How do academic advisers use MAP-Works when advising first-year direct from high school freshmen

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How do academic advisers use MAP-Works when advising their first-year direct from high school freshmen

by

Kristin Marie Mauro

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

DOCTOR OF PHILISOPHY

Major: Education (Educational Leadership)

Program of Study Committee:
Linda Serra Hagedorn, Major Professor
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Iowa State University
Ames, Iowa
2013

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DEDICATION

To my parents and paternal grandmother,

Bob, Kathy and Dorothy Platts,

who encouraged and supported me unconditionally throughout this process.

In memory of my maternal grandparents and paternal grandfather,

Fran Kozak, John Kozak, and Silas Platts,

Your spirits gave me the strength I needed to persist.
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ABSTRACT

The purpose of this research was to examine the efficacy of the MAP-Works retention tool. MAP-Works is an online survey given to all first-year direct from high school freshmen that predicts individual student’s risk for experiencing academic difficulty within their first year of college.

This dissertation identifies the extent to which academic advisers at a large Midwestern Research institution utilize the MAP-Works survey results when advising first-year direct from high school freshmen as well as how they use MAP-Works survey data during their advising appointments. Academic advisers’ opinions on the efficacy and usefulness of the MAP-Works tool were examined. The MAP-Works transition survey has been distributed to all incoming freshmen at this aforementioned institution since the fall of 2008; however, to date, there has not been any research conducted relative to the way in which academic advisers use the information provided from MAP-Works when advising first-year direct from high school freshmen.

Data for this project were collected using an online survey which was provided to all academic advisers (both professional staff and faculty). In an effort to gain more information on how and the extent to which academic advisers use the MAP-Works survey results, follow-up interviews were conducted with those who volunteered to participate in the follow up interview. This study represents a first-of-its-kind research effort at the site institution.

Descriptive statistics were combined with the follow-up interviews in order to enhance the results of this study. The results of this study indicated that none of the academic advisers at the site institution use MAP-Works as their only tool. Further,
through the use of the mixed methods analysis it became apparent that the academic 
advisers use MAP-Works in conjunction with other tools and techniques available to 
them at the site institution.
CHAPTER 1. INTRODUCTION

Measuring college student retention is complicated, confusing, and context specific. Higher education researchers will likely never reach consensus on the “correct” or “best” ways to measure this important outcome (Hagedorn, 2012). Despite this, retention remains an important issue because roughly 35 percent of undergraduates at four-year institutions attain a bachelor’s degree within four years and only 56 percent graduate within six years (Knapp, Kelly-Reid & Whitmore, 2006). Thus student retention is a high priority for institutions as a whole. The reason for this is because a significant relationship exists between student retention and finance. Financing higher education has become a complex, high-stakes activity for students and their institutions. “Many students, in effect, are betting their economic future on their college experience. In turn, colleges, their benefactors, and various governmental authorities, especially the federal government, have made and are likely to continue to make significant commitments to students so that they can attend college” (Schuh & Gansemer-Topf, 2012, p. 101).

Contemporary financing of higher education has involved an increasing reliance on students and their families to provide revenues for colleges and universities. Students, in turn, increasingly are relying on financial aid to finance their educations (Schuh & Gansemer-Topf, 2012, p. 101). Given that the cost of higher education continues to increase, loans have become a central element in financial aid for many students. This, however, does not come without consequences for those who do not persist and complete their degrees. For example, those who choose to “drop-out” are still required to pay their loans back but now face the consequence of less earning power because they do not have
a college degree. Students who do not persist are not the only ones who face consequences; institutions also face consequences, which will be discussed in greater detail below.

Before diving into the consequences of not retaining students, the distinction between “persistence” and “retention” needs to be defined and clarified. First, the words “persistence” and “retention” are often used interchangeably (Hagedorn, 2012). However, they should not be because they represent two separate and distinct concepts. As such, The National Center for Education Statistics differentiates the terms by using “retention” as an institutional measure and “persistence” as a student measure. “In other words, institutions retain and students persist” (Hagedorn, 2012, p. 85). For the purposes of this dissertation, it is important to understand the difference in terms and to not use them interchangeably.

As was mentioned above, retention is an important issue because there are not only implications for the students themselves, but also for postsecondary institutions, the workforce, and the economy as a whole (Hagedorn, 2012). The largest impact to students who do not attain their college degree is their earning potential over their lifetime. Specifically, according to U.S. College Search (2008), “the difference in earnings between a college graduate and a high school graduate is at least $1 million over the lifetime”. Another example is that college graduates are more likely to be employed compared to those who have not earned a bachelor’s degree (Schuh & Gansemer-Topf, 2012). Unemployment and lower incomes lead to a lower standard of living and correlate with many of our current social problems according to McMahon (2000). Whereas Sallis, Saelens, Frank, Conway, Slymen, Cain, Chapman & Kerr, 2009) contend
that physical quality of life, which includes, weight (obesity rates), level of physical activity and lower body mass index was highly correlated with high levels of income. “Retention not only has an impact on the individual and her or his family but also produces a ripple effect on the postsecondary institution, the work force and the economy” (Hagedorn, 2012, p. 95).

Institutions encounter number of direct costs when students enroll but fail to graduate. The first is that “institutions spend substantial resources to recruit students, whether they are highly selective or have an open admissions policy” (Schuh & Gansemer-Topf, 2012, p. 112). Therefore “when a student withdraws from college the invested institutional resources were not spent wisely, forcing the college to invest additional resources to recruit new students” (Hagedorn, 2012, p. 96).

The second is the direct impact is that to their financial aid program. Institutions invest money into financial aid programs to assist in recruiting and retaining students. Whether this is a discount on the amount of tuition students pay or dollars given to students to help them defray their costs, this money is given to students and does not need to be repaid (Schuh & Gansemer-Topf, 2012). While “financial aid increases the likelihood that a student will persist, it does not provide a guarantee that the student will persist” (Schuh & Gansemer-Topf, 2012, p. 113). Therefore, this college-based aid could have been invested in other students who attended the college, offered to students who left because of financial difficulty, or used to provide an incentive to other students recruited by the college but who did not attend because financial aid was not available to them (because it was awarded to students who did not persist). The point is that
institutionally based aid that is invested in students who do not persist is an investment lost (Schuh & Gansemer-Topf, 2012).

The third direct impact to the institution is the loss of income, both in tuition dollars as well as other lost income. Obviously, students who do not enroll; do not pay tuition however there are other areas in which the institution also loses money. “In addition to tuition, housing, dining, students pay for a variety of other services, such as bookstore purchases, entertainment, special services such as tutoring and/or money spent by family and friends who come to campus” (Schuh & Gansemer-Topf, 2012, p.114).

In addition to the direct costs to the institutions of students not persisting, there are also indirect costs. The first is that of faculty and staff salaries. One of the largest outlays of expenditures in higher education is personnel. Institutions hire faculty and staff based upon the anticipated needs of the institution. Individuals are given a salary based upon their qualifications and experience therefore their salary does not fluctuate based on the number of individuals served (Schuh & Gansemer-Topf, 2012).

Another indirect cost is that regarding the institutions facilities. The maintenance and upkeep of campus facilities is costly. Expenditures, such as water and trash, may decrease slightly if fewer students enroll, the majority do not change. For example, the library, health center, and recreation facilities will remain open roughly the same hours even if retention drops 20 percent. Another example is that heating and cooling costs remain the same regardless of the size of the class taught in the room (Schuh & Gansemer-Topf, 2012).

Finally, there are a few long-term costs to the institution that warrant being mentioned here. The first is that those who do not persist to graduation are less likely to
donate time or money to the institution. Along this line, those who do not persist are also less likely to recommend the institution to others, such as their siblings, children, friends and family because they are less likely to be “friends” of the institution (Schuh & Gansemer-Topf, 2012).

Having discussed the impact non-persisting students have on institutions, we now turn to the impact they have on the workforce. Non-persisting students lack the college training and credentials to enter the professional workforce. Industries not finding sufficiently trained workers either must invest in their own training programs or relocate to areas where sufficiently trained workers are more available, sometimes even going overseas (Hagedorn, 2012). Finally, from an economic perspective, a more educated citizenry leads to advantages on many levels (Hagedorn, 2012). Thus student retention is not just the job of the faculty or administrators; it is also an area where student affairs practitioners can be proactive and develop interventions that increase retention rates when used properly and implemented effectively. One of the proposed intervention tools that student affairs practitioners can use to improve retention results is MAP-Works.

MAP-Works®, Making Achievement Possible, is a comprehensive student retention and success program designed for both first and second year students. Developed in partnership with Ball State University, MAP-Works identifies at-risk students early in the term, allowing immediate support and intervention and then provides the infrastructure to manage those critical outreach efforts on campus (MAP-WORKS®: A Leading Student Retention Tool, 2011).

The MAP-Works retention platform is built on a core concept supported by research and experience: successful retention is driven by the early, systematic, and
comprehensive identification of student issues. MAP-Works positively impacts student success and retention by employing a sophisticated heuristic to identify at-risk students and by motivating, informing and coordinating timely and effective intervention by faculty and staff (MAP-WORKS®: A Leading Student Retention Tool, 2011).

**Background of the Problem**

Although the antecedents for student persistence through degree attainment are multifaceted and not easily attributed to a narrow set of explanatory factors (Braxton, Hirschy, & McClendon, 2004), those who are actively engaged in educationally purposeful activities, both inside and outside of the classroom, are more likely than their disengaged peers to persist through graduation (Harper & Quaye, 2009) thus retention is the role of the entire institution.

Vincent Tinto, the most frequently cited scholar on college student retention, contends that engagement (or “academic and social integration,” as he has called it) is positively related to persistence. In fact, his research shows that engagement is the single most significant predictor of persistence (Tinto, 2000). He notes that many students discontinue their undergraduate education because they feel disconnected from peers, professors, and administrators at their institution (Harper & Quaye, 2009).

Similarly, Bean (1990, 2005) proposes that students leave when they feel marginally committed to their institutions. Institutional commitment is strengthened when undergraduates are actively engaged in educationally purposeful endeavors that connect them to the campus and in which they feel some sense of enduring obligation and responsibility (Bean, 2005; Harper & Quaye, 2009; Swail, Redd, & Perna, 2003; Tinto, 1993).
MAP-Works is a tool that can assist in the retention process because it allows the opportunity for students to reflect on their current experiences as well as express their interests in what types of activities they want to become involved with during their college career.

MAP-Works is a web enabled student retention tool and success program created through a partnership between Education Benchmarking (EBI) and Ball State University that predicts student’s first-year transition from high school to college. MAP-Works capitalizes on Ball State’s 20 years of experience with the original Making Achievement Possible program and EBI’s 15 years of experience with national benchmarking assessments (Woosley & Jones, 2009).

MAP-Works was developed using Tinto’s theory of student retention coupled with the belief that the first year is pertinent to student’s success as they transition from high school to college. This period can set the tone for what students expect, how much they get involved, and what they experience (Pascarella & Terenzini, 1991). Colleges and Universities have developed various first-year experience programs and early start programs to ease the transition. The purpose of such programs is to set appropriate student expectations, get students integrated and involved, and to provide students with information and assistance when they need it (Woosley & Jones, 2011). Tinto (1993) notes “prompt feedback to students and to those who can assist students is an essential element in the effectiveness of these systems.” As institutions focus on student success (first-year students or students further along), it is critical to gather quality information, provide prompt feedback to students and staff, and create numerous opportunities for interventions and interactions that facilitate student learning (Woolsey & Jones, 2011).
MAP-Works is a tool that was created to address all of the transitional issues that first-year students typically experiences. MAP-Works is divided into 24 factors; each identifies the category or categories of risk that students fall within. Based upon the factors students are classified as “High,” “Moderate,” or “Low” risk and are given a warning indicator of “Red,” “Yellow,” or “Green.” The warning indicator represents the student’s risk of experiencing academic difficulty as well as their risk of not successfully transitioning to university life. The student is placed into a category based upon their patterns of response relative to each specific factor. The exact formula for classification into the color scheme is proprietary and not available. From this information, faculty and staff are able to intervene and offer the student available resources which not only help them achieve academically but will also help to ease the student’s transition from high school life to college life and beyond.

The concept of first-year transition is multifaceted and should be addressed using a holistic lens. Using this lens is how the site institution came to implement MAP-Works. In the spring of 2008, an administrator from the Department of Residence at the study site institution attended the College Housing Officers’ conference and saw a demo of MAP-Works. She then scheduled a meeting with the stakeholders and a MAP-Works demo was given. The meeting included a question and answer session in which all of their concerns were addressed. Within two months this campus adopted MAP-Works. At the time of this writing, the initiative is now in its fifth year. MAP-Works is funded by the Department of Residence and was brought to campus because of the institution’s focus on developing student success pathways and the role those pathways play in retention. Additionally, the institution wanted to know why students were leaving but
they also wanted to know why students chose to stay. This institution decided to invest in MAP-Works because it did not have a tool that provided the student’s voice, and the qualitative aspects, such as the affective issues new students face when they find themselves living away from home for the first time. Finally, MAP-Works was chosen as an “add on” to other retention initiatives because administrators realized that their current tools did not indicate the students who needed interventions the most. For example, administrators knew 800 students were facing academic difficulty, but they did not know in which area or areas students faced the most difficulty. Since instituting MAP-Works, administrators may know that 800 students are experiencing academic difficulty as well as the area or areas in which the student struggles most. For example, in addition to knowing 800 students are experiencing academic difficulty, they may now have evidence that 200 are homesick, 200 are worried about finances, 200 are struggling with classes, and 200 do not feel like they belong on campus. Knowing this information has helped transform the ways in which students are served.

To date the site institution has not assessed MAP-Works to determine its impact on their retention rate. This has not been done because the institution is not comfortable stating that MAP-Works itself is responsible for increasing retention rates (M. Gonzales, personal communication, September 11, 2012). The data analysis that has been done regarding MAP-Works indicates a high correlation with increased retention rates however correlation does not imply causation. Thus, what administrators are comfortable saying is that MAP-Works is a “campus culture change tool” and aids the institution in better understanding its students (M. Gonzales, personal communication, September 11, 2012). The institution now has more knowledge because of the MAP-Works data; it has
added a much needed element (that of the students voice) to the spider web of student success pathways. Therefore the information gained from MAP-Works effects how it is used on campus and also changes how student affairs practitioners serve their students (M. Gonzales, personal communication, September 11, 2012).

**Purpose of the Study**

The purpose of this study is to determine the extent and ways academic advisers at a large Midwestern Research institution use MAP-works when advising their first-year direct from high school freshmen as well as to analyze why they do or do not use this tool.

**Research Questions**

The following questions guided this study.

1. Which features of the MAP-Works software do academic advisers generally use?
2. Are there distinctive differences among the colleges at the site institution in what type of academic adviser uses MAP-Works and does not use MAP-Works?
3. Do academic advisers trust the predictive value of the MAP-Works data?
4. How extensively/often do academic advisers use MAP-Works?
5. When or at what point in the semester do academic advisers use MAP-Works?
6. How effective is MAP-Works in providing the appropriate information to academic advisers?
7. Do academic advisers find the MAP-Works reports useful in the advising process?

**Significance of the Problem**

This study is important for many reasons. The first is that a significant amount of time and resources have been dedicated to implementing and improving this initiative over the past five years. Second, this study is important to administrators because the MAP-Works data contribute to the retention of students by promoting interventions as soon as students begin experiencing academic difficulty. Third, this study is important because using the MAP-Works survey data promotes opportunities for advisers to know their advisees as well as offer them more focused advice relative any academic difficulties they may be experiencing. Additionally, the results show the academic advisers a more holistic picture of the different areas that students struggle with during their first year of college. Fourth, at this institution, the survey was targeted toward multi-cultural students and has assisted administrators in understanding the factors that enable as well as impede minorities and their success at a predominantly white institution. The purpose of this initiative is to identify the student success pathways of minority students. Specifically, administrators are interested in knowing where students are connecting with key personnel on campus, how minority students are successful and if they are not successful, what connections students report help them (S. Gaskin, personal communication, February 20, 2013). Knowing this information affects which programs are implemented as well as provides information on how to improve current programming. The fifth area of campus that could be impacted by the results of the study is the Department of Residence. Knowing how academic advisers use MAP-Works
allows for academic advisers and hall directors to collaborate with one another regarding current programming in the residence halls as well as provides insight when developing new programming. Finally, the results of this study may be important to the campus’s MAP-Works training committee because the results of this study could impact the way in which training sessions are advertised and conducted.

**Definition of Terms**

**Academic Advising Appointment:** A mutually agreed upon time between the academic adviser and the student in which the student is able to have questions relative to their academic career answered.

**Academic Adviser:** Employees with an employment status of “Faculty” or “Professional and Scientific”.

**Developmental Advising:** A systematic process based on a close student-adviser relationship intended to aid students in achieving educational, career and personal goals through the use of the full range of institutional and community resources.

**Direct connect:** A professional staff member (such as the academic adviser, residence hall director or multicultural liaison) who has a direct relationship with the student and has the ability to reach out to the student when necessary to offer academic guidance and resources.

**Direct from high school first-year student:** Students who were graduated spring 2012 from high school and are enrolled at the site institution.

**Green Warning Indicator:** Indicates that the student is at low risk for experiencing academic difficulty.
**Intrusive Advising:** A proactive approach that builds structures that incorporate intervention strategies mandating advising contacts for students who otherwise might not seek advising. Alternative to waiting for the student to contact their adviser. Rather it is a proactive approach to the adviser contacting the student when issues seem likely.

**MAP-Works:** An online survey given to all first-year direct from high school freshmen that predicts individual student’s risk for experiencing academic difficulty within their first year of college.

**Professional and Scientific Employee:** Any technical or administrative (not clerical) position that requires the employee to hold a minimum of a bachelor’s degree.

**Red Warning Indicator:** Indicates that the student is at high risk for experiencing academic difficulty.

**Successful transition:** Students retained to their sophomore year and who persist to graduation from the site institution.

**Yellow Warning Indicator:** Indicates that the student is at moderate risk for experiencing academic difficulty.

**Organization of the Study**

Chapter 1 of the study has presented the introduction, the statement of the problem, the purpose of the study, the questions to be answered, the research hypotheses, the significance of the study, and the definitions of terms.
Chapter 2 is a review of relevant literature. It addresses the following topics:

- Retention
- Developmental Advising
- Intrusive Advising
- Student Engagement

Chapter 3 presents the methods used in the study, including the research design, population and sampling procedure, and the instruments and their selection or development, together with information on validity and reliability. Each of these sections concludes with a rationale, including strengths and limitations of the design elements. The chapter goes on to describe the procedures for data collection and the plan for data analysis.

