catholic affiliated institution that specializes in healthcare education prompted a review of the institutional report that compares Confluence College to colleges of like sizes and to the 2008 CCSSE cohort. This review considered Confluence College as a whole and did not factor in the breakdown between intern groups.

Confluence College revealed demonstrably more positive results than both groups, other small colleges and the 2008 CCSSE cohort, in two of the five benchmarks. Students at Confluence College reported a higher engagement score (M=64.5) with the benchmark of Active and Collaborative Learning than other small colleges (M=51.4) and the 2008 CCSSE cohort (M=50.0). In particular, students at Confluence College demonstrated sizeable and significantly higher engagement scores in the activities of making a class presentation, working together outside of class to prepare assignments, participating in a community project and discussing ideas or readings outside of class.

Confluence College also reported a higher engagement score (M=66.5) than small colleges (M=50.5) and the 2008 CCSSE cohort (50.0) for the benchmark of Academic Challenge. Students at Confluence College experienced sizeable and significantly higher engagement scores for all ten items associated with the survey. The ten items associated with this benchmark included working harder than you thought you could, analyzing, synthesizing, making judgments, applying material, performing new skills, assigned more textbooks, wrote more papers, were challenged on exams, and encouraged to study more.

Confluence College also demonstrated notably lower scores (M=38.9) than other small colleges (M=51.8) and the CCSSE cohort (M=50.0) for the benchmark of Support for Learners. Within this benchmark only one survey item, frequency of academic advising, was consistent for Confluence College, other small colleges and the 2008 CCSSE cohort. The other six items that were included in this benchmark demonstrated a sizeable and significantly lower engagement scores. Students at Confluence College felt less supported in being successful, connecting with diverse populations, coping with non-academic

responsibilities, thriving socially, and financially so that their education was affordable. In addition, students at Confluence College utilized career counseling less frequently.

Review of the CCSSE institutional report reveals engagement factors that Confluence College clearly excels in, and has challenges with, as compared to other small colleges and the 2008 CCSSE cohort. The overrepresentation of significant differences with survey items within each benchmark suggests that Confluence College may not be comparable to other community colleges, especially in areas associated with these benchmarks, and that the result of this study may not be applicable to community college setting.

### **Research Question 3**

*Does participating in a clinical healthcare internship influence students' perceptions of the student learning engagement aspect of active participation?*

Confluence College as a whole demonstrated greater student learning engagement when compared to other small colleges and the 2008 CCSSE cohort. However, the benchmark averages were not significantly different for across the differing intern groups. Clinical healthcare internships did not play a significant role in how students engage in learning when collaborating with classmates and contributing to class activities. Only one item within the benchmark was significantly different. Students who have not, nor plan to participate in a clinical internship were significantly less likely to work with other students on a project during class when compared to students who plan to participate in a clinical healthcare internship.



#### **Research Question 4**

*Does participating in a clinical healthcare internship influence students' perceptions of the student learning engagement aspect of effort put forth?*

The differing levels of clinical healthcare internships were correlated with significant differences for the benchmark of Student Effort. Students who have not, nor plan to participate in a clinical healthcare internship (M=1.89) were significantly less engaged with this aspect of student learning engagement than students who plan to or have participated in a clinical healthcare internship. Several survey items within this benchmark proved to demonstrate significant differences. Students who plan to participate in a clinical healthcare internship were less likely to work on a project that required integrating information from multiple sources when compared to students who have participated in a clinical internship.

In particular, students who have not, nor plan to participate in a clinical healthcare internship reported using skills labs less frequently than students who plan to participate in a clinical healthcare internship. The students who have not, nor plan to participate in a clinical healthcare internship also report using the computer lab less frequently than both students who plan to and students who have participated in a clinical healthcare internship. Overall, students who have not, nor plan to participate in a healthcare internship spent less time working on assignments and preparing for class than both students who plan to and students who have participated in a clinical healthcare internship.

#### **Research Question 5**

*Does participating in a clinical healthcare internship influence students' perceptions of the student learning engagement aspect of academic challenges?*

Confluence College, as a whole, reported greater engagement than other small colleges or the 2008 CCSSE cohort. However, students who have not, nor plan to participate in a clinical healthcare internship ( $M=3.01$ ) were significantly less engaged with the benchmark of Academic Challenge when compared to students who plan to ( $M=3.35$ ) or have participated ( $M=3.43$ ) in a clinical healthcare internship. Students who have not, nor plan to participate in a clinical healthcare internship spent less time on complex tasks and assignments, especially higher order Bloom's taxonomy tasks.

Students who have not, nor plan to participate in a clinical healthcare internship were less likely to analyze elements of a topic and were not as encouraged to rigorously study when compared to students who have done a clinical healthcare internship. Those who have no plans to participate in a clinical healthcare internship were also less likely than students who plan to or have participated in a clinical healthcare internship, to apply concepts to new situations or use information to perform new tasks. Students who plan to participate in a clinical healthcare internship wrote fewer papers than students who have done a clinical healthcare internship. Planning to, or having participated in a clinical internship is associated with the academic challenge a student experiences in their healthcare education.

### **Research Question 6**

*Does participating in a clinical healthcare internship influence students' perceptions of the student learning engagement aspect of student-faculty interactions?*

Clinical healthcare internships did not appear to have an impact on the student learning engagement benchmark of Student-Faculty interactions. The ANOVA did not reveal any significant differences for the benchmark, or for any of the survey items that contribute to the benchmark. In addition, students at Confluence College were comparable to

other small colleges and the 2008 CCSSE cohort. Considering this aspect of student learning engagement, Confluence College resembles a community college and does not demonstrate any significant differences across the intern groups.