Chapter 4 presents the results of the study. Chapter 5 discusses and analyzes the results, culminating in conclusions and recommendations.
CHAPTER 2. REVIEW OF LITERATURE

Introduction

This chapter focuses on the review of literature pertaining to the history of retention, efforts and tools used with respect to retention, student engagement theory, developmental advising and intrusive advising. The first section reviews the history of retention and sets the stage for strategies that have been implemented to address retention issues as well as tools that can be used to assist in the retention of students. The second section focuses on student engagement theory as it pertains to persistence and retention. The third section discusses developmental and intrusive advising and the role they play in the persistence and retention of students.

History of Retention

American colleges have existed for over three hundred years and continue to be among the most respected postsecondary institutions across the world. Throughout the course of its life, American higher education has withstood changes in mission, curriculum, students and financing (Berger, Ramirez & Lyons, 2012). These changes have affected the nature of retention in terms of patterns of retention, institutional concern about retention, the ways in which retention has been conceptualized and studied, and the range and types of strategies that have been used in attempts to improve retention (Berger et al., 2012).

The retention literature has been broken down into 9 eras however for the purposes of this dissertation; the first four eras will be mentioned while the last five eras will be the focus of this discussion. The first four eras cover the precedents that led to
the emergence of retention as a distinct issue to be addressed, studied, and improved throughout higher education. Interestingly, the first four eras cover almost 330 years, most of which is covered by the era labeled “Retention Pre-History” as there was little concern with retention in any systematic way until the beginning of the twentieth century. The last five eras cover the last thirty years, the period of time in which retention became a universal concern across the spectrum of the higher education landscape and in which the practical, theoretical and knowledge bases became more fully developed (Berger et al., 2012).

**Preventing Dropouts (1960s)**

Summerskill (1962) use a psychological lens that focused on the personality attributes (maturity, motivation, disposition) of students as the main reasons for persistence or non-persistence. Spady (1971) notes that there are six major types of students: philosophical, census, autopsy, case, descriptive and predicted. He also noted an absence of what he called analytical-exploratory studies that synthesized existing knowledge in order to systematically develop a coherent body of empirically based knowledge that could better inform efforts to understand and improve undergraduate retention. Thus Spady’s (1971) model emphasized the interaction between individual student characteristics and key aspects of the campus environment. Spady’s work is important to note for three reasons. First, it was the first attempt to synthesize existing empirical work into a cohesive conceptual framework. Second, most of the previous studies had been grounded in psychology rather than sociology. Third, it served as a precursor to Tinto’s model (Berger et al., 2012).
Building Theory (1970s)

In many ways, this era began with the publication of Spady’s seminal article, “Dropouts from Higher Education: An Interdisciplinary Review and Synthesis (1971). His sociological model of student departure begins to explain the process as an interaction between the student and the college environment. Throughout this interaction a student’s attributes (values, interests, skills, attitudes, etc.) are exposed to the norms of an environment (faculty, peers, administrators). If the student and the environment are congruent in their norms, the student will assimilate both socially and academically, increasing the likelihood of persistence (Berger et al., 2012).

Tinto (1975) built upon and enhanced Spady’s model. In its basic form, it incorporates elements of both the psychological and organizational theoretical models. It purports that a student’s entry characteristics, coupled with his or her initial commitment to the institution and to graduation, influence student departure decisions. The theory also suggests that early and continued institutional commitment will impact academic and social integration within the university, both important factors in college student retention (Tinto, 1975, 1993).

Another early sociological perspective comes from the work of David Kamens (1971, 1974). Kamens (1971) uses multi-institutional data to demonstrate how institutions with greater size and complexity, along with a superior capacity to place graduates in prestigious social and occupational roles, have lower rates of attrition than do other types of postsecondary institutions. Meyer (1970) provides an open systems view of organizational behavior in higher education and emphasizes how colleges and universities with highly institutionalized social charters are able to use their elevated role
in higher education to enact a stronger influence on student persistence. In his later work, Kamens (1974) introduces elements of the symbolic dimension as he demonstrates how the use of legitimized myths in postsecondary institutional settings helps to reinforce the social charter of an institution, thereby strengthening the ability of an institution to retain students.

Astin (1977; 1985) suggested that the amount of physical and psychological energy a student invests in the collegiate experience (both social and academic) directly influenced departure decisions.

By the mid 1990s, the discussion moved from access to issues of choice, affordability and persistence. Although gaining entry to college is still a dramatic accomplishment for some, persisting to the degree is what really matters in the post college world (Swail, 2004).

**Current and Future Trends (Early Twenty-First Century)**

The issue of retention is a persistent problem within higher education. For the past 100 years, the institutional graduation rate has stubbornly held at the 50 percent mark: half of all students entering higher education fail to realize their dreams and aspirations based on earning a certificate or degree (Swail, 2004). “The consequences of this massive and continuing exodus from higher education are not trivial, either for individuals who leave or for their institutions” (Tinto, 1993, p.1).

“To be fair, retention and persistence are complex problems. Not all students are the same, nor are all institutions” (Swail, 2004, p. 6). Resources play a huge part in the ability of a campus to provide the support necessary to engage and save students (Swail, 2004). The elite institutions, with their large endowments, are able to provide more
services to their students, such as assigned tutors, rather than making students seek them out. Thus their students are provided with more “specialized” services and are more likely to persist to graduation.

Building on trends that emerged in the late twentieth century, college campuses in the United States continue to become more diversified, and retention of underrepresented student populations accordingly has gained attention during the first decade of the twentieth-century (Siedman, 2005). To address this, Rendon, Jamomo, & Nora (2000) have chosen to emphasize their research on the kind of theoretical foundation and methodological approaches needed to more fully understand and facilitate the retention process for minority students in an increasingly complex and multiracial institutional environment (p. 131).

Finally, it is also important to note that new issues will continue to emerge relative to retention in higher education in the coming years. Issues, such as distance learning and other new delivery options have and will continue to introduce new issues.

**Retention Strategies**

This section discusses various successful strategies that have been used by four-year institutions to improve retention. Some strategies focus on academic areas, such as providing tutorials; others on non-academic areas, such as developing social support groups to increase confidence and commitment. Finally, some are a combination of academic and non-academic and are designed to address student needs in an integrative manner, such as combining tutoring with faculty-mentors and peer support (Hurd, 2000; Ramirez, 1997; Tinto, 1997).
However, it is important to state that before any retention effort can begin, postsecondary institutions must devise ways to identify students who need help and assess the kinds of help they need (ACT Inc., 2004).

**Academic Factors**

Retention programs that focus on improving academic performance are based on models such as Tinto’s Theory of Student Departure (1975, 1993) and Bean’s Student Attrition Model (1980, 1985). Tinto and Bean link college retention to both past and present academic performance (Cabrera, Castaneda, Nora & Hengstler, 1992; Cabrera, Nora & Castaneda, 1993). Tinto, Bean and others (Cabrera et al., 1992; Cabrera et al., 1993) hypothesize that college performance influences a student’s decision to leave or stay in school (ACT Inc., 2004).

One widely applied, academically focused program is Supplemental Instruction (SI). SI is a unique form of academic assistance designed to help students with historically difficult college courses to master course content while they develop and integrate effective learning and study strategies applicable to that course (ACT Inc., 2004). SI targets first- and second-year high-risk courses, rather than high-risk students (Ramirez, 1997). Studies indicate that across institutional types, disciplines, precollege student preparation levels, and ethnic groups, SI participants consistently outperform their peers who attempt the same courses on their own (Congos & Schoeps, 2003; Hensen & Shelley, 2003; Ogden, Thompson, & Russell, 2003; Ramirez, 1997).

SI focuses on both process and content. SI sessions are structured to maximize active student involvement with the course material. Learning and study strategies, such as note-taking, graphic organization, questioning techniques, vocabulary acquisition, test
prediction and preparation are integrated into course content. Students learn to verbalize what they do understand and clarify what they do not understand. Additionally, the SI leader is a model student who provides an example of how successful students think about and process the content. The leader facilitates study sessions, but does not re-lecture or introduce new material (ACT Inc., 2004).

**Non-Academic Factors**

College retention and performance are also influenced by non-academic factors, such as academic self-confidence, achievement, motivation, institutional commitment, and social support. Contemporary motivational theories have emerged as strong explanatory models of academic achievement and other performance behavior (Robbins, Davenport, Anderson, Kliewer, Ingram, & Smith, 2003). To accurately identify students for retention programs, colleges and universities need information on the non-academic factors that relate to college retention and performance (ACT Inc., 2004).

Orientation programs can play a pivotal role in students’ transitions from high school to college or work into college (Braxton, Hirschy & McClendon, 2004; Colton, Connor, Shultz, & Easter, 1999; Fidler, 1991; Tinto, 1993). They address students’ preparedness, their identification, and their academic goals and aspirations (Fidler, 1991; Tinto, 1993). According to Holmes, Ebbers, Robinson, and Mugenda (2000), orientation programs can help reinforce to students that they matter to the institution and will be supported as they proceed toward completion of their degrees. This validation connects the student to the institution and helps build institutional and goal commitment as well as social support networks (ACT Inc., 2004).
As most student affairs practitioners know, students’ entering characteristics play an important role in persistence to graduation. However, it also important to realize that their potential success can be increased with additional support, such as a first-year seminar or a learning community that focuses on teaching the learning skills and techniques necessary for their academic success.

**Combining Academic and Non-Academic Factors**

The transition to university life is often looked upon as a positive event. However, the changes that result can at times be stressful for the student, as he or she leaves their existing sources of social support behind. Commonly, this stress creates feelings of homesickness and the intense desire to return home (Urani, Miller, Johnson, & Petzel, 2003). While feelings of homesickness are common for most, if not all, direct from high school freshmen persistent feelings of homesickness can be problematic in the long-term. Burt (1993) showed that persistent feelings of homesickness can lead to lack of concentration and ability to perform, along with absent mindedness and cognitive failures. Thus, homesickness in college students is an issue that must be taken seriously, for it can influence one’s level of success in adapting to their new lives as collegians (Urani et al., 2003). Fisher and Hood (1987) examined the relationship between homesickness and a number of demographic and personal characteristics of first-year college students. The most important finding of this study was that students who reported high levels of homesickness had a tendency to view their home environment in positive terms, suggesting that when they had positive experiences in the past, it made it harder for them to leave their homes behind (Fisher & Hood, 1987). Therefore it is imperative that students begin to become academically and socially integrated as soon as
possible so as to create positive experiences within their new environment. Ways to encourage both academic and social integration as well as create new positive experiences will be discussed in the following section.

As academic and social integration increases, so does the likelihood of student persistence (Asera, 1998; O’Brien & Shedd, 2001; Tucker, 1999). Nora (1993) defines academic integration as the development of a strong affiliation with the college academic environment both in and outside of class. Learning-centered interactions focus on improving both the academic factors and the non-academic factors that relate to college retention and performance, such as improving academic competence as well as increasing levels of academic self-confidence and motivation (ACT Inc., 2004).

Despite poor academic performance, many students persist because of their successful social integration and feelings of fit within their institution (Kennedy, Sheckley, & Kehrhan, 2000). Studies suggest that activities or programs that bring together students facilitate the development of social and learning communities and foster a shared consensus regarding institutional goals that promote persistence (Mangold, Bean, Adams, Schwab, & Lynch, 2003).

Boyer (1990) provided a very influential model of community when he challenged higher education to create communities that are purposeful, open, just, disciplined, caring and celebrative. The Carnegie Foundation and Boyer believed that learning would be significantly enhanced if these attributes were present. In essence, these attributes define community (Roberts, 2011). First-year seminars and learning communities are two strategies institutions of higher education implement to foster community and encourage students to become invested in their major. The popular first-
year seminar, once a form of an extended orientation, now occurs in a variety of forms (Upcraft, Gardner, & Barefoot, 2005; Hunter & Linder, 2005). Some of these seminars serve, as they did when they began to provide information about academic requirements and an introduction to the intellectual life of the institution. Others take the form of college success courses, focusing on study skills, time management, and other skills designed to improve academic performance. Some seminars may combine orientation and academic skills with a range of academic and social activities designed to build involvement in the life of the campus (Tinto, 2012). Learning communities, while they do share some commonalities with first-year seminars, also can be thought of as stand-alone retention tools because they create a community of learners by linking students together according to the classes in which they enroll. For example, institutions across the nation have begun to more fully involve students, especially beginning students, as collaborative participants in the learning experience. This is done by having beginning students form groups based upon common academic and intellectual interest whose members enroll in the same set of courses during their first semester or quarter of college (Tinto, 1993). In some cases, groups of students with similar interests, such as major, have been joined to “linked courses” that in turn typically join a writing course to a content area course – the former focusing on the content of the latter. Students in a freshmen interest group will take these courses together during their first semester or quarter of college as a means of encouraging the formation of self-sustaining student communities that have an academic focus (Tinto, 1993). Some programs may take this another step farther by creating a situation in which this group of students participates in block scheduling, typically three, in which the entire group meets as one community
throughout the semester or quarter. The faculty and students join together as collaborators in dealing with the content of the courses in a manner in which provides both for thematic unity and synthetic wholeness (Tinto, 1993).

In this type of learning community, the process of collaborative learning is as important as is content. Though the latter is not insignificant, the primary intent of the course is to actively involve students in the learning process in a collaborative, rather than competitive, manner. Such programs, seek through that involvement to promote both student learning and the development of academic and social communities in college, and they do so via the vehicle of the educational experience in the classroom, not despite it (Tinto, 1993).

Creating experiences such as these are important because it demonstrates to the student that faculty and staff care about their individual successes during their transition to college, which is critical if faculty and staff are to retain students through their sophomore year and beyond.

One of the primary factors affecting college retention is the quality of interaction a student has with a concerned person on campus (Habley, 2004). A recent student of college officials conducted by ACT, in cooperation with the National Academic Advising Association (NACADA), suggests that many postsecondary institutions are underutilizing or poorly administering their academic advising program (Habley, 2004). Specifically, survey results indicate that many colleges failed to capitalize on the benefit of quality advising, particularly, when it came to helping students stay in school. Few colleges had a formal, structured program in place to effectively promote advising as a way to increase retention (ACT Inc., 2004).
Academic Advising is perhaps the most important way that first-year students interact with a representative of the institution. As such, academic advising can be viewed as the hub of the wheel that establishes links to all other support services on campus. It can occur through face-to-face interaction, through the mail, by videoconferencing, by telephone, electronically or other means. However it happens, academic advising is clearly a key factor in challenging and supporting students in making a successful transition to college, feeling a part of their institution and achieving their educational goals (King & Kerr, 2005). As Richard Light states, “Good advising may be the single most under estimated characteristic of a successful college experience” (2001, p.81).

Thomas Grites and Virginia Gordon (2000) note that “the academic adviser’s role (whether faculty member or full-time adviser) is to facilitate student learning, hopefully in all three contexts identified by Winston, Miller, Erder, & Grites (1984): educational, career, and personal” (p.13). They indicate that advising should focus on student learning within the context of the student’s personal characteristics, such as interests, values, and abilities (King & Kerr, 2005). Creamer (2000) concurs, stating that the purpose of academic advising is student learning, and the focus is the whole person.

It is important to note that there is no right or wrong way to organize and deliver academic advising for first-year students. This is because academic advising approaches are institution specific and are based on the institution’s mission and organization as well as their student’s needs. However, effective advising programs include the following key components: (1) and advising program mission statement to guide the advising activities, (2) a specific individual designated by the institution to direct or coordinate advising
activities, (3) a systematic training program for all advisers, and (4) recognition and reward for exemplary advising (King & Kerr, 2005).

In Making the Most of College (2001), Light points out that first-year students, upon their arrival at college, immediately have to begin making decisions about courses, majors, student activities, how and where to study, etc. They generally make these decisions with little information, yet the consequences of their decisions could have a major impact on their academic success and ability to transition from high school to college. Light states, “Advisers play a critical role. They can ask a broad array of questions, and make a few suggestions, that can affect students in a profound and continuing way” (p.84).

Institutions need to recognize the importance of advising for first-year students and to organize and deliver advising services in the most effective way by including technological enhancements. Embracing technology is an important aspect however it is important that academic advisers never let technology compromise the standards that have been set for the advising profession as described in the CAS standards (King & Kerr, 2005).

Along with structured academic advising programs, retention efforts can also involve implementation of special registration strategies that combine both an academic and a non-academic focus. For example, in “block registration”, students enroll in the same courses and attend classes as a cohort as opposed to “linked courses” which allows students not associated with the cohort to also enroll in the course. This special type of registration is based on the belief that by attending classes together, students will be more likely to form peer networks (ACT Inc., 2004). Research has also shown that for
universities that initiate a first-year student block registration and mentoring program to strengthen social support and integration into the academic community, have also seen their persistence rates increase (ACT Inc., 2004).

**Academic Advising**

**Developmental Advising**

Crookson (1972, 1994), an early proponent of developmental advising said “Developmental advising is concerned not only with a specific personal or vocational decision but also with facilitating the student’s rational processes, environmental and interpersonal interactions, behavior awareness, and problem-solving, decision-making, and evaluation skills” (p.5). King (2005) describes it as both a process and an orientation, with a holistic focus and a dedication to student growth and development. O’Banion (1972, 1994) described five dimensions of academic advising: “(1) exploration of life goals, (2) exploration of vocational goals, (3) program choice, (4) course choice, and (5) scheduling courses” (p.10). Chickering (2006) agreed with the holistic function of advising and found that faculty members who are committed to student success are concerned with those students’ total personal development. Crookston (1994) viewed the relationship between student and advisor as the crucial element in student growth. The goal is “toward openness, acceptance, sharing of data, and collaborative problem-solving, decision-making, and evaluation” (p.9). Developmental advising does not require advisers to discuss issues that go beyond the individual advisor’s scope of knowledge or comfort. In fact, Crookston recommended making decisions about limits and responsibility and negotiating central issues as part of the establishment of the relationship between advisor and student. Developmental advising focuses on the needs
of the student in determining how the advising interaction shall transpire (Hagen & Jordan, 2008).

Intrusive Advising

Intrusive advising, on the other hand, involves intentional contact with students with the goal of developing a caring and beneficial relationship that leads to increased academic motivation and persistence. Research literature on student retention suggests that contact with a significant person within an institution of higher education is a crucial factor in a student’s decision to remain in college (Heisserer & Parette, 2002). Habley (1994) tells us that “academic advising is the only structured activity on the campus in which all students have the opportunity for on-going, one-to-one interaction with a concerned representative of the institution” (p.10). Therefore, advisers are often the best people suited to make important student connections. When advisers make connections and show interest in students, they can become the reason a student decides to stay in school. In addition, contacting students in a preventative mode may help them anticipate problems and learn problem-solving skills and strategies (Upcraft & Kramer, 1995).