### **Research Question 7**

*Does participating in a clinical healthcare internship influence students' perceptions of the student learning engagement aspect of support for learning?*

Confluence College was notably less engaged than other small colleges and the 2008 CCSSE cohort for the benchmark of Support for Learners. The feeling of not being supported in the learning process was pervasive across the institution. No intern group reported feeling less or more supported than another. Only one survey item revealed a significant difference between the intern groups. Students who plan to participate in a clinical healthcare internship reported using academic advising less often than students who have participated in a clinical healthcare internship. Overall, differing classifications of intern groups were not associated with any significant differences in how students felt they were supported by the institution.

### **Discussion**

Confluence College is not a residential campus, which means all of those enrolled are commuter students. Since it can be difficult to engage students who commute, a non-residential institution was purposefully selected for this study to control for the impact that commuting may have on learning engagement. The clinical component of a healthcare education generally requires students to commute to off-campus locations. Even residents of a residential campus find it necessary to commute to clinical sites.

There were some differences noted among the differing intern groups. In particular, students who have not, nor plan to participate in a clinical healthcare internship demonstrated characteristics of students who naturally possess more barriers to engaging in their learning. These students are less likely to be a full-time student, which requires them to be on campus less. In addition, students who have not, or plan to participate in a clinical healthcare internship are more likely to be older and have more non-academic commitments in the form of a spouse or children. All of these could be potential explanations for why this intern group reported lower engagement scores than students who plan to or have participated in a clinical healthcare internship.

It is worth noting that Confluence College, as a whole, demonstrated greater engagement than other small colleges and the 2008 CCSSE cohort for the benchmarks of Active and Collaborative Learning and Academic Challenge. This could be due, in part, to the prescriptive curriculums and intense certification and licensure exams that healthcare education programs prepare students for. Many healthcare education programs seek programmatic accreditation in addition to regional accreditation for the institution. Programmatic accreditations often offer curricular guidelines that programs must adhere to. In some cases the accrediting agency even needs to approve curricular changes.

These highly structured curriculums do not leave room for a lot of variation or electives. In essence, a successful semester leads to another semester of prescribed courses. An unsuccessful semester severely disrupts this progression and makes it difficult for students to continue. Therefore, an environment is created where students enter a cohort by default depending upon which group they were admitted with. This leads to students who take the same classes together, semester after semester. As cohorts become comfortable with

one another they are more likely to engage actively and collaborate with others in class. By default the students develop a self-supported learning community.

In addition to the highly structured curriculum, healthcare education programs often prepare students to take certification or licensure exams following graduation to enter their field of practice. These exams are known for their rigor and expectation of critical thinking to answer higher order multiple-choice questions. This one exam is used to test if the students can apply all the information they have acquired throughout their healthcare education. Many curricula prepare students for this style of testing by incorporating assignments that require higher order Bloom's taxonomy, such as analyzing, synthesizing, evaluation, and application. While these types of assignments are undoubtedly utilized at community colleges, these types of assignments are embedded throughout healthcare education curriculums. As an example, a typical major at a community college may include multiple topics that include a few courses that require a prerequisite course so the student has the knowledge necessary so it can be applied in the more advanced course. In healthcare education it is possible that a degree that is five semesters long has a course in the fifth semester that is linked by prerequisites all the way back to the first semester. It is this structure within healthcare education that may explain why students at the institution researched reported being challenged academically more than other small colleges or the 2008 CCSSE cohort.

The institution researched did report lower engagement scores than other small colleges and the 2008 CCSSE cohort for the benchmark of Support for Learners. Respondents overwhelmingly reported feeling a lack of support to be successful and thrive socially. It is difficult to discern if this phenomenon can be contributed to healthcare

education or the institution researched. The benchmark of Support for Learners is comprised of items that ask about resources and opportunities that the college or institution provide for the students. This coupled with the fact that this study only considered one institution makes it quite plausible that Confluence College may be a contributing factor to these results.

Confluence College is not a comprehensive community college; it is a small, private, not-for-profit, non-residential, Catholic affiliated institution that focuses on healthcare education.

Therefore, Confluence College does not have the resources and opportunities that one would find on the campus of a comprehensive community college. In addition, Confluence College is comprised of commuter students who may not be on campus or even know the resources are available. As a commuter college, Confluence College does not have a union or commons area for students to socialize, nor does it offer a wide variety of college sponsored extra-curricular activities. These items could contribute to the engagement scores seen in this benchmark.

There is one aspect of healthcare education that may also contribute to lower engagement for the benchmark of Support for Learners—the clinical healthcare internship. Often times, the students are unaware of the time commitment required of a clinical healthcare internship. Students may be used to the notion that a three-credit didactic course meets for three hours each week. However, a three-credit clinical healthcare internship course could meet for nine hours a week. To compound the matter, those hours for clinical healthcare internships are often held during the day, making it difficult to utilize resources and offices that may only be available during daytime hours. Given that the clinical healthcare internship could contribute to lower engagement scores for this benchmark, it is worth noting that there were no significant differences found between any of the intern

groups for this benchmark. This suggests that the nature of Confluence College may be the largest contributor to the lower engagement scores.

This study also queried whether differences in student learning engagement existed for students with differing intentions regarding clinical healthcare internships. The CCSSE asked respondents to designate whether they have not, nor plan to, plan to, or have participated in an internship. Due to the nature of the programs offered at Confluence College, all internships are in a clinical healthcare environment and therefore are clinical healthcare internships. One limitation to this study was that there was no way to discern why students would select that they have not, nor plan to participate in a clinical healthcare internship. A plausible explanation for selecting this option is that these students are not yet admitted to a program and exploring their options, or simply are unaware of the clinical healthcare internship component of the program they wish to pursue. These students may not yet be as committed to their education or lack the focus of being in a particular health education program.

One aspect of healthcare education is that students work toward obtaining a specific set of knowledge and skills that ultimately lead to a specific job they can expect to do. This can be different from a student who majors in biology or English. These degrees are valuable, yet they can lead to a multitude of employment options. A lack of specific direction after graduation can be frustrating to some new graduates trying to find their niche. For this reason, healthcare education can be very attractive to students. Students in healthcare education programs tend to get excited about their specific program courses and are more motivated to engage in those courses. Anecdotally, as a Program Chair of a health education program, the researcher can recount numerous conversations in which a student

was excited to start the program and expected his or her grades and academic success to improve once in the program. This motivation is the reason for grounding this study in SDT and agentic engagement (Reeve, 2012, Reeve & Tseng, 2011). Indeed, the findings of this research support that students who plan to or have participated in a clinical healthcare internship are more engaged than those who have no plans to participate in a clinical healthcare internship. The research combined with the literature review support that students are expected to and are motivated to contribute to their own learning process and, thus, support the theory of agentic engagement.

A close examination of the five benchmarks for CCSSE reveals that two are primarily driven by the student and their own personal motivation: (1) Active and Collaborative Learning requires participation of not only the students but also their classmates and those around them (CCSSE, 2013b); and (2) Student-Faculty Interaction is driven largely by the instructor and their availability and intentions to interact with the students (CCSSE, 2013e). Support for Learners relies heavily on resources and opportunities provided by the institution (CCSSE, 2013f). These three benchmarks did not yield significant differences across the intern groups and largely rely on resources other than the respondent, such as other students, instructors, and the institution.

The two remaining benchmarks, Student Effort and Academic Challenge, rely greatly on the students and their motivation to participate in and create learning opportunities. The benchmark, Student Effort, demonstrated that students who have not, nor plan to participate in a clinical healthcare internship spent significantly less time engaging with the learning material outside of class and preparing for class (CCSSE, 2013a). Once again, if the students lack the focus, excitement, and motivation of being in a program that has a clearly defined



path to a career that they have decided they want, it can be expected that they will be less engaged until they find the path they want.

The benchmark of Academic Challenge addresses the rigor of the respondent's courses (CCSSE, 2013c). The benchmark revealed that students who plan to or have participated in a clinical healthcare internship are significantly more engaged in meeting academic challenges by putting in the time and effort to apply knowledge to complex assignments and situations than students who have no plans to participate in a clinical healthcare internship. Considering this study was limited to one institution, it can be assumed that expectations to meet rigorous course outcomes were fairly consistent across the intern groups. However, students who plan to or have completed a clinical internship have a vested interest in remaining with their cohort and performing well in the clinical environment. Therefore, these students may be more motivated to meet the rigorous expectations.

This study revealed differences between a private, not-for-profit, non-residential, Catholic-affiliated healthcare college and other small colleges and the 2008 CCSSE cohort. Specifically at Confluence College, students were more engaged in collaborative learning activities and meeting academic challenges, and felt less supported in their academic success and social well-being, than students at community colleges. This study looked specifically at how students' intentions to participate in a clinical healthcare internship may have impacted their student learning engagement. Clearly, students who have not, nor plan to participate in a clinical healthcare internship are less engaged in the effort they put forth and their motivation to rise to academic challenges. Since engagement is strongly linked to retention

and persistence (Tinto, 1993), the results of this study have implication for the practice and policies for healthcare education programs.

### **Implications for Practice and Policy**

The results of this study demonstrate that healthcare education institutions reap many benefits in the area of student learning engagement due to the specific nature of their mission. However, specifically for Confluence College, there are challenges to support student learning. Small private, non-residential campuses that offer programs with significant off-campus internships would benefit from investing in strategic approaches to meeting students where they are in the community and offer resources during hours that students are available. Another change in practice would be to implement a student union to give students a place other than the classroom to socialize while on campus. This may seem cost-prohibitive for smaller campuses with limited budgets, but could become a revenue generator in the long term through retention and persistence.

Students who plan to or have participated in a clinical healthcare internship are significantly more engaged in the learning process than students who have not, nor plan to participate in a clinical healthcare internship. Healthcare education institutions and programs would benefit from identifying students who do not, nor plan to participate in a clinical healthcare program early on in their enrollment process. Identifying these groups of students will help to focus resources to help support them in their educational endeavors. This study revealed that students who plan to or have participated in a clinical healthcare internship are more engaged. Therefore, policies and practices that help move students from having no

plans, to planning and participating in a clinical healthcare internship should lead to increased engagement and greater academic success.