Intrusive advising differs from the more traditional prescriptive and developmental models of advising because advisers are not only helpful and encouraging of students, but also proactively make the initial contact with students, a pre-emptive strike, of sorts. Most students know they have an advisor but may be unaware of how and when they are able to contact the advisor or what the advisor can help them accomplish. Heisserer and Parette (2002) observe that “the only variable that has direct effect on student persistence is the quality of a relationship with a significant member of the college community” (p. 72). Thus the advisor is often the person best suited to form a
significant relationship with the student. At-risk students, in particular, may benefit most from the intrusive advising approach as they may not be aware of how to move forward when unexpected situations arise.

**MAP-Works as a Retention Tool**

In reviewing the literature regarding the theoretical frameworks from which Map-Works was created, it was found that several authors’ and their theories contributed to the creation of the factors used to predict whether or not a student is at risk for successful transition from high school to college. The factors used to predict a student’s risk according to the Map-Works warning indicator measure one of the following concepts: early adjustment to college, level of involvement, attrition, self-efficacy and institutional commitment, engagement and effort, student expectations, and student development. Each of the concepts as well as the author’s theories and how Map-Works uses their concepts to predict student’s risk will be reviewed in the following paragraphs.

The first concept was introduced in 1989 by Upcraft, Gardner & Associates who assert that the success of first year students is determined largely by pre-enrollment variables, institutional characteristics, and institutional climate. As part of their theoretical framework, they emphasized the important role interaction with peer’s plays stating that “establishing close friends, especially during the first month of enrollment is critical” (p.10) and indicated that “there is overwhelming evidence that students’ success is, in large part, determined by their experiences during the freshmen year” (p.12). Map-Works focuses on the early adjustment of first-year students and also emphasizes both academic and socio-emotional adjustment; thus the transition survey includes questions regarding their peer relationships as well as their sense of belonging.
The second concept included is Astin’s Theory of Involvement (1984) which defined college student involvement (the investment of energy), emphasized both the quantitative (e.g., amount of time on task) as well as the qualitative (e.g., type of effort made) nature of involvement, and related involvement to both student learning and student development. Astin stressed the importance of involvement and suggested that the effectiveness of one’s educational experience is “directly related to the capacity of that policy or practice to increase student involvement” (p. 519). Map-Works focuses on the quantity and quality of involvement in a variety of domains (e.g. academic co-curricular, residence life, and social).

The third concept taken into consideration is Tinto’s Theory of Attrition (1993). Tinto’s classic theory describes the interaction between a student and the academic and social systems of a college environment. He emphasized the highly independent nature of those experiences and interactions as factors which affect a student’s commitment to the institution and educational goals. Tinto’s theory flows through five main areas: Pre-Entry Characteristics, Goals and Commitments, Institutional Experiences (in both the academic systems and the social systems), Integration (both academic and social), and the Departure Decision. As a result Map-Works has structured questions to specifically address all five areas of Tinto’s theory.

Bean and Eaton (2000) revised Tinto’s theory and emphasized the importance of self-efficacy and the development of positive coping strategies, both of which lead to better student outcomes. Braxton, Hirschy and McClendon (2004) further revised Tinto’s theory and emphasized the importance of initial institutional commitment for residential students because of its impact on the student’s perceptions and behaviors (thus retention).
They also discuss the direct impact of pre-entry characteristics (e.g., self-efficacy) on retention/attrition decisions for non-residential students. Bandura (1997) stated “perceived self-efficacy refers to beliefs in one’s capabilities to organize and execute the courses of action required to produce given attainments” (p.3). Therefore, the self-efficacy component has been linked to what situations people choose, the behaviors they display, their effort levels, their persistence, resiliency levels, thought patterns, and stress levels as well as outcomes. Taking this information into account Map-Works gives students information that promotes positive behaviors and encourages students to build self-efficacy by promoting self-reflection and successful behaviors.

Pascarella’s model (1985) emphasizes the interaction with socializing agents (faculty and peers) and the quality of student effort as important predictors of student learning and development. Weidman’s model of undergraduate socialization (1989) discusses the normative contexts (e.g., residential halls), socialization processes (e.g., interactions, integration), and socialization outcomes. The end result is that Map-Works focuses on the academic, social, emotional and developmental domains so as to best predict who is and who is not at risk for successfully transitioning from high school to college, thus allowing MAP-Works to be comprehensive as well as treat academic success using a holistic lens and not relying on just one domain to predict students academic success.

Kuh, Gonyea, & Williams (2005) describe two ways in which student expectations impact experiences. The first is that expectations “serve as a filter, or a screening mechanism, through which students evaluate … “their college experiences (pp. 35-36). Secondly, expectations can also serve “as a psychological catalyst or determinant
to certain types of behavior” (p.36). As mentioned previously Pascarella and Terenzini (1991) note that the transition to college can set the tone for what students expect, how much they get involved, what they experience and in the end can mean the difference between a student who persists to graduation and one who does not. Further, Miller, Bender, Schuh and Associates (2005) discuss the need to promote reasonable expectations of college. Therefore an important aspect of Map-Works is that it addresses student expectations through asking specific questions as well as asking students to reflect on their expectations. Immediate feedback is then provided to the student in an effort to help them realign their expectations and behaviors so that they achieve their academic goals. Additionally, the results of the transition survey provide information to key campus personnel about student expectations. They can then use this information to make adjustments to the services they offer or can use it to enhance current programs. Finally, Map-Works provides information to students regarding available campus resources, thus allowing them to empower themselves to change their behavior as well as seek the resources they need to succeed academically.

The last concept used to develop Map-Works is Chickering’s seven vectors, which describe the stages of college student development (Chickering & Reisser, 1993). The vectors are (1) developing competence, (2) managing emotions, (3) moving through autonomy toward interdependence, (4) developing mature interpersonal relationships, (5) establishing identity, (6) developing purpose, and (7) developing integrity. Map-Works includes questions about student’s self-perceptions of confidence and skills, initial social relationships, and educational goals. This information is important to obtain because it permits the feedback provided to students to emphasize personal responsibility and
development, as well as building connections for long-term success (Woolsey & Jones, 2011). Ultimately, MAP-Works can lead to increased retention because student affairs professionals are able to intervene in a timely manner and offer students the resources they need to be successful academically.

**Student Engagement Theory**

Student engagement is simply characterized as participation in educationally effective practices, both inside and outside the classroom, which leads to a range of measurable outcomes. (Harper & Quaye, 2009) are persuaded by a large volume of empirical evidence that confirms that strategizing ways to increase the engagement of various student populations, especially for those who engagement is known to be problematic, is a worthwhile endeavor. “The impact of college is largely determined by individual effort and involvement in the academic, interpersonal and extracurricular offerings on a campus” (Pascarella & Terenzini, 2005. p. 602).

Tinto (2000) argues that engagement is the single most significant predictor of persistence. He notes that many students discontinue their undergraduate education because they feel disconnected from peers, professors and administrators at the institution. “Leavers of this type express a sense of not having made any significant contacts or not feeling membership in the institution” (Tinto, 2000. p.7). In his classic book, *Leaving College: The Causes and Cures of Student Attrition*, Tinto argues that high levels of integration into academic and social communities on campus lead to higher levels of institutional commitment, which in turn compels a student to persist.

Bean (1990, 2005) proposes that students leave when they are marginally committed to their institutions. Institutional commitment is strengthened when
undergraduates are actively engaged in educationally purposeful endeavors that connect them to the campus and in which they feel some sense of enduring obligation and responsibility (Bean, 2005; Swail, Redd & Perna, 2003 & Tinto, 1993). Those who hold leadership positions in student organizations, for example, assume responsibilities in their groups and know that others depend on them for service, guidance, and follow-through on important initiatives. Thus, they feel committed to their respective organizations and the institution at large, and are less likely than are disengaged students to leave (Harper & Quaye, 2009).

Nearly 25 years ago, Alexander W. Astin defined student involvement as “the amount of physical and psychological energy that a student devotes to the academic experience” (1984, p.297). Astin’s conceptualization of involvement refers to behaviors and what students do, instead of what they think, how they feel and the meanings they make of their experiences. Instead, his theory of student involvement is principally concerned with how college students spend their time and how various institutional actors, processes, and opportunities facilitate development (Harper & Quaye, 2009). Although conceptually similar, there is a key qualitative difference between involvement and engagement: It is entirely possible to be involved in something without being engaged (Harper & Quaye, 2009). Thus, action, purpose, and cross-institutional collaboration are requisite for engagement and deep learning (Kinzie & Kuh, 2004; Kuh, Kinzie, Schuh, Whitt & Associates, 2005, Kuh, Kinzie, Buckley, Bridges, & Hayek, 2007).

The focus on student learning and outcomes creates another distinction between involvement and engagement however Harper & Quaye (2009) offer an additional
definition characteristic: the dual responsibility for engagement. For Harper & Quaye (2009) is not the students who are chiefly responsible for their own engagement but that it is also the role of administrators and educators to foster conditions in which a diverse population of students can be engaged in.

**Summary**

This literature review has discussed the history of retention, strategies and tools that can be used to help increase retention rates. It has also discussed the role student engagement theory plays in the retention model. Finally, this chapter reviewed developmental advising as well as intrusive advising models and how the different types of advising styles can be used to develop close relationships with students so that they feel they are connected to their institution of higher education.

This review of literature was relevant to this research project because understanding how academic advisers use the MAP-Works tool when advising their first-year direct from high school freshmen is critical if we are to further our understanding of the role MAP-Works plays in how students are advised by their academic advisers at the site institution. This information ensures that students who experience academic difficulty are given the interventions they need when they need them. Thus retaining more first year freshmen than otherwise may have been retained if the MAP-Works tool were not available for use on this campus.

While the emphasis here has been on the first year of college, this does not mean that there is little an institution can do to promote student retention beyond that year. In fact, enhancing student retention requires that institutions consider all phases of the student experience, from entry to completion (Tinto, 2012). Further, studies on effective
institutions indicate that increased retention and graduation rates are not achieved by
actions alone, how those actions are organized are also important. It bears repeating that
effective institutions are intentional, structured, and proactive in their pursuit of student
success. They collect and utilize data on student success, develop plans of action to
enhance success, and actively pursue their goals. They assess their efforts, monitor their
progress in promoting student success, and adjust their actions accordingly. At the same
time, they institute systems such as early warning that enable them to take action early
enough to make a difference in the success of their students (Tinto, 2012).
CHAPTER 3. RESEARCH METHODOLOGY

Introduction

The purpose of this study was to determine the extent to which academic advisers at a large Midwestern Research institution use MAP-works when advising their first-year direct from high school freshmen as well as to analyze why they do or do not use this tool.

Survey items measured the academic adviser’s training level and knowledge of MAP-Works at the site institution. Skepticism was measured in the form of training level, satisfaction with training provided and perceptions of usefulness. Of particular interest within this study was the extent to which academic advisers use MAP-Works when working with their first-year direct from high school freshmen advisees. After the completion of the survey, qualitative individual interviews were administered to those who volunteered in an effort to better understand their experiences using the MAP-Works software.

This chapter includes the research questions, the hypotheses, and a description of the research methodology. The latter includes the sampling procedure and population, instrumentation, and procedures for data collection and analysis.

Research Design

This research project employed a mixed methods approach to data collection and analysis. More specifically, this project included both a quantitative study and a qualitative study that are connected via both a shared sample and the research questions stated. Mixed methods designs provide pragmatic advantages when exploring complex
research questions. The qualitative data provides a deep understanding of survey responses, and statistical analysis provides detailed assessment of patterns of responses (Driscoll, Appiah-Yeboah, Salib, & Rupert, 2007).

The use of a survey “provides a quantitative or numeric description of trends, attitudes, or opinions of a population” (Creswell, 2009, p. 145). Survey research is a research method involving the use of questionnaires and statistical surveys to gather data about people, their thoughts and their behaviors, thus allowing the researcher to make generalizations about the population based on the results from their findings. A survey was created for the purposes of this study and is being used to uncover usage patterns amongst the academic advisers. The survey was created in consultation with the researcher’s major professor, and it is augmented with questions pertaining to MAP-Works and advising that were informed by the literature, purpose and literature relative to MAP-Works. The instrument included quantitative and open-ended responses. The instrument also included background characteristics, such as employment status, length of time employed as an academic adviser at this institution as well as relative to their professional experience as a whole, whether or not the academic advisor uses MAP-Works during their advising sessions, and the level of training the academic advisor has received pertaining to how to use the MAP-Works software. Additionally, individual semi structured interviews were conducted with academic advisers who volunteered to be interviewed. The qualitative aspect was used in an effort for the researcher to better understand the extent to which the MAP-Works report was being used during advising sessions as well as to better understand how academic advisers are using the MAP-Works software.
Setting

This study was conducted at a Research intensive institution in the Midwest. The site institution is an international university that enrolled just over 31,000 students in the fall of 2012. This institution is also a land grant institution and embraces the principles that land grant institutions were found upon.

In the fall of 2012, 5,366 first-year direct from high school freshmen were admitted to the site institution. This institution employs 211 academic advisers to serve the incoming freshmen however some of the academic advisers who participated in this study also advise students at the sophomore, junior and senior levels.

Population and Sample

The target population for this study included all academic advisers at the site institution who participate in undergraduate advising. Academic Advisers at this institution include employment appointments at both the faculty and professional staff level. A list of all academic advisers who are assigned to first-year direct from high school freshmen was obtained from the Registrar’s office. E-mail invitations were sent to 211 academic advisers employed at the site institution during the fall of 2012. A cover letter explaining the purpose of the survey (Appendix A) accompanied the e-mail survey.

To obtain the qualitative component of this study, the survey instrument asked the participants if they would be interested in participating in a follow up interview. Those who expressed interest were instructed to contact the researcher to set up the follow up interview. The follow up interview questions can be seen in Appendix C.

According to Jones, et al., (2006), “sampling in qualitative inquiry is distinguished by purposeful sampling, that is, sampling for information-rich cases that
hold the greatest potential for generating insight about the phenomenon of interest” (p.66). Therefore the vignettes were created with the intention of gaining as much information as possible from the academic adviser regarding their experiences as an academic adviser at the site institution. Further, the narrative analysis enhances the “opportunity of the reader to gain an experiential understanding of the case” (Stake, 1995, p.40). Individual narratives were produced in the case study investigation utilizing the academic adviser’s interview transcripts. The interview transcripts were combined with the survey questions and the open ended survey questions to develop themes and conclusions for this study.

**Population of Academic Advisers at the Site Institution**

There are a total of 211 academic advisers employed at the site institution. Of those, 121 or (57%) are classified as faculty, five or (2%) are Graduate students and 85 or (41%) are classified as P&S. The gender breakdown of the population consisted of 97 or (46%) males and 114 or (54%) females.

Table 1

*Population Demographics (N = 211)*

<table>
<thead>
<tr>
<th>Adviser Type</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Faculty</td>
<td>121</td>
<td>57</td>
</tr>
<tr>
<td>Grad Students</td>
<td>5</td>
<td>2%</td>
</tr>
<tr>
<td>P&amp;S</td>
<td>85</td>
<td>41</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Gender</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>97</td>
<td>46</td>
</tr>
<tr>
<td>Female</td>
<td>114</td>
<td>54</td>
</tr>
</tbody>
</table>
Employment Type, College and Gender of Respondents

The survey portion of this study produced 61 usable responses. Table 2 presents the results of respondents by college. As Table 2 indicates, the college with the highest response rate was Engineering with 19 or (19%) of the P&S advisers responding to the survey. Table 3 outlines the remainder of the demographic information collected in this study. The results of the survey indicated that 30 or 47% of respondents were faculty members while 33 or 52% were classified as P&S employees. The results also indicated that 20 or 45.2% of the respondents were male, while 34 or 58.2% were female.

Employment in General, Years as an Academic Adviser and Number of Advisees

Of the academic advisers who responded, 12 or 20% have been employed at the site institution for 1-5 years, 13 or 21% have been employed for 6-10 years, 8 or 13% have been employed for 11-15 years, 4 or 7% have been employed for 16-20 years and 24 or 39% have been employed at the site institution for more than 20 years.

The following results describe the number of years of advising experience at the site institution the sample population has. Of the academic advisers who responded, 12 or 20% have been an academic adviser for 1-5 years, 13 or 21% have advised for 6-10 years, 8 or 13% have advised for 11-15 years; 4 or 7% have advised for 16-20 years and 24 or 39% have advised for more than 20 years. It is interesting that the years of experience and years of advising experience at the site institution are the same for each respondent.

Finally are the results of each academic adviser’s advisee load. Of the academic adviser’s who responded, 12 or 19.7% report they advise fewer than 25 students, 10 or 16.4% report advising 25-49 students; 19 or 31.1% report advising 50-149 students, 10 or
16.4% report advising 150-249, 7 or 11.5% report advising 250-349 and 3 or 4.9% report advising 350-449 students.

**Descriptive Analysis of the Sample**

Table 1 presents information regarding the sample of academic advisers at the site institution. Table 3 represents the demographic information of the sample population that responded to the survey. Table 5 responds to research question 1 by showing which features academic advisers generally use when working with their first-year direct from high school freshmen. The sample includes frequencies and percentages of features used by the academic advisers. The results indicate that the most used MAP-Works feature is the individual data (42%, n = 61). The most often used MAP-Works feature was also analyzed by adviser type (Table 4) and by college (Table 5). From this analysis, it can be seen that Professional and Scientific (P&S) academic advisers use the individual report the most as well (48%, n = 22). The analysis by college indicates that individual data are the most use MAP-Works feature and the colleges that most use MAP-Works are: Agriculture and Life Sciences (42.3%, n = 11), Engineering (36.8%, n = 7), Liberal Arts and Sciences (33%, n = 7) and Human Sciences (75%, n = 6). Table 6 responds to research question 2 by answering the question of whether or not distinctive differences exist between the colleges regarding the adviser’s employment type. Table 7 is a cross tabulation of how often academic advisers use the MAP-Works software versus their skepticism toward the predictive value of the warning indicators.

**Summary of Demographic Characteristics**

In an effort to better understand the sample that responded at the site institution, relevant demographic characteristics are presented in Tables 2 and 3.
Table 2

*Adviser Response Rate by College (N = 61)*

<table>
<thead>
<tr>
<th>College</th>
<th>Adviser Type</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agriculture &amp; Life Sciences</td>
<td>Faculty</td>
<td>17</td>
<td>63</td>
</tr>
<tr>
<td></td>
<td>P&amp;S</td>
<td>10</td>
<td>37</td>
</tr>
<tr>
<td>Business</td>
<td>Faculty</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>P&amp;S</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Design</td>
<td>Faculty</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>P&amp;S</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Engineering</td>
<td>Faculty</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>P&amp;S</td>
<td>19</td>
<td>19</td>
</tr>
<tr>
<td>Human Sciences</td>
<td>Faculty</td>
<td>1</td>
<td>11.1</td>
</tr>
<tr>
<td></td>
<td>P&amp;S</td>
<td>8</td>
<td>88.9</td>
</tr>
<tr>
<td>Liberal Arts &amp; Sciences</td>
<td>Faculty</td>
<td>12</td>
<td>54.5</td>
</tr>
<tr>
<td></td>
<td>P&amp;S</td>
<td>10</td>
<td>45.5</td>
</tr>
</tbody>
</table>

Table 3

*Respondent Demographics (N = 61)*

<table>
<thead>
<tr>
<th>Adviser Type</th>
<th>Frequency</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Faculty</td>
<td>30</td>
<td>47</td>
</tr>
<tr>
<td>P&amp;S</td>
<td>33</td>
<td>53</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Gender</th>
<th>Frequency</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>28</td>
<td>45.2</td>
</tr>
<tr>
<td>Female</td>
<td>34</td>
<td>54.8</td>
</tr>
</tbody>
</table>
Table 3 (continued)

<table>
<thead>
<tr>
<th>Employment – General</th>
<th>Frequency</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-5 years</td>
<td>12</td>
<td>20</td>
</tr>
<tr>
<td>6-10 years</td>
<td>13</td>
<td>21</td>
</tr>
<tr>
<td>11-15 year</td>
<td>8</td>
<td>13</td>
</tr>
<tr>
<td>16-20 years</td>
<td>4</td>
<td>7</td>
</tr>
<tr>
<td>More than 20 years</td>
<td>24</td>
<td>39</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Years advising</th>
<th>Frequency</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-5 years</td>
<td>12</td>
<td>20</td>
</tr>
<tr>
<td>6-10 years</td>
<td>13</td>
<td>21</td>
</tr>
<tr>
<td>11-15 years</td>
<td>8</td>
<td>13</td>
</tr>
<tr>
<td>16-20 years</td>
<td>4</td>
<td>7</td>
</tr>
<tr>
<td>More than 20 years</td>
<td>24</td>
<td>39</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Number of Advisees</th>
<th>Frequency</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fewer than 25</td>
<td>12</td>
<td>19.7</td>
</tr>
<tr>
<td>25-49</td>
<td>10</td>
<td>16.4</td>
</tr>
<tr>
<td>50-149</td>
<td>19</td>
<td>31.1</td>
</tr>
<tr>
<td>150-249</td>
<td>10</td>
<td>16.4</td>
</tr>
<tr>
<td>250-349</td>
<td>7</td>
<td>11.5</td>
</tr>
<tr>
<td>350-449</td>
<td>3</td>
<td>4.9</td>
</tr>
</tbody>
</table>

**Summary of Background Characteristics**

1. The college with the largest response rate was the College of Engineering with 19 Professional and Scientific advisers responding to the survey.

2. Forty-seven percent of the sample was faculty members while 53% of the sample was classified as Professional and Scientific employees.

3. Forty-five percent of the sample was male while 55% of the sample was female.

4. The majority of the respondents (39%) had been employed at the site institution for more than 20 years.
5. The majority of the respondents (39%) had been employed as academic advisers at the site institution for more than 20 years.

6. The largest percentage of respondents (31%) had an advising load of 50-49 advisees.

**Instrumentation**

**Survey**

The survey instrument used was created specifically for this study. A portion of the survey was adopted from the *2011 Survey of Advisers*, which had been previously conducted at the site institution. For example, questions regarding the academic advisers’ employment status, length of time as an academic adviser at the site institution, college they worked in, type of undergraduate students with whom they work, average advisee load, how the advisee load is determined, age, and gender were adopted. Additionally, based on the uniqueness of this study’s topic, questions relative to the academic adviser’s usage and knowledge of the MAP-Works software were designed by the researcher in consultation with her major professor. The survey was piloted to several academic advisers prior to the administration of the formal survey. The questions used a Likert type scale and asked the participant to rank the extent to which they agreed or disagreed with statements representing their use and knowledge of the MAP-Works software. The last section of the survey asked questions regarding their level of training. This section was broken down into “on campus training” and “off campus training” in an effort to better understand the academic adviser’s level and type of training received. The questions in this section also used a Likert type scale and asked the participant to rank the extent to which they agreed or disagreed with the adequacy of training they had received.
A text box was provided for those who had not attended the “off campus” training and wanted to comment on why they had not attended the “off campus” training.

**Interview Protocol**

The use of semi-structured interviews permitted the experiences of the academic advisers to be explored more in-depth. Additionally, the use of this methodology afforded the participants the opportunity to interpret and make meaning of their experiences with first-year direct from high school freshmen and the MAP-Works software in their own voices.

With this goal in mind, the qualitative portion of the research project utilized a case study methodology in order to make meaning from the perspectives of the academic adviser’s at the site instruction regardless of whether they used MAP-Works or not.

“Case study is a qualitative approach in which the investigator explores a bounded system (a case) or multiple bounded systems (cases) over time through detailed, in-depth data collection involving multiple sources of information” (Creswell, Hanson, Clark-Plano, & Morales, 2007. p.245). Yin (2003) explained that cases studies have a variety of different applications within qualitative research: “The most important is to explain the presumed causal links in real-life interventions that are too complex for the survey or experimental strategies” (p. 15).

This multiple-case study was bound by specific cases, the academic advisers who work with first year direct from high school freshmen, and by a specific timeframe, fall of 2012. The case study protocol consisted of the creation of vignettes for each warning indicator color as well as a list of traits for each student. The list of traits was derived directly from the literature while the MAP-Works reports used were from students who
were first-year direct from high school freshmen in the fall of 2011. To protect their identities, all identifying information was removed from the report before it was shown to the interview participants.

Each academic adviser was shown the MAP-Works adviser report along with the list of traits for each warning indicator color of “red”, “yellow” and “green”. They were then given time to review the report and the list of traits. Once they expressed they had enough time to digest the information provided to them, they were asked a series of questions. For the sake of consistency, the same questions were asked for each vignette. As with the survey, because of the uniqueness of this study’s topic, questions regarding to the academic adviser’s initial reaction to the MAP-Works report and their usage of the report during their advising appointments were designed by the researcher in consultation with her major professor. To truly understand as well as gauge the extent to which academic advisers used the MAP-Works report during their advising appointments, they were asked to answer a variety of questions. The first question asked what their first step would be with each student. Second, the advisers were asked what kinds of additional information they want from the student that would help them properly advise the student and why they would ask these questions. Third, the advisers were asked how they would advise the student, and what resources (if any) they would refer the student to. Finally, they were asked how useful the report was to them and what improvements (if any) would make the report more useful to them. The list of follow-up interview questions can be found in Appendix C.
Reliability and Validity

Reliability refers to whether scores to items on an instrument are internally consistent and whether there is consistency in test administration and scoring (Creswell, 2009). Creswell (2005) asserts that reliability is measured by item consistency and the degree to which the item responses are consistent across constructs. Additionally, reliability is defined as “the extent to which measures are free from error” (McMillan, 1996, p.123). Descriptive statistics were used to ensure that the data were input correctly and that everyone answered the survey appropriately.

Validity refers to “whether one can draw meaningful and useful inferences from scores on particular instruments” (Creswell, 2009, p.235). In other words, validity refers to the degree to which the survey items measure the constructs the constructs of intent. A pilot test was conducted on the instrument prior to it being sent to the target population to ensure face validity.

Triangulation is the act of collecting information from a diverse range of individuals and settings, using a variety of methods. This strategy reduces the risk of chance associations and of systematic biases due to a specific method, and allows a better assessment of the generality of the explanations that one develops (Maxwell, 2013). The assortment of data from multiple sources provided a wealth of information as well as the individual perspectives necessary to discover emerging themes and conclusions relevant to the purposes of this study (Jones, Torres, & Arminio, 2006). Thus for the purposes of this study, the survey data, follow-up interviews and open ended responses were triangulated to allow for the generalization of the results.
Data Collection

Quantitative Component

E-mail invitations were sent to all 211 academic advisers who worked with first-year direct from high school freshmen and were employed at the site institution during the fall of 2012. A cover letter explaining the purpose of the study (Appendix A) accompanied the e-mail survey. The survey instrument used for this study, the *2012 Academic Advisers use of MAP-Works*, was administered through Qualtrics. Qualtrics is an online survey software available for use through the site institution. The 47-item survey was created for this study specifically. A portion of the survey was adopted from the *2011 Survey of Advisers*, which had been previously conducted at the site institution. The *Academic Advisers use of MAP-Works survey* was used to collect the quantitative data. The survey consisted of Likert type questions and open ended questions regarding the academic advisers background, knowledge of and use of the MAP-Works software functions as well as training they had received to answer each of the research questions (see Appendix B).

The background information section included questions related to employment status/rank, college employed in, job title, gender, age, years employed as an academic adviser at the site institution, type of undergraduate advisees, advisee load and how the advisee load is determined. The knowledge of/use of MAP-Works section asked about the academic advisers awareness of the software, how they use it, how often they use it and what they do to engage with their students by warning indicator type. The “on campus training” section asked questions relative to the adequacy of training received at the site institution. The “off campus training” section asked questions relative to training
received by attending the MAP-Works summer conference which is sponsored by the MAP-Works creators themselves.

**Qualitative Component**

The data for the qualitative component of the study was derived from two sources: the open-ended questions on the survey and the semi structured follow up interviews.

**Semi Structured Interviews**

The research questions “Which features of the MAP-Works software do academic advisers generally use” and “Do academic advisers trust the predictive value of the MAP-Works data” were enhanced by using the mixed methods approach. This section also allowed the researcher to ask additional questions that arose from the analysis of the quantitative portion. The research questions “How effective is MAP-Works in providing the appropriate information to academic advisers” and “Do academic advisers find the MAP-Works reports useful in the advising process” were answered by using a qualitative approach through semi structured interviews. Creswell (2009) defined qualitative research as a means for “exploring and understanding the meaning individuals or groups ascribe to a social or human problem” (p. 232). Qualitative methodology helps to uncover “how people make sense of their lives, what they experience, how they interpret these experiences, [and] how they structure their social worlds” (Merriam, 2002, p.19). The use of semi structured interviews allows for the academic advisers use of the MAP-Works features and software to be examined on a more in-depth level. Additionally, this methodology allows the participants to interpret and make meaning of their knowledge
and use of MAP-Works as well as allowing for their voice to be heard relative to their experiences.

**Participants**

The selection of interview participants was obtained using purposive sampling. Purposive sampling enables “detailed exploration and understanding of the central themes and puzzles which the researcher wishes to study” (Ritchie & Lewis, 2003, p.78). For this reason, potential interviewees were sent an e-mail invitation to participate in the semi structured follow up interview. The adviser usage of MAP-Works survey included a question asking participants to express their interest in participating in follow up interviews. The interview participants were chosen based on their expressed interest in participating in the follow up interview. The goal was to interview two academic advisers from each college at the site institution, excluding Veterinary Medicine because their students are not eligible to participate in the MAP-Works survey. Marshall and Rossman (1995) describe phenomenological interviewing as “a specific type of in-depth interviewing grounded in the theoretical tradition of phenomenology” (p.82). The purpose of phenomenological interviewing is to “describe the meaning of a concept or phenomenon that several individuals share” (Marshall & Rossman, 2006, p.105). Phenomenological research considers interviewing to be the main method for data collection. Kvale (1996) notes that during the interview process, the experiences and descriptions given by interviewees can be explored and clarified. Along this line, Jasper (1994) suggests that essential interview skills include “the use of reflection, clarification, requests for examples, and description and the conveyance of interest through listening techniques” (p.311). Thus the primary advantage of phenomenological interviewing
according to Marshall and Rossman (2006) is that “it permits an explicit focus on the researcher’s personal experience combined with those of the interviewees” (p. 105).

Each interviewee participated in a 30 to 45-minute semi structured interview. Semi structured interviews are designed to “explore a topic more openly and to allow interviewees to express their options and ideas in their own words” (Esterberg, 2002, p.87). The follow-up interview was guided by an interview protocol, which consisted of vignettes relative to the MAP-Works reports and how the academic adviser would use this report to advise their student. The interview also consisted of semi structured questions which allowed the academic adviser to express why they do or do not use MAP-Works. Each interview was recorded using a digital voice recorder and was then transcribed.

The analysis and interpretation of semi-structured interview data were completed by using a combination of Patton’s (2002) three step process and Creswell’s (2009) six steps. The first step included accumulating raw case data and the organization of the data. Individual case files were developed for each participant. The second step included the construction of a case record and included the condensation of the raw data. A case demographic sheet was developed for each participant and included their responses to the interview questions. Throughout the data collection and organization process notes were kept regarding both the similarities and differences in each participants answer to the interview questions and responses to the vignettes. The next step of the data analysis focused on examining “key issues (or themes), not for generalizing beyond the case but to understand the complexity of the case” (Creswell et al., 2007, p.245). To further ensure that the participant’s voice was accurately portrayed, each participant was given
the opportunity to review their transcript and the themes which emerged while reading through the transcripts. By including this step, an external audit was conducted and was also used to validate the emerging themes (Yin, 2003). The last step included generating descriptions as well as explaining how those descriptions and themes would be represented in the final analysis (Creswell, 2009). Additionally, each participant’s story offered a “holistic portrayal” (Patton, pg. 450) of the individual experiences and perspectives of each academic adviser who participated in the semi-structured follow up interview.

**General Participant Profiles**

The twelve interview participants were academic advisers employed in their position at the site institution during the fall of 2012. Two of the participants were Faculty members while the other ten were Professional and Scientific (P&S) staff members. Table 4 provides a summary of each of the interview participants.

Table 4

*Background of Interview Participants*

<table>
<thead>
<tr>
<th>Pseudonym</th>
<th>College</th>
<th>Adviser Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Erin</td>
<td>6</td>
<td>P&amp;S</td>
</tr>
<tr>
<td>Candace</td>
<td>4</td>
<td>P&amp;S</td>
</tr>
<tr>
<td>Lourdes</td>
<td>5</td>
<td>P&amp;S</td>
</tr>
<tr>
<td>Cory</td>
<td>1</td>
<td>Faculty</td>
</tr>
<tr>
<td>Laci</td>
<td>5</td>
<td>P&amp;S</td>
</tr>
<tr>
<td>Madelyn</td>
<td>3</td>
<td>P&amp;S</td>
</tr>
<tr>
<td>Debbie</td>
<td>6</td>
<td>P&amp;S</td>
</tr>
</tbody>
</table>
Individual Participant Profiles

Erin

Erin is an academic adviser in college number 6. She is a P&S adviser and reports that she advises approximately 300 students. When asked to describe her role as an academic adviser she stated:

“I view myself as a resource and an advocate for my students.”

When asked what responsibilities she embraces with respect to her students she stated:

“I guide students by helping them choose courses wisely, explore majors available to them and succeed in their classes by explaining campus resources.”

Erin reported:

“I do not use the MAP-Works report during advising appointments but prior to registration, I reviewed all of the student profiles so that I had an idea of what types of struggles (if any) the student was facing. I review student profiles from the time the survey opens until it closes and again when mid-term grades are released. I do this because it allows me to make sure I address those concerns when the student comes in for their advising appointment.”

Erin also reported that she treats her “reds”, yellows” and ‘greens” the same for the most part.

“I look at each student’s dashboard (regardless of color) because sometimes a “green” student has areas that are “red” and a “red” student may have many “green” areas.”

Table 4 (continued)

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Cleveland</td>
<td>3</td>
<td>P&amp;S</td>
</tr>
<tr>
<td>Connor</td>
<td>1</td>
<td>Faculty</td>
</tr>
<tr>
<td>Peyton</td>
<td>5</td>
<td>P&amp;S</td>
</tr>
<tr>
<td>Layla</td>
<td>2</td>
<td>P&amp;S</td>
</tr>
<tr>
<td>Lee Ann</td>
<td>2</td>
<td>P&amp;S</td>
</tr>
</tbody>
</table>
Candace

Candace is an academic adviser in college number 4. She is a P&S adviser and reports that she advises 284 students. When asked to describe her role as an academic adviser she stated:

“I help students schedule their classes. My program is fairly prescribed but there is also room to help students select the correct kinds of technical electives”.

When asked what responsibilities she embraces with respect to her students she stated:

“I am interested in finding out what else is going on because I view the student as a holistic being, knowing that their living arrangement and personal lives can impact their academic success. “Therefore, I feel it is important to ask how things are going in all areas of their lives so that I can provide them with the resources and/or other kinds of support they need”.

Candace reported:

“I do not use the MAP-Works report during advising appointments because I do not yet have access to the MAP-Works system however I have used it extensively in my previous position at the site institution”.

Candace also reported that:

“In my previous position I would reach out to my “reds” and “yellows” but did not reach out to my “greens. I plan to do the same thing once I am given access to MAP-Works”.

Lourdes

Lourdes is an academic adviser in college number 5. She is a P&S adviser and reports that she advises approximately 170 students. When asked to describe her role as an academic adviser she stated:

“I meet with students and make sure they are on track to graduating on time. I help them make informed decisions about what classes they need to take. I also advise them through the learning community as one of the coordinators. The biggest part of my job is to make sure that I listen with an open mind and ask open ended questions because a lot of the time when things are not going well or there is a problem, there is always a reason”.
When asked what responsibilities she embraces with respect to her students she stated:

“I have to be very careful to be non judgmental because otherwise my students will not trust me and talk to me about the underlying issue that is affecting their academics. My main goal is to build rapport and try to find out what their underlying issues.”

Lourdes reported:

“I do not use the MAP-Works report in front of my students during advising appointments. I use it to check up on the students who are in the “red” category and if I am not in contact with them, I figure out a way to have contact with them that is not intrusive because what MAP-Works says is “red” does not always match up with what is going on in their lives”.

Lourdes also reported that:

“since I am also a learning community coordinator, freshmen do have peer mentors, whom I can suggest keep an eye on someone who is coded as a “red” even though I do not specifically tell the peer mentor the student has a “red” MAP-Works warning indicator but I am not aggressively reaching out to students in response to what MAP-Works is showing”.

Cory

Cory is an academic adviser in college number 1. He is a faculty adviser and reports that he advises approximately 50 students. When asked to describe his role as an academic adviser he stated:

“My goal is human development and so my research is about advancing the knowledge for humans. I also develop them as professionals”.

When asked what he embraces about his role as an adviser, he stated:

“I see my role as a facilitator”.

Cory reported:

“I do not use MAP-Works because I see no value in it. I am perplexed why I would need talking points given to me by software, I do not understand the relevance in that. Genuinely perplexed and then the second component is I work
person to person. Human development to me is person to person and an electronic system is simply an impediment to that, not a facilitator”.

Cory also reported:

“I am able to identify which students are at risk by simply talking to them”.

Laci

Laci is an academic adviser in college number 4. She is a P&S adviser and reports that she advises approximately 160 students. When asked to describe her role as an academic adviser she stated:

“I rarely out right tell students what to do, instead I prefer to present them with their options and ask them to think about what is right for them so they can make an informed decision”.