Greater engagement can be accomplished by identifying students who have no plans to participate in a clinical healthcare internship and reach out to them through intrusive advising (Habley, 2000). Helping each student identify a specific pathway toward a particular career is the first step. This practice can help create excitement that leads to greater student motivation. After this is accomplished, it is important to help the student understand the time commitments required in a specific program, while explaining that clinical healthcare internships are time consuming and helping them plan to meet those time commitments. The institution can help support its students through the services and resources it offers. Specifically, for institutions like Confluence College, the institution may offer childcare or family activities, since students who have no plans to participate in a clinical internship are more likely to be older, have children, and have spouses. These types of resources can help these students juggle an abundance of commitments. The policies and practices of the College will help students navigate toward a plan wherein they plan to or will participate in a clinical healthcare internship that results in greater engagement as well as greater academic success.

### **Recommendations for Future Research**

This research study has been a mere snowflake in a blizzard of what we still do not know about clinical healthcare internships and their impact on student learning engagement. This study adds to our knowledge of student learning engagement for students in healthcare

education programs, but it also generates additional questions. It could also serve as a springboard to investigating the following future research projects.

The research study did not uncover why students responded as having no plans to participate in a clinical healthcare internship. In the future, focus groups with this population could add to our understanding of the underlying intentions of these students. Adding this knowledge would provide focus to intrusive advising efforts, and may increase the success of advising these students toward a plan to participate in a clinical healthcare internship.

The selection of Confluence College for this study was quite unique. Future study would benefit from conducting similar research on healthcare education students within a comprehensive community college. This research would help discern whether the results of this study are unique to Confluence College or if similar results and patterns are present in a very different environment. A comparison of those environments could enable each institution develop policies and practices to enhance student learning engagement in areas that need improvement.

Finally, Confluence College is a non-residential campus. The literature has revealed that off-campus students who participate in a clinical healthcare internship feel detached and less engaged during this portion of their healthcare education (Price et al., 2011). The results of this study did not demonstrate that phenomenon. This may be due to the non-residential characteristic of the institution researched. Future research may look at a residential campus, and conduct a longitudinal study to determine if student learning engagement decreases in specific benchmarks when students are in their clinical healthcare internship.

The previously mentioned suggestions for future research are examples of a multitude of research possibilities that may be informed by this research study. The literature has little

to offer on the topic of student learning engagement for students in clinical healthcare internships, and any added knowledge to the topic will be welcomed and beneficial.

### **Conclusion**

The purpose of this study was to determine if student learning engagement differs for students who have done, plan to do, or have not done, nor plan to participate in a clinical healthcare internship. The study demonstrated that students who have not done, nor plan to participate in a clinical healthcare internship struggle to engage in their learning when compared to students who plan to or have participated in a clinical healthcare internship. The implications of this study are that students who have no plans to participate in a clinical healthcare internship would benefit from being identified early and advised through an intrusive advising program. In addition, the institution would benefit through retention and persistence by identifying the demographic and academic characteristics of these students and create resources and policies that help support them. Academic success is driven by student learning engagement. The more we understand how students engage in their learning, the better prepared we will be to meet their needs and help them be successful.

## APPENDIX. CCSSE 2008 CODEBOOK

Please note the following for the *CCSSE* dataset:

- Invalid responses are coded as missing “.”

Item #	Variable Name	Item Description/Variable Label	Response Value
	SURVEYNO	Survey Number	
1	ENTER	Did you begin college at this college or elsewhere?	1=Started here 2=Started elsewhere
2	ENRLMENT	Thinking about this current academic term, how would you characterize your enrollment <u>at this college</u> ?	1= Less than full-time 2=Full-time
3	SRVAGAIN	Have you taken this survey in another class this term?	1=Yes s

4) In your experiences at this college during the current school year, about how often have you done each of the following?

**NOTE:** All items below have the following response values:

- 1=Never**  
**2=Sometimes**  
**3=Often**  
**4=Very often**

Item #	Variable Name	Item Description/Variable Label
4a	CLQUEST	Asked questions in class or contributed to class discussions
4b	CLPRESEN	Made a class presentation
4c	REWROPAP	Prepared two or more drafts of a paper or assignment before turning it in
4d	INTEGRAT	Worked on a paper or project that required integrating ideas or information from various sources
4e	CLUNPREP	Come to class without completing readings or assignments
4f	CLASSGRP	Worked with other students on projects during class
4g	OCCGRP	Worked with classmates outside of class to prepare class assignments
4h	TUTOR	Tutored or taught other students (paid or voluntary)
4i	COMMPROJ	Participated in a community-based project as a part of a regular course
4j	INTERNET	Used the Internet or instant messaging to work on an assignment
4k	EMAIL	Used email to communicate with an instructor
4l	FACGRADE	Discussed grades or assignments with an instructor
4m	FACPLANS	Talked about career plans with an instructor or advisor
4n	FACIDEAS	Discussed ideas from your readings or classes with instructors outside of class
4o	FACFEED	Received prompt feedback (written or oral) from instructors on your performance

Item #	Variable Name	Item Description/Variable Label
4p	WORKHARD	Worked harder than you thought you could to meet an instructor's standards or expectations
4q	FACOTH	Worked with instructors on activities other than coursework
4r	OOCIDEAS	Discussed ideas from your readings or classes with others outside of class (students, family members, co-workers, etc.)
4s	DIVRSTUD	Had serious conversations with students of a different race or ethnicity other than your own
4t	DIFFSTUD	Had serious conversations with students who differ from you in terms of their religious beliefs, political opinions, or personal values
4u	SKIPCLAS	Skipped class

5) During the current school year, how much has your coursework at this college emphasized the following mental activities?

**NOTE:** All items below have the following response values:

- 1=Very little**  
**2=Some**  
**3=Quite a bit**  
**4=Very much**

Item #	Variable Name	Item Description/Variable Label
5a	MEMORIZE	Memorizing facts, ideas, or methods from your courses and readings so you can repeat them in pretty much the same form
5b	ANALYZE	Analyzing the basic elements of an idea, experience, or theory
5c	SYNTHESZ	Synthesizing and organizing ideas, information, or experiences in new ways
5d	EVALUATE	Making judgments about the value or soundness of information, arguments, or methods
5e	APPLYING	Applying theories or concepts to practical problems or in new situations
5f	PERFORM	Using information you have read or heard to perform a new skill.

6) During the current school year, about how much reading and writing have you done at this college?

**NOTE:** All items below have the following response values:

**1=None 2=Between 1 and 4**

**3=Between 5 and 10**

**4=Between 11 and 20**

**5=More than 20**

Item #	Variable Name	Item Description/Variable Label
6a	READASGN	Number of assigned textbooks, manuals, books, or book-length packs of course readings
6b	READOWN	Number of books read on your own (not assigned) for personal enjoyment or academic enrichment
6c	WRITEANY	Number of written papers or reports of any length

Item #	Variable Name	Item Description/Variable Label	Response Value
7	EXAMS	Mark the box that best represents the extent to which your examinations during the current school year have challenged you to do your best work <u>at this college</u>	Responses range from 1 to 7, with scale anchors described: (1) Extremely easy (7) Extremely

8) Which of the following have you done, are you doing, or do you plan to do while attending this college?

**NOTE:** All items below have the following response values:

**1=I Have Not Done, Nor Plan To Do**

**2=I Plan To Do**

**3=I Have Done**

Item #	Variable Name	Item Description/Variable Label
8a	INTERN	Internship, field experience, co-op experience, or clinical assignment
8b	ESL	English as a second language course
8c	DEVREAD	Developmental/remedial reading course
8d	DEVWRITE	Developmental/remedial writing course
8e	DEVMATH	Developmental/remedial math course
8f	STUDSKIL	Study skills course
8g	HONORS	Honors course
8h	ORIEN	College orientation program or course
8i	LRNCOMM	Organized learning communities (linked courses/study groups led by faculty or counselors)



9) How much does this college emphasize each of the following?

**NOTE:** All items below have the following response values:

**1=Very little 2=Some 3=Quite a bit 4=Very much**

Item #	Variable Name	Item Description/Variable Label
9a	ENVSCHOL	Encouraging you to spend significant amounts of time studying
9b	ENVSUPRT	Providing the support you need to help you succeed at this college
9c	ENVDIVRS	Encouraging contact among students from different economic, social, and racial or ethnic backgrounds
9d	ENVNACAD	Helping you cope with your non-academic responsibilities (work, family, etc.)
9e	ENVSOCAL	Providing the support you need to thrive socially
9f	FINSUPP	Providing the financial support you need to afford your education
9g	ENVCOMP	Using computers in academic work

10) About how many hours do you spend in a typical 7-day week doing each of the following?

**NOTE:** All items below have the following response values:

**0=None**

**1=1-5 hours**

**2=6-10 hours**

**3=11-20 hours**

**4=21-30 hours 5=More than 30 hours**

Item #	Variable Name	Item Description/Variable Label
10a	ACADPR01	Preparing for class (studying, reading, writing, rehearsing, doing homework, or other activities related to your program)
10b	PAYWORK	Working for pay
10c	COCURR01	Participating in college-sponsored activities (organizations, campus publications, student government, intercollegiate or intramural sports, etc.)
10d	CAREDE01	Providing care for dependents living with you (parents, children, spouse, etc.)
10e	COMMUTE	Commuting to and from classes

11) Mark the box that best represents the quality of your relationships with people at this college.  
Your relationship with:

Item #	Variable Name	Item Description/Variable Label	Response Value
11a	ENVSTU	Other students	Responses range from 1 to 7, with scale anchors described as: (1) Unfriendly, unsupportive, sense of alienation (7) Friendly, supportive, sense of
11b	ENVFAC	Instructors	Responses range from 1 to 7, with scale anchors described as: (1) Unavailable, unhelpful, unsympathetic
11c	ENVADM	Administrative personnel and offices	Responses range from 1 to 7, with scale anchors described as: (1) Unhelpful, inconsiderate, rigid

12) How much has YOUR EXPERIENCE AT THIS COLLEGE contributed to your knowledge, skills, and personal development in the following areas?

**NOTE:** All items below have the following response values:

**1=Very little 2=Some 3=Quite a bit 4=Very much**

Item #	Variable Name	Item Description/Variable Label
12a	NGENLED	Acquiring a broad general education
12b	GNWORK	Acquiring job or work-related knowledge and skills
12c	GNWRITE	Writing clearly and effectively
12d	GNSPEAK	Speaking clearly and effectively
12e	GNANALY	Thinking critically and analytically
12f	GNSOLVE	Solving numerical problems
12g	GNCMPTS	Using computing and information technology
12h	GNOTHERS	Working effectively with others
12i	GNINQ	Learning effectively on your own
12j	GNSSELF	Understanding yourself
12k	GNDIVERS	Understanding people of other racial and ethnic backgrounds
12l	GNETHICS	Developing a personal code of values and ethics
12m	GNCOMMUN	Contributing to the welfare of your community
12n	CARGOAL	Developing clearer career goals
12o	GAINCAR	Gaining information about career opportunities

13a) Indicate how often you use the following services.