When asked what responsibilities she embraces with respect to her students she stated:

“I see my role as helping to empower students to be able to make their own informed decision by providing information to them and helping them gather the right information to help them make decisions with a little bit of guidance”.

Laci reported:

“I review the MAP-Works report before my students arrive for their advising appointments. I then review the MAP-Works report with the student and ask what courses they are taking, what type of activities they are involved in as well as remind them what resources are available to them”.

Laci also reported:

“I invite all of my students to come in. However the “reds” are my priority and whom I target my outreach toward”.

Madelyn

Madelyn is an academic adviser in college number 3. She is a P&S adviser and reports that she advises approximately 134 students. When asked to describe her role as an academic adviser she stated:
“For me, academic advising means to help the student’s transition into college and then also succeed while here”.

Madelyn reports:

“I do not use MAP-Works because I feel it is too big brother for me. Yes, we have a responsibility to help them graduate but the need to keep a record of all of your interactions with particular students is, for me, just not necessary”.

She also reported:

“I feel there is too much paperwork kept on students and I think it manifests itself as a sense of entitlement by allowing the student to think there is someone who is going to catch things for them, it enables them. Further I advise the two smallest programs in my college from the student’s sophomore through senior year and as a result I maintain very close contact with her advisee and the instructors. Everyone knows each other so well that if issues emerge either the instructors notify her or the student’s themselves do. Peer mentors who are a resource for the students and the peer mentors notify her is issues as they arise. The students are also good about coming to speak to her directly about their concerns”.

Debbie

Debbie is an academic adviser in college number 6. She is a P&S adviser and reports that she advises between 200-250 students. When asked to describe her role as an academic adviser she stated:

“I like a lot of individual interaction with my students and while I appreciate that I advise for a large major, but I would find it difficult to advise if I did not have a relationship with each of my students”.

When asked what she embraces as an adviser, she indicated:

“I begin cultivating relationships with both my students and their parents during summer orientation so that their parents feel comfortable knowing their children have someone to assist them through the process their first year. I am a learning community coordinator so this enables me to build connections with my students during class because it’s not just about advising but it is also about building community early on”.
Debbie reported:

“I use MAP-Works as a part of my orientation course in the aggregate to help me see what issues the class as a whole is struggling with and this allows me to address their concerns through programming offered in the class”.

Debbie also reported that she reaches out to the “reds”.

“I would use the individual reports and send out emails specifically to those who were coded as “red”. I would get a lot of students to come in and speak with me as a result of my outreach efforts”.

Cleveland

Cleveland is an academic adviser in college number 3. He is a P&S adviser and reports that he advises approximately 140 students. When asked to describe his role as an academic adviser he stated:

“I see my role as an adviser to help them be successful both inside and outside of the classroom”.

When asked what he embraces as an adviser, he indicated:

“My students see me as a mentor and some of them look at me as a friend. How they balance this is important because I want to help them be successful both as students and in meeting their professional goals”.

Cleveland reported:

“I do not use the MAP-Works report in a typical advising session but rather I review the information prior to meeting with my students then I use the talking points to converse with my students”.

Cleveland also reported:

“I respond to my students based on their specific situations regardless of their MAP-Works warning indicator”.

Connor

Connor is an academic adviser in college number 1. He is a faculty adviser and reports that he advises approximately 68 students. When asked to describe his role as an academic adviser he stated:

“Advising is one of several aspects of my job responsibilities. As part of my advising responsibilities I meet with students and keep them on track and help them get the courses they need for graduation”.

When asked what he embraces as an adviser, he indicated:

“I use prescriptive advising as well as developmental advising by meeting my students and trying to find out what makes them tick, what their long term career goals are. How I can position them for the appropriate internship as well as select the appropriate elective courses”. I also want to know if they were thinking about a minor or second major so that I can position them to get where they want to go in life”

Connor reported:

“I do not use MAP-Works as much as I would like to but that it is a wonderful program. The challenge is that as an academic adviser I get pulled in so many directions. I’d like to use MAP-Works more than I actually do”.

Connor also reported:

“I reach out to the “reds” first and more frequently than I do the “yellows” or “greens”. I also use the mid-term reports as my way of knowing who I really need to reach out to but unfortunately that is a little too late for some of these students because they have already dug themselves into a pretty big hole. Rather than having a standardized one size fits all method, I try to talk with each student and figure out what is causing their problems and try to provide them with some options for dealing with them”.

Peyton

Peyton is an academic adviser in college number 5. She is a P&S adviser and reports that she advises between 240-250 students. When asked to describe her role as an academic adviser she stated:
“I work primarily with freshmen in a specific major, I help them learn the curriculum as well as work with students on academic warning and probation and write reference letters when asked”.

Peyton reported:

“I use MAP-Works as a part of my orientation course and use it in combination with what I see inside and outside of class and what the peer mentors tell me to determine if there are any “red” flags I need to address and if I identify someone is struggling, I will reach out to them”.

Peyton also reported:

“I would keep an eye on the “reds” more closely by trying to interact with them more frequently and would work with the peer mentors because the peer mentors play a key role in welcoming and interacting with the students right away. My interventions are more informal and individualized as I get to know my students”.

**Layla**

Layla is an academic adviser in college number 2. She is a P&S adviser and reports that she advises approximately 400 students. When asked to describe her role as an academic adviser she stated:

“I help students through their academic progress and I meet regularly with students about their schedules and academic progress if they are not doing well. Coordinating our learning communities is another big part of my role as an adviser”.

Layla reported:

“I use MAP-Works to check students on an individual basis when I know they are coming in to see me especially if the student is someone I am already concerned about but I do not use it during her advising sessions”.

Layla also stated:

“I pay attention to students who may be arriving late to class or have several midterms; another way I keep track is if the peer mentors mention they are concerned about a student, they also go on my radar as well”.
Lee Ann
Lee Ann is an academic adviser in college number 2. She is a P&S adviser and reports that she advises over 400 students. When asked to describe her role as an academic adviser she stated:

“I have two parts besides the actual advising, helping with registration and going through the actual graduation requirements. I also teach an orientation course”.

Lee Ann reported:

“I do not use MAP-Works. The biggest thing honestly would be that our college had not adopted it and that it was something that was talked about, but not everyone was onboard. And so since not everyone believed in what MAP-Works could do, it was if you chose to then you could use it in your class”.

When asked how she identifies students who are at risk she stated:

“Unfortunately some of it is when they come in and they are on warning or on probation that might be the first sign. Otherwise I would say any of our students who get a midterm or the negative behavior a student displays in class or if they mention during an appointment that they are struggling with something academically, I try to figure out what the cause may be”.

Ethical Considerations
Prior to data collection, approval for the use of human subjects was obtained through the Institutional Review Board (IRB) at the site institution. The researcher was aware of the sensitive nature of the data and complied with all restrictions relative to the use of the data. No data were reported without being aggregated to protect the anonymity of the individuals involved.

Additionally, because of my positionality as an academic adviser at the site institution myself, I knew it was critical for me to adopt a stance of neutrality (Patton, 2002) and curiosity regarding the phenomenon being studied in this project. While complete objectivity is impossible, I attempted to balance my positionality by being
“self-analytical, politically aware and reflexive in consciousness” (Patton, p. 45). My personal biases regarding the value and importance of MAP-Works and the advising process were carefully examined through the use of reflexive writing throughout the process (Esterberg, 2002). Finally, the trustworthiness of this study was increased through the use of multiple data sources to confirm (triangulate) findings, and member checks in order to capture and respect multiple perspectives from the participants (Esterberg, 2002; Merriam, 2002; Patton, 2002).

Data Analyses

Initial Analyses

Quantitative. The data were analyzed in two phases. First the survey data were entered into SPSS. Frequency tables were viewed to check the flow and to identify any data errors. Once the data were checked for accuracy, it was then analyzed using descriptive statistics to determine the extent of use of MAP-Works when advising their first-year direct from high school freshmen. Second, themes were developed from the individual follow up interviews.

Qualitative. Creswell (2009) views data analysis as an interactive process and draws attention to six steps in the analysis of qualitative research. The first step is to organize and prepare the data for analysis. The second step requires the researcher to read through all the data. The third step begins the detailed analysis with the coding process. To “get a sense of the whole,” all of the transcripts will be carefully read once without taking notes (Creswell, 2009, p. 186). According to Rossman & Rallis (1998) coding is the process of organizing interview information into chunks or segments of text before bringing meaning to the information. The “codes [are] allowed to emerge during
data analysis” (Creswell, 2009, p.187). The fourth step is to generate descriptions from the coding process. The fifth step is to explain how the themes will be represented in the findings. Finally, the sixth step is to interpret the data. The above steps were carried out relative to the open-ended questions from the survey and the follow-up interviews.

Creating the vignettes allowed for a case study protocol to guide the data collection and organization process as well as the data analysis process (Esterberg, 2002). The protocol also provided methods of writing field notes and follow-up questions to enable participants to clarify their reactions to the vignettes (Esterberg, 2002). Following each interview, the digital recording was transcribed by a third party. When the transcript was received by the researcher, it was read through without making any comments to ensure that the transcript was an accurate account of the interview. Any inaccuracies were corrected. Once the accuracy was assumed, the transcripts were read through for a second time. This time comments were made regarding any aspects the researcher found to be interesting or important as well as how the information informed or did not inform the findings from other sources of data collection (Esterberg, 2002). The transcripts were read through a third time which began the coding process. Responses to the interview questions were categorized in such a way as to bring focus on the potential meaning of the data (Esterberg, 2002). The multiple reviews of the transcripts assisted in the analysis of the semi-structured interviews by creating a case narrative for each academic adviser who was interviewed and allowed for the confirmation of similarities as well as differences that exist within the interviews.

Multiple sources of data collection assisted in the triangulation of the findings of each data sources. The semi-structured interviews combined with the survey data and
analysis of the open ended survey questions provided the depth of information needed to better understand the academic adviser’s experiences with MAP-Works as well as discover the emerging themes and conclusions relevant to this research study (Jones, et al., 2006). Additionally, utilizing multiple methods of data collection (survey data, open ended survey questions and the semi-structured interviews) increased the researcher’s understanding of the academic advisers experience when working with first-year direct from high school freshmen. The following outlines how each question was analyzed individually.

**Individual Analysis of the Research Questions**

**Question 1: Most used MAP-Works feature.** This question was predominantly answered throughout the survey. The first research question asked what feature or features (e.g., aggregate reports, individual reports, making lists, track notes) do you use the most. For each feature, the participant’s response was be coded as “0” or “1”. “1” indicated that the participant uses that feature and “0” indicated that the participant did not use the feature. This allowed for the researcher to determine the proportion of participants who used each feature. Once this has been completed descriptive statistics were used to answer the question of which feature or features the participants used most often. The results of this question were also enhanced by information obtained through the semi structured interviews.

**Question 2: Distinctive differences among the colleges in MAP-Works users.** The second research question asked if there were distinctive differences among the colleges in the types (faculty versus P&S) of advisers who use MAP-Works. All faculty advisers were coded as “0”. The professional and scientific advisers (P&S) were coded
as “1”. Descriptive statistics were used to answer the question of whether or not distinctive differences exist in the type of adviser who uses MAP-Works relative to their college.

**Question 3: Predictive value of MAP-Works.** The third research question asked whether or not academic advisers trust the predictive value of the MAP-Works data. A cross tabulation of survey question 29 (which stated “I have faith in MAP-Works ability to predict first year student transition”) and survey question 17 (which asked:”How often do you use MAP-Works” were used to answer research question 3 as well as to determine if there was a relationship between the academic adviser’s level of belief in the predictive value of the MAP-Works warning indicator and the frequency with which the academic advisers accessed MAP-Works.

**Questions 4 and 5: Frequency of MAP-Works usage.** The fourth and fifth research questions were relative to the frequency with which academic adviser’s access MAP-Works and were analyzed using descriptive statistics. The fourth question asked how extensively or often academic advisers use MAP-Works while the fifth question asked at what point academic advisers access MAP-Works during the semester. To determine how extensively academic advisers accessed the MAP-Works data, a frequency table of the total averages of responses to survey question number 17 (How often do you use MAP-Works) was run. A frequency table of the total averages of responses to survey question number 19 (Indicate which of the following events triggers your use of MAP-Works) was also run to determine at what point in time throughout the semester academic advisers most access the MAP-Works software.

**Question 6: Effectiveness and appropriateness of MAP-Works reports.** The sixth research question asked how effective MAP-Works is in providing the appropriate
information to academic advisers. This question was best answered by using the data collected during the semi structured follow up interviews.

In an effort to gain the needed insight into how best to answer this research question, the academic advisers interviewed were asked a series of questions after they had been given sufficient time to read and digest the information on each “red”, “yellow” and “green” MAP-Works report. The questions included asking what their first step would be with each student, what additional information they want from the student and why they would ask those questions. They were then asked how they would advise each student and whether or not they would encourage the student to set up additional meetings with them. The final question asked what campus resources (if any) the academic adviser would refer them to. The themes derived from their responses were used to answer this research question.

Question 7: Usefulness of MAP-Works reports. The seventh research question asked if the academic advisers found the MAP-Works reports useful when advising their first-year direct from high school freshmen. This question was also best answered using the data collected through the semi structured follow up interviews.

To answer this question, the academic advisers were asked how useful they found the MAP-Works reports to be. They were also asked to comment on what changes (if any) could be made to the MAP-Works report to make it more useful to them. The themes derived from their responses were used to answer this research question.

Limitations of the Study

The major limitation of this study is that consistent with a case study, only one site location was used. Therefore the results of this study can only be applied to
academic advisers at the site institution and cannot be used to make generalizations at institutions which are not considered to be peer institutions and those who do not have access to MAP-Works. It is also important to note that the site institution is a research intensive institution therefore had this study been conducted at a different type of institution, such as a liberal arts college or community college, different results may have been yielded.

Second, both the quantitative and qualitative data used in this study were self-reported. Therefore it is important to recognize that both the quantitative and qualitative findings are limited to the academic adviser’s memory on how they choose to use or not use MAP-Works when advising their first-year direct from high school freshmen. Thus relying on their memories may have created some inaccuracies in what the student experienced in their academic advising sessions their freshmen year.

Finally, it is important to note that all of the qualitative data from the semi-structured follow up interviews were conducted by an academic adviser employed by the site institution therefore there may be some level of bias reflected in the findings that may not exist if the researcher had not been a current employee at the site institution.

**Delimitations of the Study**

First, this study was delimited to the institution in which the research was conducted. Thus the findings of this study can only be generalized to the site institution. This study is also delimited to academic advisers who advise first-year direct from high school freshmen since they are the students who are eligible participate in MAP-Works at this time. There are academic advisers who advise sophomores, juniors and seniors, but
they were excluded from this study because their advisees would not have been invited to participate in the MAP-Works survey during the fall 2012 semester.

**Summary**

Chapter 3 discussed the methodological approach used for this study. Included in this chapter were the descriptions regarding the research questions, research design, setting, population and sample, data collection, instrumentation, variables, data management, and method of analysis for both the quantitative and qualitative components of the study. This chapter concluded with discussing the ethical considerations, delimitations and limitations of the study.
CHAPTER 4. FINDINGS

This chapter presents an overview of the quantitative and qualitative findings of this study. The study is organized into seven research questions, and the results will be discussed in the sections below.

Question 1: Most used MAP-Works feature

To answer research question 1, descriptive statistics were used to determine which MAP-Works features academic advisers used most often. Table 5 was used to answer this research question and indicates that “individual data” was the most used MAP-Works feature; with 32 or 42.1% of academic advisers stated they used this feature most often.

Table 4 provides the numbers and percentages of use by category.

Table 5

<table>
<thead>
<tr>
<th>MAP-Works Feature Used Most Often</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Individual Data Only</td>
<td>32</td>
<td>42.1</td>
</tr>
<tr>
<td>Aggregate Reports</td>
<td>11</td>
<td>14.5</td>
</tr>
<tr>
<td>Make Lists</td>
<td>5</td>
<td>6.6</td>
</tr>
<tr>
<td>Track Notes</td>
<td>12</td>
<td>15.8</td>
</tr>
<tr>
<td>Other, did not specify</td>
<td>3</td>
<td>3.9</td>
</tr>
<tr>
<td>None</td>
<td>6</td>
<td>7.9</td>
</tr>
<tr>
<td>Does not use MAP-Works</td>
<td>4</td>
<td>5.3</td>
</tr>
<tr>
<td>Very little, students don't use</td>
<td>1</td>
<td>1.3</td>
</tr>
<tr>
<td>Not aware, didn't use</td>
<td>1</td>
<td>1.3</td>
</tr>
<tr>
<td>Not well trained</td>
<td>1</td>
<td>1.3</td>
</tr>
</tbody>
</table>
Summary of MAP-Works feature Usage

1. The most used MAP-Works feature was the individual data, 42.1% of academic advisers reported using this feature.

2. The second most used feature was only slightly more used than the third most used feature. The track notes feature was used by 15.8% of the academic advisers while aggregate reports were used by 14.5% of academic advisers.

3. The three colleges who reported the most use were Agriculture and Life Sciences (42.3%), Engineering (36.8%), and Liberal Arts and Sciences (33.3%).