**NOTE:** All items below have the following response values:

**0=Don't Know/N.A**

**1=Rarely/never**

**2=Sometimes**

**3=Often**

Item #	Variable Name	Item Description/Variable Label
13a1	USEACAD	Frequency: Academic advising/planning
13b1	USECACOU	Frequency: Career counseling
13c1	USEJOBPL	Frequency: Job placement assistance
13d1	USETUTOR	Frequency: Peer or other tutoring
13e1	USELAB	Frequency: Skill labs (writing, math, etc.)
13f1	USECHLD	Frequency: Child care
13g1	USEFAADV	Frequency: Financial aid advising
13h1	USECOMLB	Frequency: Computer lab
13i1	USESTORG	Frequency: Student organizations
13j1	USETRCRD	Frequency: Transfer credit assistance
13k1	USEDISAB	Frequency: Services to students with disabilities

13b) Indicate how satisfied you are with the services at this college.

**NOTE:** All items below have the following response values:

**0=N.A.**

**1=Not at all**

**2=Somewhat**

**3=Very**

Item #	Variable Name	Item Description/Variable Label
13a2	SATACAD	Satisfaction: Academic advising/planning
13b2	SATCACOU	Satisfaction: Career Counseling
13c2	SATJOBPL	Satisfaction: Job placement assistance
13d2	SATTUTOR	Satisfaction: Peer or other tutoring
13e2	SATLAB	Satisfaction: Skill labs (writing, math, etc.)
13f2	SATCHLD	Satisfaction: Child care
13g2	SATFAADV	Satisfaction: Financial aid advising
13h2	SATCOMLB	Satisfaction: Computer lab
13i2	SATSTORG	Satisfaction: Student organizations
13j2	SATTRCRD	Satisfaction: Transfer credit assistance
13k2	SATDISAB	Satisfaction: Services to students with disabilities

13c) Indicate how important the services are to you.

**NOTE:** All items below have the following response values:

**1=Not at all 2=Somewhat 3=Very**

Item #	Variable Name	Item Description/Variable Label
13a3	IMPACAD	Importance: Academic advising/planning
13b3	IMPCACOU	Importance: Career counseling
13c3	IMPJOBPL	Importance: Job placement assistance
13d3	IMPTUTOR	Importance: Peer or other tutoring
13e3	IMPLAB	Importance: Skill labs (writing, math, etc.)
13f3	IMPCHLD	Importance: Child care
13g3	IMPFAADV	Importance: Financial aid advising
13h3	IMPCOMLB	Importance: Computer lab
13i3	IMPSTORG	Importance: Student organizations
13j3	IMPTRCRD	Importance: Transfer credit assistance
13k3	IMPDISAB	Importance: Services to students with disabilities

14) How likely is it that the following issues would cause you to withdraw from class or from this college?

**NOTE:** All items below have the following response values:

**1=Not Likely  
2=Somewhat Likely  
3=Likely  
4=Very Likely**

Item #	Variable Name	Item Description/Variable Label
14a	WRKFULL	Working full-time
14b	CAREDEP	Caring for dependents
14c	ACADUNP	Academically unprepared
14d	LACKFIN	Lack of finances
14e	TRANSFER	Transfer to a 4-year college or university

Item #	Variable Name	Item Description/Variable Label	Response Value
15	FRNDSUPP	How supportive are your friends of your attending <u>this college</u> ?	1=Not very 2=Somewhat 3=Quite a bit 4=Extremely
16	FAMSUPP	How supportive is your immediate family of your attending <u>this college</u> ?	1=Not very 2=Somewhat 3=Quite a bit 4=Extremely

17) Indicate which of the following are your reasons/goals for attending this college.

**NOTE:** All items below have the following response values:

**1=Not a goal**  
**2=Secondary goal**  
**3=Primary goal**

Item #	Variable Name	Item Description/Variable Label
17a	CERTPRGM	Complete a certificate program
17b	ASSOCDEG	Obtain an associate degree
17c	TR4YR	Transfer to a 4-year college or university
17d	OBUPSKIL	Obtain or update job-related skills
17e	SLFIMP	Self-improvement/personal enjoyment
17f	CARCHNG	Change careers

18) Indicate which of the following are sources you use to pay your tuition at this college. (Please respond to each item)

**NOTE:** All items below have the following response values:

**1=Not a source 2=Minor source 3=Major source**

Item #	Variable Name	Item Description/Variable Label
18a	OWNINC	My own income/savings
18b	PARSPINC	Parent or spouse/significant other's income/savings
18c	EMPLOYER	Employer contributions
18d	GRANTS	Grants and scholarships
18e	STULOANS	Student loans (bank, etc.)
18f	PUBASSIT	Public assistance

19) Since high school, which of the following types of schools have you attended other than the one you are now attending?

This question asks students to select all options that apply. To permit multiple responses, the question is represented in the codebook by five separate items the student either checks or does not check.

**NOTE:** All items below have the following response values:

**0=No response**  
**1=Response**

Item #	Variable Name	Item Description/Variable Label
19a	PROPSCH	Proprietary (private) school or training program
19b	VOCTECH	Public vocational-technical school
19c	COMMCOLL	Another community or technical college
19d	FOURYEAR	4-year college or university
19e	NONESC	None

Item #	Variable Name	Item Description/Variable Label	Response Value
20	TAKAGAIN	When do you plan to take classes <u>at this college</u> again?	1=I will accomplish my goal(s) this term and will not be returning 2=I have no current plans to return 3=Within the next 12 months
21	GPA	<u>At this college</u> , in what range is your overall college grade average?	1=Pass/fail classes only 2=Do not have a GPA at this school 3=C- or lower 4=C 5=B- to C+ 6=B 7=A- to B+ 8=A
22	TIMCLASS	When do you most frequently take classes <u>at this college</u> ?	1=Day classes (morning or afternoon) 2=Evening classes 3=Weekend classes
23	TOTCHRS	How many TOTAL credit hours have you earned <u>at this college</u> , not counting the courses you are currently taking this term?	0=None 1=1 – 14 credits 2=15 – 29 credits 3=30 – 44 credits 4=45 – 60 credits 5= over 60 credits

24) At what other types of institutions are you taking classes this term?

This question asks students to select all options that apply. To permit multiple responses, the question is represented in the codebook by six separate items the student either checks or does not check.

**NOTE:** All items below have the following response values:

**0=No response**

**1=Response**

Item #	Variable Name	Item Description/Variable Label
24a	OTCLSNON	None
24b	OTCLSHS	High school
24c	OTCLSVT	Vocational/technical school
24d	OTCLSCC	Another community or technical college
24e	OTCLS4Y	4-year college/ university
24f	OTCLASS	Other

Item #	Variable Name	Item Description/Variable Label	Response Value
25	OTHINST	How many classes are you <i>presently</i> taking at OTHER institutions?	1 = N on e 2
26	RECOMMEN	Would you recommend this college to a friend or family member?	1=Y es
27	ENTIREXP	How would you evaluate your entire educational experience <u>at this college</u> ?	1=P oor 2=F air
28	HAVKID	Do you have children who live with you?	1=Y es
29	AGENEW	Mark your age group	1=Under 18 2=18 to 19 3=20 to 21 4=22 to 24 5=25 to 29 6=30 to 39 7=40 to 49 8=50 to 64 9=65+
30	SEX	Your sex	1= M
31	MARRY	Are you married?	1 =
32	ENGFIRST	Is English your native (first) language?	1=Y es
33	INTERNAT	Are you an international student or foreign national?	1=Y es
34	RERACE	What is your racial identification? (Mark <b>only one</b> )	1=American Indian or other Native American 2=Asian, Asian American or Pacific Islander 3=Native Hawaiian 4=Black or African American, Non- Hispanic 5=White, Non-Hispanic 6=Hispanic, Latino, Spanish
35	HIACCRED	What is the highest academic credential you have earned?	1=None 2=High school diploma or GED 3=Vocational/technical certificate 4= Associate degree 5= Bachelor's degree

Item #	Variable Name	Item Description/Variable Label	Response Value
36m	MOTHEd	Highest level of education: mother	1=Not a high school graduate 2=High school diploma or GED 3=Some college, did not complete degree 4=Associate degree 5=Bachelor's degree 6=Master's/1 <sup>st</sup> professional degree 7=Doctorate degree 8=Unknown
36f	FATHED	Highest level of education: father	1=Not a high school graduate 2=High school diploma or GED 3=Some college, did not complete degree 4=Associate degree 5=Bachelor's degree 6=Master's/1 <sup>st</sup> professional degree 7=Doctorate degree 8=Unknown
37	MAJOR	Using the list provided (see <i>CCSSE</i> Program Code Sheet p.15), please write the code indicating your major	
38	STID	*Student Identification Number	

\* Please see cover letter

The items below contain course level data from the Course Master Data File:

Variable Name	Item Description/Variable Label	Response Value
psample	Record in primary sample	0 =
in	Survey number in range for packet	0=False 1=True
sdate	Course start date	
edate	Course end date	
timegrp	Administration Time Group	1=Morning (Before Noon) 2=Afternoon (Noon to 4:59)
camploc	Campus location	
secno	Section number	
courseno	Course number	
courname	Course full name	
bldg	Building	
room	Room	
meetdays	Class meeting days	
instrnam	Instructor name	
depart	Department	
actenrol	Actual enrollment	
stime	Class start time	
etime	Class end time	



The items below refer to derived *CCSSE* variables:

Variable Name	Item Description/Variable Label	Response Value
credit	Credit hours completed	1=Students with 0-29 Credits 2=Students with 30 or More
stud_age_class	Traditional/Nontraditional age students	1=Traditional Age Student (24 and younger) 2=Nontraditional Age Student (25 and older)
developmental	Developmental/Nondevelopmental coursework	1=Nondevelopmental 2=Developmental
generation	First-Generation/Not First-Generation Students	1=First-Generation (neither parent attended college) 2=Not First-Generation (at least one parent attended college)
credential	Credential/Noncredential seeking	1=Noncredential Seeking

The items below contain course level data from the class information sheet:

Variable Name	Item Description/Variable Label	Response Value
SRVADMN	Survey administered by	1=Faculty 2=Survey
FACFTPT	Faculty member's status	1=Full-time 2=Part-time
NUMSTU	Number of students in attendance	
ADMNTIME	Total administration time: <i>in minutes</i>	
ADMNDATE	Administration date	
SPNEEDS	How many students in this class have special needs?	
SEMHR	Number of credit hours taught this semester by faculty member teaching this class: Semester system hours	
QRTHRS	Number of credit hours taught this semester by faculty member teaching this class: Quarter system hours	