Question 2: Distinctive Differences between the colleges in MAP-Works users

Descriptive statistics were also used to answer research question 2, which asked whether or not distinctive differences exist between the colleges regarding which type of academic adviser used MAP-Works. Table 6 shows the results of MAP-Works features used by adviser type while Table 7 shows the results of MAP-Works features used by college. As can be seen by Tables 6 and 7 there did not appear to be any distinctive differences between the colleges or type of adviser who used MAP-Works because the majority of colleges (42.3%, 36.8% and 33.3%) reported using the individual data the most. The same was true for adviser type; both faculty (33.3%) and professional staff (47.8%) reported using the individual data most often thus there did not appear to be any distinctive differences in the type of adviser who used MAP-Works.
Table 6

*MAP-Works Feature Usage by Adviser Type*

<table>
<thead>
<tr>
<th>MAP-Works Feature</th>
<th>Adviser Type</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Individual Data Only</td>
<td>Faculty</td>
<td>9</td>
<td>33.3</td>
</tr>
<tr>
<td></td>
<td>P&amp;S</td>
<td>22</td>
<td>47.8</td>
</tr>
<tr>
<td>Aggregate Reports</td>
<td>Faculty</td>
<td>3</td>
<td>11.1</td>
</tr>
<tr>
<td></td>
<td>P&amp;S</td>
<td>7</td>
<td>15.2</td>
</tr>
<tr>
<td>Make Lists</td>
<td>Faculty</td>
<td>1</td>
<td>3.7</td>
</tr>
<tr>
<td></td>
<td>P&amp;S</td>
<td>4</td>
<td>8.7</td>
</tr>
<tr>
<td>Track Notes</td>
<td>Faculty</td>
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<td>7.4</td>
</tr>
<tr>
<td></td>
<td>P&amp;S</td>
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<td>19.6</td>
</tr>
<tr>
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<td>Faculty</td>
<td>2</td>
<td>7.4</td>
</tr>
<tr>
<td></td>
<td>P&amp;S</td>
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<td>2.2</td>
</tr>
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<td>Faculty</td>
<td>5</td>
<td>18.5</td>
</tr>
<tr>
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<td>P&amp;S</td>
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<td>2.2</td>
</tr>
<tr>
<td>Does not use MAP-Works</td>
<td>Faculty</td>
<td>3</td>
<td>11.1</td>
</tr>
<tr>
<td></td>
<td>P&amp;S</td>
<td>1</td>
<td>2.2</td>
</tr>
<tr>
<td>Very little, students don't use</td>
<td>Faculty</td>
<td>1</td>
<td>3.7</td>
</tr>
<tr>
<td></td>
<td>P&amp;S</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Not aware, didn't use it</td>
<td>Faculty</td>
<td>1</td>
<td>3.7</td>
</tr>
<tr>
<td></td>
<td>P&amp;S</td>
<td>0</td>
<td>0</td>
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<tr>
<td>Not well trained</td>
<td>Faculty</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>P&amp;S</td>
<td>1</td>
<td>2.2</td>
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</table>
Table 7

*MAP-Works Feature Usage by College*

<table>
<thead>
<tr>
<th>MAP-Works Feature</th>
<th>Ag &amp; Life Sci</th>
<th>Busi</th>
<th>Design</th>
<th>Engr</th>
<th>Hum Sci</th>
<th>Liberal Arts</th>
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<tr>
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<tr>
<td>Individual Data Only</td>
<td>11, 42.3</td>
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<td>100</td>
<td>0</td>
<td>7</td>
<td>36.8</td>
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<tr>
<td>Aggregate Reports</td>
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<td>0</td>
<td>4</td>
<td>21.1</td>
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<tr>
<td>Make Lists</td>
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<td>0</td>
<td>0</td>
<td>3</td>
<td>15.8</td>
</tr>
<tr>
<td>Track Notes</td>
<td>3, 11.5</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>3</td>
<td>15.8</td>
</tr>
<tr>
<td>Other, did not specify</td>
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<td>3, 11.5</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
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<tr>
<td>Does not use MAP-Works</td>
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<td>0</td>
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<td>0</td>
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<td>0, 1</td>
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<tr>
<td>Very Little, students</td>
<td>1, 3.8</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
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<tr>
<td>don't use it</td>
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<td>0</td>
<td>0</td>
<td>0</td>
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<td>0</td>
</tr>
<tr>
<td>Not well trained</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>5.3</td>
</tr>
</tbody>
</table>

Summary of MAP-Works Usage by College

1. There appeared to be no distinctive difference between the type of academic adviser who used MAP-Works and those who did not use MAP-Works. Both Faculty (33.3%) and Professional and Scientific (47.8%) advisers reported using the individual data the most.

2. There appeared to be no distinctive differences among the colleges who used MAP-Works and those who did not. The colleges also reported using the individual data most often as well (42.3%, 36.8% and 33.3%).
3. The second most used feature by adviser type was the track notes feature. With 7.4% of faculty and 19.6% of Professional and Scientific advisers reporting they used this feature.

4. The second most used feature by college was the aggregate reports. With 15.4% of academic advisers within the College of Agriculture and Life Sciences reporting use. The College of Engineering reported that 21.1% of their academic advisers used this feature. While the College of Liberal Arts and Sciences reported that 14.3% of their academic advisers used this feature.

**Question 3: Predictive value of MAP-Works data**

Descriptive statistics were used to answer research questions 3, 4 and 5. To answer research question 3, a frequency table was produced on a survey question which stated “I have faith in MAP-Works ability to predict first year student transition”. To gain a greater understanding of research question 3, comments made by participants during the semi structured follow up interviews were also used to enhance our understanding of whether or not academic advisers trusted the predictive value of the MAP-Works warning indicators. Table 8 shows the responses to the survey item. As can be seen from this table, the majority of respondents (61%) indicated they are neutral in their faith in MAP-Works predictive ability. This could be for several reasons. First, the academic advisers may not understand the predictive power of the MAP-Works warning indicators. The second reason could be that the academic advisers do understand the predictive power of the MAP-Works warning indicator but may feel that they can discern the same information through developing a close advisee/adviser relationship. For example, four of the 12 interview participants reported that they do not use MAP-Works
because they believed that they could discern the same amount of information, if not more, from developing a strong advisee/adviser relationship. Cory, an academic adviser in college number 1, went as far as to say that he does not use MAP-Works because he “felt it is nothing more than ‘noise’ and that he felt the best way to help his advisees was by developing strong individual relationships with them”. Finally, the academic advisers may understand the predictive power of the MAP-Works warning indicator but have found that their experiences in working with individual students differ from the MAP-Works warning indicator. For example, during the semi structured follow up interviews, when presented with the individual reports, nearly every academic adviser (67%) questioned whether or not the “green” report should be coded as “yellow” and whether or not the “yellow” report should be coded as a “red” because of the number of factors as well as the type of factor the student was struggling with. Further, the academic advisers collectively thought that having two or more “reds” in the Socio-Emotional and Behaviors and Activities sections of the dashboard was reason for concern regardless of the student’s warning indicator color.

Table 8

_Faith in MAP-Works Predictive Ability_

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly Agree</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Agree</td>
<td>11</td>
<td>19</td>
</tr>
<tr>
<td>Neutral</td>
<td>36</td>
<td>61</td>
</tr>
<tr>
<td>Disagree</td>
<td>6</td>
<td>10</td>
</tr>
<tr>
<td>Strongly Disagree</td>
<td>5</td>
<td>8</td>
</tr>
<tr>
<td>Mean</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SD</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>3.02</td>
<td>0.84</td>
</tr>
</tbody>
</table>
Question 4: Frequency of MAP-Works usage

To answer research question number 4, descriptive statistics were used to determined how extensively/often academic advisers used MAP-Works. Figure 1 shows the response rate to this question.

![Bar chart showing frequency of MAP-Works usage](Figure 1. Academic Advisers’ use of MAP-Works.)

As can be seen from the bar chart above, the majority of academic advisers (24) reported that they never used MAP-Works. While (19) respondents reported that they used MAP-Works at least once per semester, another (17) indicated they used MAP-Works more than 3 times per semester. The finding that the majority of academic advisers who responded to the survey never use MAP-Works is significant.

To better understand the respondent’s faith in MAP-Works as juxtaposed with their MAP-Works usage, a cross-tabulation was conducted. The cross-tabulation examined the relationship between survey question17 (How often do you use MAP-Works) with survey question 29 (I have faith in MAP-Works ability to predict first year transition). The results of this analysis can be found in Table 9 and indicated that
academic advisers who have faith in or trusted the predictive value of MAP-Works used it the most while those who did not understand the predictive strength of MAP-Works did not use it.

Table 9

*Academic Advisers’ Belief in MAP-Works Predictive Value*

<table>
<thead>
<tr>
<th>Frequency of Use</th>
<th>Agree</th>
<th>Neutral</th>
<th>Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Once per semester</td>
<td>1</td>
<td>6</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>9.1%</td>
<td>54.5%</td>
<td>36.4%</td>
</tr>
<tr>
<td>Twice per semester</td>
<td>3</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>42.9%</td>
<td>42.9%</td>
<td>14.2%</td>
</tr>
<tr>
<td>3 or more times</td>
<td>9</td>
<td>7</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>50%</td>
<td>38.9%</td>
<td>11.1%</td>
</tr>
<tr>
<td>Never</td>
<td>0</td>
<td>18</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>0%</td>
<td>94.7%</td>
<td>5.3%</td>
</tr>
<tr>
<td>Used a few times</td>
<td>0</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>0%</td>
<td>100%</td>
<td>0%</td>
</tr>
<tr>
<td>Not sure how to use it</td>
<td>0</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>0%</td>
<td>100%</td>
<td>0%</td>
</tr>
</tbody>
</table>

**Question 5: MAP-Works Trigger Events**

To answer research question 5, which asked when or at what point in the semester academic advisers used MAP-Works descriptive statistics were used. The results are presented in Table 10. As can be seen the majority of academic adviser’s (53%) indicated that they used MAP-Works when the transition survey closed while 41% indicated that they used it when the transition survey opened or as part of an orientation course assignment. Another 38% indicated that they used MAP-Works when mid-term grades were released.
Table 10

MAP-Works Events that triggered use

<table>
<thead>
<tr>
<th>Trigger Event</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>When the transition survey opens</td>
<td>13</td>
<td>41</td>
</tr>
<tr>
<td>When the transition survey closes</td>
<td>17</td>
<td>53</td>
</tr>
<tr>
<td>Every time my advisee contacts me</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>Every time my advisees comes to see me</td>
<td>3</td>
<td>9</td>
</tr>
<tr>
<td>After mid-term grades are released</td>
<td>12</td>
<td>38</td>
</tr>
<tr>
<td>As part of an orientation course assignment</td>
<td>13</td>
<td>41</td>
</tr>
<tr>
<td>After the spring checkup survey opens</td>
<td>3</td>
<td>9</td>
</tr>
<tr>
<td>After the spring checkup survey closes</td>
<td>5</td>
<td>16</td>
</tr>
<tr>
<td>After final grades are released</td>
<td>5</td>
<td>16</td>
</tr>
<tr>
<td>Other</td>
<td>3</td>
<td>9</td>
</tr>
</tbody>
</table>

Summary of use and Trustworthiness of MAP-Works Warning Indicators

1. The majority of respondents (61%) indicated they were neutral in their faith in MAP-Works ability to predict first year student transition.

2. Four of the 12 interviewees believed that they could discern the same information MAP-Works provided by developing a strong advisee/adviser relationship.

3. One interviewee reported he does not use MAP-Works because to him, “it is nothing more than “noise” and distracts him from what is important, the student”.

4. The majority of academic adviser’s interviewed (8) questioned MAP-Works individual report warning indicators.
5. The majority of academic adviser’s interviewed (8) believed that having two or more “Reds” in the Socio-Emotional and Behaviors and Activities sections were reason for concern regardless of the warning indicator color.

6. Regarding how often academic advisers used MAP-Works, 11 or (18%) reported using MAP-Works once per semester while another 17 or (28%) used it three or more times per semester.

7. Regarding how often academic advisers used MAP-Works, 17 or (28%) indicated they never use it.

8. The majority of academic advisers (53%) used MAP-Works when the transition survey opened, while 13% reported using MAP-Works when the transition survey opened or as part of an orientation course assignment.

9. Another 38% of academic advisers indicated that they used MAP-Works when mid-term grades were released.

**Question 6: Effectiveness and appropriateness of the MAP-Works reports**

Each academic adviser interviewed (regardless of whether or not they used MAP-Works) agreed that the MAP-Works report was effective in reporting a comprehensive snap shot of individual student experiences that the academic adviser may not been able to derive from their own interactions with the student. Further, the academic advisers all agreed that the MAP-Works report appropriately represented the individual student experiences with regard to how freshmen view themselves during their transition from high school to collegiate life. The following three sections are broken down by warning indicator color and contain the academic adviser’s initial reactions regarding the MAP-
Works reports they were shown. Their initial reactions were used to gauge the effectiveness and appropriateness of the MAP-Works reports.

“Red” Warning Indicator

“I would first ask about their financial concerns and ask if they are working or not”.

“Is their financial aid enough to cover their expenses? If not, are they aware of their scholarship opportunities?”

“They report being homesick this causes me a lot of concern”.

“I do not begin with asking them about their academics but instead ask where they are from, what their high school experience was like in an effort to understand who they are and where they are coming from”.

“I wonder if they have a strong connection to family at home or is there a significant other back home, what is causing the student to feel homesick”.

“I would carefully ask about finances because sometimes they don’t really want to share that information because it is connected to their parents but since this is one of their concerns, but I would want to know more so I could properly refer this student to the right place”.

“I would suggest the student take Psych 131 because I know that if students take it seriously, the course is very effective”.

“I would have the peer mentor work with this student. Oftentimes, freshmen feel more comfortable talking to their peer mentor about sensitive topics than they do their academic adviser”.

“As odd as it sounds when students fall into the category of low probability of success; I would try to get them a job on campus, specifically in their major, with a group that is dynamic. So now they see some relevance and they now have social structure but a professional social structure and one that can become a point of pride. Additionally, this job also becomes a point of stability, and it facilitates income but it also starts making their classes and the context more relevant”.

“This is interesting, the student reports that studying for exams is what they least like about school, yet it is key to their academic success”.
“You can only get so much from MAP-Works so I feel it is a starting off point to give me some topic areas to dive into and then it is up to me as an adviser to dig a little deeper and figure out what areas are really of concern for the student”.

“I would want to meet with this student and talk with them about personal stuff more than the obvious main issues of their academics. My gut is telling me that the social emotional and behavioral aspects are why their warning indicator indicates a high level of risk for this student. I wondered how accurate this report is”.

“Being homesick has a big ripple effect and sometimes its having a conversation about why they are feeling homesick; many times just talking about it allows me enough information to help the student make connections with others on campus”.

“It looks like this student is struggling with their course work so I want to make sure that they are attending class and being responsible meaning attending class, turning in homework, connecting with professors and/or TA’s, utilizing office hours if needed, etc”.

“I wonder how they are studying, how much time are they devoting to studying, are they developing flash cards, are they attending every class?”

“I would first establish a rapport with this student and I would definitely explore their living arrangement because things can change quickly there.”

“Yellow” Warning Indicator

“Has this student connected with the Veteran’s Affairs office on campus?”

“Are they involved in ROTC or another student organization to help them maintain the structure they are used to from being in the military”.

“I am concerned the student reports not making friends”.

“I am concerned that the student reports having poor communication skills and how this could hinder our advising conversations”.

“The fact that this student is a veteran concerns me”.

“It seems to me there is the pull from a lot of other things because not attending classes, not turning in homework, and not getting involved on campus, it appears to me there is a strong pull away from engaging on campus and I would ask a lot of questions about that”.

“I feel the only way to really help is if you really understand what is going on with the student. If you only look at it on paper, it gives you an idea but it’s not
reality until you get them talking about their life and what is really going on with them”.

“I would invite the student to come in and meet with me because my first impression is that there is something seriously going on in regard to mental health issues with this student and that is my biggest concern”.

“This report is a very huge red flag because there is so much going on here. I strongly suspect that there are some underlying mental health issues, which are outside of my area of expertise but I would still want to get them the help they need”.

“I would ask this student to predict what grade they think they would get in the classes they are struggling with to help drive home the point that their academic behavior directly impacts the grades they get”.

“I would invite the student to come in and meet with me because my first impression is they are having a lot of academic challenges and have a lack of involvement. It looks like this student should be “red” if you ask me”.

“I may even reach out to the student’s community adviser or hall director if they live on campus to ensure that others on campus are connecting with this student”.

“There had been a progression, they started off moderately well and have progressed down and it looks like the main issue is financial issues. The weight of that emotionally and then also tangibly is causing them to… Really this is the root of the problem”.

“I would want to explore if this was the right major or not. Sometimes their desires and abilities do not align with one another”.

“This person is just obviously not prepared for college; they need to work at the basic academic level. I would refer them to the academic success center for tutoring and academic coaching because once their skills are up to par; their expectations for success will increase”.

“Interesting, they are a student athlete, well that changes things a little bit because they are also getting used to a system that not all students experience and that there are times when you have to be a little more involved with someone who is a student athlete because the obstacle in front of them may not be something they’ve chosen or have any control of”.

“The report is so inconsistent; I would want to know if things had changed from when they answered the survey”.
“Sometimes when it’s all “yellow” it is just that their reality and expectations are incongruent or they are struggling with other transitions such as living away from home or living with a roommate for the first time”.

“I would try to connect him to an office or something that is going to help him to better understand the institution. Also because it seems the student is not interested in being involved in any student organization, I’d take him to a meeting with me to expose the student to how they would personally benefit by connecting to a campus organization”.

“I am more concerned about this person than the “red” person because of the number as well as nature of the problems the student self-reports. Especially his/her concerns about not feeling like they fit into the institution and their concerns about not making friends”.

“The report is so inconsistent. I wonder if this is a non-traditional student because obviously there is a lot going on. I wonder if school is right for them at this time”.

“This student is someone I would call in right away because I want to talk about their intent to leave. I also want to talk to them about their self confidence and why they are not attending class”.

“For me, one’s attitude and motivations can affect their grades just as much as anything else and that their real problem could be their lack of connections on campus”.

“I wonder what brought them here because it appears they are not committed to earning their degree”.

**“Green” Warning Indicator**

“I would talk to them about their living situation. Has the student has spoken with their Residence Hall Director”.

“I would want to talk to them about their feelings of homesickness and how often they have been going home.”

“I am concerned that the student reports having concerns with social integration, test anxiety and their ability to pay for future semesters”.

“I am confused by all the contradictions. With no mid-terms it sounds like everything academically is going ok, although maybe not”.
“After looking at this report, I think there could be some underlying physical reason they are feeling the way they are”.

“This profile seems to suggest someone who is struggling internally, and so she thinks this is why she is so concerned about this student”.

“I would definitely want to reach out to this person because it looks like they have everything going for them but then they also say they don’t feel like they belong and this concerns me”.

“I would encourage this student to get a job on campus that is related to their major because I feel strongly that working in your major can help students focus their interest area within their major. Additionally, having an on campus job could also help this student feel less homesick and that they do indeed belong on this campus”.

“I would invite this student to come in and have the conversation about integrating into the overall institution because this seems to be the biggest problem for this student. I would also have a conversation about the student being away from home and their overall satisfaction at the institution”.

“I would want to get more information from the student in all of the areas that show “red” flags. If I am able to get more information, I am able to determine what resources the student really needs”.

“We would also have a conversation about transferring to another institution as well as encouraging the student to see student counseling to deal with their stress and being away from home”.

“I’ve also learned that I do need to drill down on the “green” students and not assume because they are “green” they are not experiencing academic or emotional problems”.

“This student could just be a pleaser. This student seems to be good academically but not socially. I would get the peer mentor involved with this person just as a safety net, sort of social network to help this student get more involved”.

“This is perplexing, the student evidently has the tools to succeed, and they just need some encouragement on using those tools in a variety of different situations”.

“This is one she probably would not have come in but that she would encourage the peer mentor to get involved to help them with their feelings of homesickness”.
“Academically they could be fine but just not very happy, and if they have the academic tools, then we just need to work on some minor adjustments to really help them be successful”.

“Are you sure this person isn’t “yellow” because of all the inconsistencies”.

“I would focus on talking to the student about the comments they made in the survey rather than other parts of the survey because it seems like they need to vent”.

“I would ask if they had thought about getting a part time job on campus or if they had thought of becoming a member of the Honor’s program so that the large campus community can become much smaller”.

“According to the time line, it looks like they started out ok but then they did not like their living situation and then the homesickness piece. Even though this student is “green” I would still want to check in with them because I want to follow up with them on their homesickness. I also want to know if what they’ve said here is still true”.

“This is something I may not even look at because it’s “green” and I’m curious why they are “green” when everything is “red”, the algorithm doesn’t make sense to me. I don’t think this is someone I would have caught but would have liked to know because clearly this student is homesick but this is concerning because it makes me wonder if the warning indicator is correctly predicting for this student”.

Several themes emerged from the analysis of the academic adviser’s initial reactions to the MAP-Works reports and their warning indicator colors. First, the academic adviser’s all indicated that they would want to reach out to each student regardless of their MAP-Works warning indicator color because each student was struggling with something that could have a major impact on their academic success. For example, the academic advisers were concerned about the level of homesickness as well as the student’s lack of study skills and social integration that each student faced regardless of their MAP-Works warning indicator.
Second, the issue that most concerned the academic advisers on the “red” MAP-Works report was that the student indicated they were concerned about their finances and ability to pay for the next semester of schooling. This caused concern because financial issues can have a significant impact on a student’s academic performance especially if they are forced to hold a part time job while attending school full time.

Third, for the “yellow” MAP-Works report specifically, the academic adviser’s were concerned because of the inconsistencies within the report as well as because the student indicated they were both an athlete and a veteran. Further, the academic adviser’s collectively believed that this person should have been coded as a “red” because of how they responded to the MAP-Works survey questions.

Finally, for the “green” MAP-Works report, half of the academic advisers interviewed questioned the warning indicator color because of the types of struggles the student reported, and because the report contained several inconsistencies.

**Question 7: Usefulness of the MAP-Works reports**

Again, each academic adviser interviewed (regardless of whether or not they use MAP-Works) agreed that the MAP-Works report was useful in creating a comprehensive snapshot of individual student experiences that the academic adviser may not been able to derive from their own interactions with the student. However, the academic advisers interviewed also reported that the MAP-Works report would be more useful to them if it were an interactive and fluid system rather than a one-time static system. For example, the majority of academic advisers interviewed thought that they would be more inclined to use MAP-Works if there was a way for them to interact with the student within the current student records system rather than outside of the system as is currently required.
The following three sections are broken down by warning indicator color containing the academic adviser’s comments regarding the usefulness of the MAP-Works reports they were shown. The last section presents the academic adviser’s suggestions for improvements to the MAP-Works reports. This section is also broken down by warning indicator color.

“Red” Warning Indicator

“The report can be useful early in the semester because many of my students are strangers to me. I do not meet all of them during orientation and I like the heads-up with the students I know are in my orientation course. I am not really surprised by the findings and I find the dashboard and specific strengths/weaknesses sections to be most useful”.

“This report was very useful because it has so much detail about what is going on based on what questions they answered. Additionally, it’s really helpful because you are given talking points which help guide the conversation”.

“To be honest, I do not use it that way. I check in periodically just to see who is in “red” and why and then make some judgment about it. Since the system keeps changing I find it discouraging since I continually have to re-learn how to navigate the system, which can be time consuming since there is a learning curve associated with learning to navigate your way through the system.”

“I do not find MAP-Works useful. To me, it is nothing more than “noise” and distracts me from what is important, the student”.

“I find the MAP-Works report to be very useful, if it is accessed at the right time”.

“It is useful but I think there is so much “yellow”, it is hard to figure out why it is coming out as a “red” warning indicator” when everything is coming up as “yellow” and it makes it hard to know what area to focus on”.

“Middle because the “red” happened later and that is something I usually can find out from other things, does it still tell me that they were struggling right from the start, yeah but now it looks like something completely different is happening”.

“It is kinda nice since it is a snapshot of what is going on or what they anticipate is happening. It is useful and it is a good conversation starter to say hey it looks like what you indicated this is what you are feeling. It is also helpful actually
because I think sometimes it can take me two or three meetings for them to actually come out and tell me all of this stuff”.

“It does contain helpful information but you know students can tell me these types of things. You know I just do not like documented information. I have a problem with this because this isn’t elementary, this isn’t high school, college isn’t for everyone okay and if you want to succeed then I am going to help you succeed. If you do not know how to succeed, I am going to help provide strategies to help you succeed but that is only halfway, the student has to be committed as well”.

“What I have found is that very few students read their report”.

“It is important to remember that the report is only one piece of the puzzle; it is not the total picture. I think it gives me a window of opportunity to start a conversation with the student and to find out more”.

“Yellow” Warning Indicator

“For me, I find this report to be more useful because it points out that the student is a veteran which does not always come up in my conversations. Having that pointed out brings many issues to light. It also helps me to formulate my conversation with the student”.

“This report is just as useful to me as the “red” report because it points out that the student is a veteran and also shows that this student has a lot of different areas of concern. Many times veterans do not disclose this information to their academic adviser.

“I find this report to be very helpful because it gave me more information that I might not have known right away. Many times veterans do not disclose this information to their academic adviser.”

“I do not find MAP-Works useful and actually find it to be more effort that what I get out of it”.

“I am not sure how useful this report is because I think that it should be coded as a “red” because from the information on here this student is one of those who for me needs to be a bit more of a priority, because of lack of integration and their indecision to stay at the university will raise to the top, for me”.

“I feel this report is more useful because it points out that the student is an athlete as well as a veteran”.

“The only thing I find helpful is that it told me that the student is not involved and they are thinking of leaving the university”.

“This report is more useful to me than the “red” report because it gave much more information on what areas the student is struggling in”.

“This report is useful to me because it reports the behavioral stuff that is cause for concern”.

“I don’t know. I think it’s always the students that fall in the middle who are difficult. It gives me more information than I typically have when they come in. So it is useful”.

“The report is fine because there are specific areas listed that I can focus on with the student. I also feel that the history is helpful because it shows they are going up and down”.

“Well if everything is right on target about them, it makes me very concerned”.

“Green” Warning Indicator

“I do not feel this report was as useful as the “red” or “yellow” report because there are so many contradictions but it brings those contradictions to light and makes me want to know more about what is really going on”.

“I find this report useful but it is also a little confusing because of all of the contradictions in the student’s answers. I mean it is helpful but then it’s always different when I read this and then talk with the student. Most of the time, they are like yeah, it’s not that big of a deal, I’ve got it taken care of”.

“I did not find this report as useful because the student has so much “green” but admittedly this report is a bit deceptive because of the areas that are “yellow” and “red”. Those are areas in which I would be most concerned about therefore I feel I need to drill down a little further on my students who are coded as “green” to ensure that I am reaching out to everyone who is struggling”.

“I feel this report is useful but I would be fine without it. I have nothing against the MAP-Works. It’s just not how I roll”.

“The report is useful except that you don’t know that you need to look at them.”

“I do not find this report as useful because while the student is coded “green” there are several issues that in my opinion make this student more at risk than MAP-Works does”.

“I find this report to be more questionable because of the dramatic differences in responses between the fall transition survey and spring checkup survey. It’s like
they were fine in the fall but then in the spring they report being homesick and feeling like they don’t belong here”.

“The report is useful if I read it. Most likely I would not have read it”.

“This one, it’s difficult because I feel like these students don’t come in to meet with me and if they do it’s to get a recommendation letter or ask about grad school or something extra. So this one may not be as helpful because I feel like these are the qualities and basic information I would figure out right away”.

Collectively, whether the academic advisers used MAP-Works or not, they believed that the MAP-Works reports were useful because the report provides a detailed snapshot of the student’s experience early on in their academic careers and, thus provides the information necessary for the academic adviser to intervene and provide the necessary resources as soon as possible.

**Academic Advisers’ Suggested Revisions to the MAP-Works Report**

As previously mentioned, the academic advisers were also asked what could be done to improve the MAP-Works report so that they found it more useful. This section presents responses gathered from the interviews with the academic advisers. Several themes emerged as a result of asking this question. For the purposes of this section the comments were grouped together instead of being presented by warning indicator color because the comments the academic advisers gave did not differentiate between the warning indicator colors. The suggestions given were global, even though the academic adviser was asked what (if anything) could be improved to make the MAP-Works report more useful to them for each “red”, “yellow” and “green” MAP-Works report they were given. Below is the list of how the academic advisers responded:

“One improvement that I would like to see made would be if MAP-Works were integrated as a whole into our other institutional system. That way there would only be one database with everything in it that we need”.
“I do not find MAP-Works useful and actually find it to be more effort that what I get out of it and I do not know how the report could be made more user friendly”.

“The report is really good but navigating the system can be difficult when you are not familiar with it so making it easier to navigate would be helpful”.

“I have so much interaction with my students that I don’t need something like MAP-Works to assist me. After all, there comes a point where you have to be reactive”.

“It would be nice to know the scale and how each question was answered. For example, I’d like to know, how they were asked to respond the question, was it based on a Likert type scale of Strongly Agree to Strongly Disagree or was it some other type of answer they gave and how is the weighted? I feel that by not knowing this, I am not given a full picture of the student’s circumstances”.

“I’d like to know how many people responded negatively to the social integration questions. I would also like to be able to make graphs of the data so that I can show students in the course snap shots of specific questions so they can see how they compare to their peers”.

“The report would be more helpful if it was shorter and did not have so much text and context, I am more of a visual learner so making it more visually appealing would be nice”.

“It would be nice if the system sent an alert to the student’s on campus connections so that staff they are connected with could collaborate with me in helping this student”.

“I think they need some very brief, succinct bullet points up front, here are your areas of strength and here are some areas for improvement in a PDF report because then I do not have to deal with all the animations and all the noise of everything. MAP-Works has done a very good job of giving students a choice; it needs to give advisers a choice”.

“I would find the report more helpful if there was a reaction piece included that students filled out, perhaps this might get them to actually think about their results”.

“Again, having a section where students can reflect on why they feel the way they and then to see if seeing it in their own words contributes to a change in their behavior”.
“For me, having the strengths more prominent in the report would be helpful so that advisers could focus on the student’s strengths during their conversations”.

“I guess I don’t know if there is a way under the success markers part, if they’re able to give more information than just selecting or indicating, it would nice if there was a way to put in more context and get the student thinking about the bigger picture and not just the first few weeks of school”.

While the majority (84%) of academic indicated some aspect they want to see changed, there was a small number of academic advisers (16%) that stated they did not feel the reports needed anything changed on them, below are their comments:

““The report does not need any improvement”.

“The comments were interesting in terms of what they said they liked about school but otherwise there was nothing I can think of to add to the report”.

As can be seen by the comments, how the academic advisers responded to this question is directly related to how they see their role as an academic adviser as well as what responsibilities they embrace regarding their unique personal advising philosophies.

**Qualitative Findings Interview Summary**

This section presented the qualitative findings of this study through an analysis of the group profile of the participants, individual profiles, and a summary of two emergent themes: effectiveness and appropriateness of the MAP-Works reports as well as the usefulness of the Map-Works reports during the advising process.

The qualitative semi-structured follow-up interviews were used to answer research questions 6 and 7.
Summary

This chapter presents the results of analyses regarding the research questions that guided this study. The analysis included the use of descriptive statistics to present the findings of the survey data. This chapter also reported the findings from the qualitative follow up interviews.

There results of this study indicate that there are several major findings worth discussing. First, MAP-Works is under-utilized by the academic advisers at the site institution therefore a more intentional training program should be developed which creates a culture in which MAP-Works becomes an integrated part of the advising process.

Second, there appeared to be no significant difference between the types (faculty versus P & S) of academic adviser who used MAP-Works. There also appeared to be no significant difference among the colleges who used MAP-Works.

Third, the most prevalent feature used is the individual data however there are several more basic features as well as advanced features (such as making groups) that should be utilized so that both the students and the academic advisers get the most out of the MAP-Works software.

Fourth, MAP-Works is a blunt instrument that does not have the capability to differentiate among students. Since MAP-Works treats all students the same, the algorithm and the student experience sometimes do not mirror one another. Therefore, this phenomenon has caused some academic advisers to question the accuracy of the predictive ability of MAP-Works.
Finally, while all of the academic advisers thought that the MAP-Works reports were useful, they also thought they would be more inclined to use the software if it were integrated into the current student records software versus being a standalone software package that must be used separately. They also strongly believed that it was important to not lose sight of the fact that MAP-Works provides a snap shot of what the student experienced within their first few weeks of the semester and therefore this snap shot cannot be used to make long term judgments about students because their experiences may change as they matriculate though the system.
CHAPTER 5. DISCUSSION

This chapter is divided into seven sections and provides the discussion of the results of this mixed methods study. First, a summary of the study will be provided. Second, the results of both the quantitative and qualitative components of this study will be discussed using the research questions as the organization. Third, conclusions from this study will be presented. Finally, this chapter will close with the implications of this study for policy and practice at the site institution, applications of the study, and recommendations for future research as well as final thoughts.

Summary of the study

As previously mentioned in chapter 1, the purpose of this was to examine the extent to which academic advisers to use MAP-Works when advising their first-year direct from high school freshmen. This chapter also provides an overview of how academic advisers use MAP-Works and why some academic advisers have chosen not to use the MAP-Works program.

Chapter 2 presented an overview of the literature, including the history of retention, the early research regarding preventing students from dropping out, how retention theory was built, current and future retention trends as well as both the academic and non-academic factors which impact whether or not a student persists toward graduation and completes their degree or chooses to drop out. Chapter 2 also delved a little deeper into the academic and non-academic factors by discussing the impact that combining both the academic and non-academics factors, when implemented in a clear and concise manner, can have on increasing the retention of students. Chapter 2 then discussed MAP-Works as a retention tool and the theoretical foundations on which
the survey was created which lead into discussing the role that student engagement plays in ensuring that students successfully transition during their first year of college. Finally, chapter 2 discussed the integral role academic advising plays in assisting students in their transition to the institution. The academic adviser is not only charged with guiding students through their degree program, they are also charged with teaching students what the institution expects from them by exposing them to the rules and regulations which govern the institution. This section closed by exploring the role that developmental and intrusive advising plays in assisting first-year direct from high school students in their transition from high school to college.

Chapter 3 described the methodology including the methods used in the design and implementation of the study. Specifically, this chapter addressed the research questions, research design, setting, population, sample, data collection, and the survey used to collect the quantitative aspect of the study. Chapter 3 also described the semi-structured interviews used to collect the qualitative aspect of the study, how the data were managed as well as the methods of analyses that were used.

Chapter 4 presented the results of both the quantitative and qualitative analyses. Chapter 4 provided a comprehensive overview of the participant’s demographics as well as the results from the 2012 Academic Advisers Survey which was given at the site institution during the fall of 2012. Descriptive statistics were used to report the results of the survey data regarding the academic adviser’s knowledge and use of MAP-Works when advising their first-year direct from high school freshmen. Descriptive statistics were also used to report the academic adviser’s level of training as well as their trustworthiness in MAP-Works predictive ability to gauge which students are considered
to be at risk for experiencing academic difficulties. Finally, this chapter provides the results from the qualitative analysis by discussing the findings from the semi-structured interviews which were conducted with 12 academic advisers at the site institution. Their voices were profiled through their individual profiles, the academic adviser group’s profile and a summary of emergent themes.

Chapter 5 summarizes the research project and provides a discussion as well as conclusions for this study. Implications for the site institution’s policy and practice, application of the study, recommendations future research and final thoughts will also be presented.

**Discussion**

This study analyzed the extent to which academic advisers at the site institution used MAP-Works when advising their first-year direct from high school freshmen. This was accomplished by connecting the survey results to the themes that evolved during the semi-structured follow-up interviews.

The findings of this study, as discussed in more detail below, support the notion that academic advisers do not extensively use MAP-Works when advising their first-year direct from high school freshmen. In fact, the majority of academic advisers, who responded to the survey as well as those who participated in the follow-up interviews, used MAP-Works in conjunction with other information gathered at the site institution or insight gained from the relationship they developed with their individual students.

**Research Question 1: Most used MAP-Works feature**

Research question 1 examined which MAP-Works features academic advisers generally used. Descriptive statistics were used to answer this question. The results
revealed that the most used feature is the individual data. This finding was further reinforced through the semi-structured follow up interview as the majority of academic advisers (10) interviewed stated that they used the individual data most often.

The individual data report provides information to the academic adviser about how a specific student responded to the MAP-Works survey and then produces a comprehensive report that is divided into the following categories: Academic, Socio-Emotional, Performance and Expectations, Behaviors and Activities, Financial Means and if applicable, Special Population Concerns (such as active military or veteran, off-campus student or student athlete) and Special Topics (such as test anxiety). Each of the above categories are further broken down into six to nine factors and each factor is given a “red”, “yellow” or “green” waning indicator. The student’s response to each survey question is combined with pre-collegiate factors (such as high school GPA, ACT score, etc.) and incorporated into an algorithm that creates the warning indicator of “red”, “yellow” or “green”. The report also provides the academic adviser a list of the individual’s strengths and weaknesses as well as a list of talking points that the academic adviser can use to develop a deeper relationship with the student and appropriately refer the student to additional services on campus when needed.

The second most used feature was the track notes. The track notes feature permits the student’s direct connects (faculty or staff members with whom they have a direct relationship with) to make notes about their interactions with the student within the MAP-Works system. This feature also allows for the direct connects to make referrals to other campus professionals and also tracks whether or not the student followed through on the referral. The benefit of using this feature is that is allows for multiple staff
members on campus to collaborate with one another and proactively target their outreach effort toward students in an efficient and holistic manner because they can work together to address the area(s) within which the student is struggling the most with.

The third most used feature was the aggregate reports. This was further supported by the fact that this feature was mentioned by half (6) of the academic advisers who participated in the follow up interviews. Interestingly, this was also the feature that several academic advisers described using to engage their peer mentors in curriculum planning. Further, the academic advisers mentioned that many of their programmatic outcomes are designed to specifically address the transition issues that the majority of their advisees will face within the first few weeks and months of their college careers. This was done within the context of the orientation course they taught or the learning community that they coordinated. For example, the majority of academic advisers who participated in the semi-structured follow-up interviews had been academic advisers at the site institution for a several years and therefore had a great deal of insight into which transitional issues, such as homesickness, that first-year direct from high school students were most likely to encounter within their first weeks and months in college. The benefit of using the aggregate reports, according to the advisers interviewed, was that they could show both the class as well as the peer mentors what issues the class as a whole was experiencing. The information from the aggregate reports was then used in two ways. The first was that the freshmen were shown what transitional issues they and their classmates were facing. Further, they were also shown concrete cohort data which indicated that the feelings they were experiencing were normal, and they were not alone in their struggles. Second, the academic advisers and peer mentors were empowered
address the multitude of transitional issues freshmen face in proactive rather than reactive manner.