The items below are calculated weights and benchmarks:

Variable Name	Item Description/Variable Label
iweight	Institutional weight based on part-time/full-time enrollment
actcoll	Active and collaborative learning benchmark score (rescaled from 0 to 1)
stueff	Student effort benchmark score (rescaled from 0 to 1)
acchall	Academic challenge benchmark score (rescaled from 0 to 1)
stufac	Student-faculty interaction benchmark score (rescaled from 0 to 1)
support	Support for learners benchmark score (rescaled from 0 to 1)

The items below are standardized benchmarks:

Variable Name	Item Description/Variable Label
actcoll_std	Standardized active and collaborative learning benchmark score (mean of 50)
stueff_std	Standardized student effort benchmark score (mean of 50)
acchall_std	Standardized academic challenge benchmark score (mean of 50)
stufac_std	Standardized student-faculty interaction benchmark score (mean of 50)
support_std	Standardized support for learners benchmark score (mean of 50)

The items below refer to the *CCSSE* Supplemental Questions:

Item #	Variable Name	Item Description/Variable Label	Response Value
1	COLLQ385	Have you submitted the form for financial aid known as the FAFSA (Free Application for Federal Student Aid) to pay for your expenses <u>at this college</u> ?	A = Y es B

**If you answered “B” (No) to question #1, please continue to question #2; otherwise, please skip to question #4.**

2	COLLQ386	If you did <u>not</u> fill out the form for financial aid (FAFSA), what was the <u>main reason</u> you did not? Mark only one response.	A= Did not want to provide sensitive, personal information (such as tax or immigration information) B= The form was too complex/complicated to fill out C= Did not think I would qualify for financial aid
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**If you answered “C” (Did not think I would qualify for financial aid) to question #2, please continue to question #3; otherwise, please skip to question #4.**

3	COLLQ387	If you did <u>not</u> fill out the form for financial aid (FAFSA) because you thought that you would not qualify for financial aid, what was the <u>main reason</u> you thought you would not receive any financial aid? Mark only one response.	A= My income and/or family's income or savings are too much for me to qualify for financial aid B= I would not qualify for financial aid due to the number of credit hours I am taking C= I would not qualify for financial aid due to poor grades D= Someone told me I would not be eligible
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Item #	Variable Name	Item Description/Variable Label	Response Value
4	COLLQ388	Did you receive (or have you been <i>notified</i> that you will receive) ANY TYPE of financial aid (scholarships, grants, loans) to help pay for college? Mark only one response.	A= Did not receive any type of financial aid B= Received or will receive scholarship(s) and/or grant(s) (money that DOES NOT have to be paid back) C= Received or will receive loan(s) (money that DOES have to be paid back) D= Received or will receive both scholarship(s)/grant(s) and loans E= Don't know yet whether I will receive any financial aid
5	COLLQ389	Which ONE of the following BEST describes the source from which you originally learned about the process for applying for financial aid to help pay for college? Mark only one response.	A= Parents or other family members B= High school counselor or teacher C= College employee/staff member D= Friend or other student

**CCSSE Program Code Sheet**

01 = Agriculture

02 = Allied Health Professions & Related Sciences (nursing, physical therapy, dental, EMT, veterinary, etc.) 03 = Architecture & Related Programs (city/urban, community/regional planning, etc.)

04 = Biological Sciences/Life Sciences (biology, biochemistry, botany, zoology, etc.)

05 = Business Management & Administrative Services (accounting, business admin., marketing, management, real estate, etc.)

06 = Communications (advertising, journalism, television/radio, etc.)

07 = Computer & Information Sciences

08 = Conservation & Renewable Natural Resources (fishing, forestry, wildlife, etc.)

09 = Construction Trades (masonry, carpentry, plumbing & pipe fitters, etc.)

10 = Education

11 = Engineering Technologies/Technicians

12 = English Language & Literature/Letters (composition, creative writing, etc.) 13 = Foreign Languages & Literatures (French, Spanish, etc.)

14 = History

15 = Law & Legal Studies

16 = Liberal Arts & Sciences, General Studies & Humanities 17 = Mathematics

18 = Technicians & Repairers (A/C, heating & refrigeration, auto body, electrical/electronic equipment, etc.) 19 = Multi/Interdisciplinary Studies (international relations, ecology, environmental studies, etc.)

20 = Parks, Recreation, Leisure & Fitness Studies

21 = Personal & Miscellaneous Services (gaming & sports, cosmetic, culinary, etc.) 22 = Physical Sciences (astronomy, chemistry, geology, physics, etc.)

23 = Precision Production Trades (drafting, graphic, precious metal worker, etc.) 24 = Protective Services (criminal justice & corrections, fire protection, etc.)

25 = Psychology

26 = Public Administration & Services (public policy, social work, etc.)

27 = Science Technologies (biological technology, nuclear & industrial radiological technology, etc.)

28 = Social Sciences & History (anthropology, archeology, economics, geography, history, political science, sociology, etc.)

29 = Transportation & Materials Moving Workers (air, vehicle, & water workers, etc.)

30 = Visual & Performing Arts (art, music, theater, dance, etc.)

31 = Vocational Home Economics (child care/guidance worker & manager, clothing, apparel, & textile worker, housekeeping, etc.)

32 = University transfer 33 = Undecided

34 = Other

35 = Not applicable

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