The downside is that MAP-Works is under-utilized by the academic advisers at the site institution. Few academic advisers use it, and they are not using it to the full potential. For example, the top three features that the academic advisers reported using are considered to be basic features within MAP-Works. MAP-Works also includes more advanced features, such as creating groups to monitor students as a cohort. For example, an academic adviser who was also a learning community coordinator could divide their advisees into separate groups. The first group could include their students enrolled in the learning community and who would experience the intervention strategies offered as part of the learning community. The second group could contain the student’s not enrolled in the learning community. Because this group is not enrolled in the learning community, they may not be receiving the additional academic support from their academic adviser they need, yet they could be the group that needs the most intervention. Another example of how academic advisers could use the making groups feature is that academic advisers could also create groups of students who belong to special populations, such as student athletes, veterans, Greek membership or those who live off campus. Doing so, would allow for the academic adviser to ensure that they were creating and implementing intervention programs for students not automatically exposed to them through the learning community. This would also decrease the number of students who may be slipping through the cracks because they are not in the learning community or those who may be too embarrassed to reach out for the help they need.
Research Question 2: Distinctive differences between the colleges in MAP-Works Users

Research question number 2 explored whether or not there were distinctive differences between the colleges in which type (faculty versus P&S) of academic adviser used MAP-Works. Descriptive statistics revealed that there were no distinctive differences between the colleges in which type of adviser used MAP-Works. This was confirmed through the semi-structured follow-up interviews.

For example, the site institution has invested significant financial resources into this tool, but it appears that none of the colleges have dug deeply into MAP-Works’ usefulness. Digging deeper to truly understand the power behind the MAP-Works tool may benefit all of the student affairs personnel, not just the academic advisers at the site institution. Thus any training offered at the site institution should be delivered holistically across campus and should be developed based upon the outcomes utilizing MAP-Works would achieve.

The results of this research question indicated that the site institution would greatly benefit from proactively facing this issue and constructing deeper training on how to use the MAP-Works tool more effectively, deeply and holistically as well as addressing the importance of ensuring MAP-Works is used to its fullest potential.

Research Question 3: Predictive value of the MAP-Works data

Research question number 3 explored the extent to which the academic advisers trusted the predictive value of the MAP-Works warning indicator. Descriptive statistics were used to answer this question. A descriptive analysis of frequencies was run on question number 29, which stated “I have faith in MAP-Works ability to predict first year
student transition”. Interestingly, the majority of respondents (61%) indicated that they were neutral in their faith of MAP-Works predictive ability. This could be for a variety of reasons. One reason could be that the academic advisers may not fully understand the predictive power of the MAP-Works software. The second reason could be that the academic advisers do understand the predictive power of the MAP-Works warning indicator but may feel that they draw out the same information by developing close adviser/advisee relationships with their first-year direct from high school freshmen. As was previously mentioned, the academic advisers who had chosen not to use MAP-Works strongly believed that they could gain the same information through the establishment of a close adviser/advisee relationship. In fact, one adviser went as far as to say that “he does not find MAP-Works useful. To him, it is nothing more than “noise” and distracts him from what is important, the student. He also stated “for me, the best way to help my advisees is through getting to know them personally and by building a strong relationship with them”. The final reason academic advisers reported being neutral in their faith in MAP-Works ability to predict first year transition may be that they understand the predictive ability of the MAP-Works warning indicator but their individual experiences working directly with their students differs from the MAP-Works warning indicator on the individual reports. During the follow-up interviews nearly every academic adviser (8) questioned whether or not the “green” report should really be coded as “yellow” and whether or not the “yellow” report should really be coded as “red”. The academic advisers who questioned the report went on to explain why they

1 The researcher attempted to find out the information regarding the algorithm used to determine the warning indicator but was not successful because this information is proprietary and MAP-Works would not release the information.
were questioning the report. For example, the academic advisers collectively stated that having two or more “reds” in the Socio-Emotional and Behaviors and Activities category on the individual’s dashboard would cause them to be more concerned about that individual student regardless of the color of the student’s overall warning indicator. Thus, their reason for questioning the overall warning indicator color on the individual reports was directly related to the type of factors as well as the number of factors which were coded as “red” on the student’s individual dashboard.

**Research Questions 4: Frequency of MAP-Works Usage**

Research question number 4 asked how “extensively/often academic advisers use MAP-Works”. Descriptive statistics were used to answer this question and revealed that the majority of academic advisers (29) who responded to the survey used MAP-Works at least once per semester, another (17) indicated that they used MAP-Works more than 3 times per semester and (24) indicated they never used MAP-Works. To gain a better understanding of the academic advisers usage, a cross tabulation was conducted. The cross tabulation explored the relationship between question 17 (How often do you use MAP-Works) with survey question 29 (I have faith in MAP-Works ability to predict first year transition). This analysis indicated that the academic advisers who reported trusting the predictive value of MAP-Works were the same academic advisers who reported they used MAP-Works most often. Further, the results of this analysis lead the researcher to believe that those who do not believe in MAP-Works predictive value tend to be those who use it the least.

This finding was not surprising given that academic advisers tended to use the tools that produced the most significant results when working with their students.
Therefore, if the academic advisers found that using MAP-Works was not adding a significant value over and above the other methods available to them, they would not opt to use a tool they do not trust or believe in wholeheartedly.

While this finding may not have been surprising, it was important because it reinforced the notion that more effort should be made to bring academic advisers on board with using MAP-Works. There are several ways that the site institution could do this. The first would be to more heavily advertise that MAP-Works training was available and that the training sufficiently enabled academic advisers to begin using MAP-Works immediately. The second example of what could be done to engage the academic advisers would be to produce verifiable results using rigorous testing methods that proved that MAP-Works accurately predicted first year transition at the site institution. This could be further reinforced by providing antidotal evidence from the academic advisers who used MAP-Works which indicated that the warning indicator predictor mirrored the student’s experience.

**Research Question 5: MAP-Works Trigger Events**

Research question number 5 asked “when or at what point in the semester academic adviser’s used MAP-Works”. Descriptive statistics were used to answer this question as well. The majority of academic adviser’s (53%) reported that they used MAP-Works when the transition survey closed. This finding was important because MAP-Works provided the academic adviser with a snap shot in time view of what types of transitional issues individual student’s experienced within the first six weeks of their college careers. Therefore, it is important to acknowledge that there are limitations to the MAP-Works software because it is a blunt instrument and is not perfect. While the
algorithm formula may be somewhat effective in differentiating high probably of success from low probability of success, the MAP-Works system would be more useful if the differentiations between the warning indicator colors were more focused. For example, not all “greens” are home free for success and not all “reds” are destined to fail. Therefore, MAP-Works alone would not give a holistic account of individual student transition throughout the first year and thus must be used in combination with other tools available to the academic advisers at the site institution.

The second most reported event that triggered MAP-Works usage (41%) was the use of the MAP-Works report as part of an orientation course assignment. This finding was further supported during the semi-structured follow-up interviews as the academic advisers were afforded the opportunity to expand on this finding and explain what all was entailed as a part of the orientation course assignment. The assignment instructed the student to set up an individual appointment with their academic adviser. Together they reviewed the MAP-Works report, discussed what areas the student was struggling with and the resources available at the site institution. Finally, additional meetings were set up, if necessary.

This finding was important because it provided the academic adviser’s the ability to explain how they could use the MAP-Works report in conjunction with their orientation courses and learning communities in an effort to ensure that students had the best first year experience possible.

The third most reported trigger event (38%) was the release of mid-term grades. Again, this finding was further supported by the semi-structured follow-up interviews
because several of the academic advisers interviewed indicated that they checked MAP-Works after their advisee’s mid-term grades were released.

Not surprisingly, the majority of academic advisers interviewed reported that they possessed a variety of tools in their “advising tool belt” and that in the majority of cases, they must use a variety of techniques to properly assist their students. Additionally, the academic advisers’ also reported using different techniques with their students who experienced the most difficulty transitioning from high school to college.

The results of which events trigged MAP-Works usage were also important because the MAP-Works warning indicator color has the potential to change up to two times within the same semester after the initial color is assigned. Therefore, to get the most out of using the MAP-Works software, academic advisers should periodically check MAP-Works throughout the semester.

As previously mentioned, the warning indicator color has the potential to change color up to three times throughout the semester. Immediately following the student’s completion of the survey an initial warning indicator color is assigned. The warning indicator could change was after mid-term grades are released. The second time the warning indicator could change is after final grades are reported.

**Research Question 6: Effectiveness and appropriateness of the MAP-Works reports**

Research question 6 asked the academic advisers “how effective and appropriate they found the MAP-Works reports to be”. This question was best answered through the data collected from the semi-structured follow-up interviews. The interviews were conducted with 12 academic advisers at the site institution. As was discussed in the
previous chapter, eight of the 12 academic advisers reported using MAP-Works to some extent when advising their first-year direct from high school freshmen.

An interesting revelation from the semi-structured follow-up interviews was that regardless of whether or not the academic adviser used MAP-Works, all 12 academic advisers collectively agreed that the MAP-Works reports were both effective and appropriate. They confirmed that the information presented in the MAP-Works reports were effective and appropriate in that it presented a snapshot view of the student early in the semester which allowed more opportunity for the academic advisers to intervene and help the student correct their behavior so that he/she were academically successful the first semester in college.

What was also interesting about research question 6 is that the qualitative component seemed to contradict the results of the quantitative analysis. The results of the quantitative analysis indicated that the majority of respondents (61%) were neutral and did not truly trust the predictive value of MAP-Works even though they found it to be somewhat useful and added one more tool to their “advising tool belt”. This finding was also interesting because it further supported the notion that more effort needed to be made to encourage the academic advisers to not only buy into MAP-Works, but to also use it.

It is also important to note that the MAP-Works software reports assumed that the academic advisers would use them in the same way however as learned through the qualitative follow-up interviews, not all academic advisers used the reports in the same way. None of the academic advisers used the MAP-Works report in front of the student except for the two who used the MAP-Works report as part of an orientation course or
learning community assignment. Therefore, the majority of academic advisers interviewed, reviewed the report before they met with the student to ensure that they addressed all of the transitional issues the student faced. The academic advisers reported this was useful because many times students did not reveal the true extent of the difficulties they were facing unless the academic adviser started the conversation.

Finally, it was also important to remember that at the site institution, the MAP-Works data were disseminated out to each student’s academic adviser. Also MAP-Works is a blunt instrument designed to treat each student the same. For example, MAP-Works does not differentiate between majors; however, academic advisers know that there are differences between majors and the type of work ethic required to be successful. Regardless of this, the only question MAP-Works asked regarding major was whether or not the student had chosen one. Therefore, the type of major is not accounted for in the MAP-Works algorithm. This revelation could be used to explain why some of the academic advisers are skeptical of MAP-Works predictive ability and that could be why the quantitative and qualitative components seemed to be contradicting one another.

**Research Question 7: Usefulness of the MAP-Works reports**

Research question number 7 asked the academic advisers “how useful they found the MAP-Works reports to be”. This question was also answered through the semi-structured follow-up interviews. All 12 academic advisers agreed that the MAP-Works reports were useful. However there were several academic advisers who questioned the MAP-Works Warning Indicator report for the “yellow” and “green” student. The reason the academic advisers questioned the warning indicator color was because of they had two or more of “reds” in the Socio-Emotional and Academic Behaviors factors
specifically. For the academic advisers who questioned the warning indicator color, they thought these two factors would cause them to be significantly more concerned about this student versus someone who had only one “red” in this area. They also stated they would want to reach out the student to ensure that student was aware of the resources available.

Additionally, the reason they found the “green” report to be so disturbing was because most of them reported that they do not drill down to the dashboard for their “green” students because the misconception had been that the “greens” were exempt from experiencing any transitional issues. Thus the academic advisers were embarrassed to admit that they most likely would not have realized this student needed an intervention. When the reality was that once you began to drill down, it could be that this specific student was experiencing a significant amount of “homesickness”. Based on what academic advisers reported they knew about “homesickness” and the distress it can cause, they strongly believed that this factor alone could have caused the student a significant amount of academic distress even though their profile indicated that they should not be experiencing any academic difficulty.

This finding was significant because it further reinforced that the academic advisers did not wholeheartedly trust the predictive value of MAP-Works. It also further reinforced that MAP-Works was not a focused instrument.

**Conclusions**

The purpose of this study was to examine the extent to which academic advisers at the site institution used MAP-Works when advising their first-year direct from high school freshmen. The results of this study indicated that some, but not all, academic advisers used MAP-Works in conjunction with other advising techniques and information
provided by the institution, such as mid-term grade reports. While another subsection of the sample participants have decided not to use MAP-Works. Further, those who have chosen not to use MAP-Works have done so for a variety of reasons ranging from personal choice to their college not embracing the use of MAP-Works. Finally, none of the academic advisers who participated in this study used MAP-Works only when working with their first-year direct from high school freshmen. This finding makes sense because even the creator’s of MAP-Works, like the academic advisers, used a holistic lens when developing the software to ensure that all of the issues first-year students experience were being dealt with through the survey.

This study was built on previous research regarding the experiences of first-year students. Research, conducted by Astin (1984), Pascarella (1985), Upcraft, Gardner & Associates (1989), Weidman (1989), Pascarella & Terenzini (1991), Chickering & Reisser (1993), Tinto (1993), Bandura (1997), Bean & Eaton (2000), Braxton, Hirschy & McClendon (2004), Kuh, Kinzie, Schuh, Whitt & Associates (2005) and Miller, Bender, Schuh & Associates (2005), has highlighted the transitional issues that first-year direct from high school freshmen must successfully master if they are to transition from high school to college without experiencing a severe amount of academic difficulty. When creating the MAP-Works software, EBI took all of the following aspects into account, early adjustment to college, Astin’s (1984) Theory of Involvement, Tinto’s (1993) Theory of Attrition, Self-Efficacy & Institutional Commitment, Engagement & Effort, Student Expectations and Student Development using Chickering’s (1993) Seven Vectors to explain how students develop within the first weeks and months of college and used this information to develop the MAP-Works Warning Indicators. It is important for
academic advisers to remember that each student is an individual and must be dealt with on an individual basis. While there are several different techniques that academic advisers used to ensure their students had a positive experience, there is no “one size fits all” model of advising. This means that the academic adviser must understand not only what issues their students were experiencing but must also treat their issues in holistic manner so that many areas of student’s needs were being addressed and resolved. Therefore, understanding the scope and variety transitional issues first-year direct from high school freshmen are faced with was critical for academic advisers to embrace if they are to provide the type of support freshmen need to master their first year in college and successfully persist to graduation.

However the results of this study indicated that MAP-Works is being underutilized and the few academic advisers, who did use it, were not using the system to its full potential. There were several reasons for this. The first was that the MAP-Works instrument is a blunt instrument. Perhaps if the instrument were more focused and could differentiate between students, more academic advisers might opt to use the system.

Second, the results of the study also indicated that there was not enough trust in MAP-Works predictive ability among the academic advisers. If the academic advisers do not trust MAP-Works or had experienced something different than what the warning indicator predicted they were unlikely to find value in using MAP-Works. For example, several of the academic advisers questioned the MAP-Works reports during the follow up interviews because they strongly believed that the warning indicator did not accurately reflect the actual amount of academic difficulty the student could encounter.
Third, the results of both the quantitative survey and the qualitative interviews indicated that a proportion of the academic advisers believed that there were other tools and methods available to them that were better than MAP-Works. For example, several of the academic advisers believed that the best way to help their direct from high school freshmen transition from high school to college was to simply talk to them and developing a strong adviser/advisee relationship.

Last, the results also indicated that a proportion of academic advisers were not interested in gaining additional MAP-Works training. The quantitative survey asked several questions regarding what the academic advisers thought about the training they had received. The results from this portion of the survey further explained why so many academic advisers have chosen not to use MAP-Works and will be discussed in the following section.

**Training, Satisfaction with Training and Perceptions of the training’s Usefulness**

This section presents the findings regarding the respondent’s level of training, satisfaction with the training they received and their perceptions of the usefulness of the training. There were two training opportunities available to the academic advisers at the site institution. The first was the MAP-Works sponsored summer conference that was offered in July. Each year, the Department of Residence sends a select group of employees from various departments on campus. The second option was the training provided on campus. Four different types of training sessions were offered, depending on the employee’s level of experience with MAP-Works. The campus training was conducted by employees who had attended the summer conference.
**MAP-Works Summer Conference.** Only 20% of respondents have attended the summer conference. To gain more insight into why more of the academic advisers had not attended the summer conference, the open ended question was analyzed. As a result, two themes emerged.

First 12 or (29.3%) of respondents were not available to attend for a variety of reasons including:

“Time”.

“Time and timing of the event”.

“Too many conflicts with the time”.

“I don’t value MAP-Works enough to justify spending as conference amount of time”.

“I am an experienced, successful adviser who has always had a disproportional number of “at-risk” advisees who go on to graduate. I am skeptical if another tool is going to change that but that tool will take more of my time and effort, when in fact, the university needs folks like me spending more of our time on fundamental missions like advising, teaching and research”.

“When on earth does anyone think we have time to do this given the lack of value given to advising on campus. There is no real incentive to this what so ever”.

“I have not worked at ISU in the summer”.

“Not in contract”.

“Summer is for research”.

“I am a nine month employee”.

The second theme that emerged is that 8 or 19.5% of employees reported that they were not aware the summer conference training was available. The reasons given for this theme were also varied and examples of the comments are given below:
“I am not sure I have been invited. I know nothing about MAP-Works for students…”

“Don’t know about it, or ignored the announcement when it came. I generally find all this outsourcing to for-profits a big waste of time for someone like me. Perhaps it helps someone who deals with 10’s or more of advisees, but it is a lot more efficient for me to simply talk with my advisees. Also, I am familiar with data mining procedures and that takes a lot of input to try to make simple predictions. A lot are bogus, and most aren’t worth the money they cost”.

“I know nothing about MAP-Works”.

“Never heard of it, No time; research first during field season”.

“I do not remember hearing of the conference. I probably was not interested because I do not have time to use the system”.

“I have not been invited. I also do not have a level of interest in using MAP-Works that would make send me (as opposed to another adviser) to the conference a good investment”.

“I’ve never heard of it”.

“Never heard of MAP-Works”.

“I am not aware of it”.

The results of theme analysis can be found in Table 11 below.

Table 11

<table>
<thead>
<tr>
<th>Summer Conference Non-Attendance</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Reason</strong></td>
</tr>
<tr>
<td>Sent staff for Professional Development</td>
</tr>
<tr>
<td>Had not been invited</td>
</tr>
<tr>
<td>Unaware of MAP-Works</td>
</tr>
<tr>
<td>Didn't know or ignored invite</td>
</tr>
<tr>
<td>More efficient to talk to advisees</td>
</tr>
<tr>
<td>Bogus/Waste or money</td>
</tr>
<tr>
<td>Not available</td>
</tr>
</tbody>
</table>
Table 11 (continued)

<table>
<thead>
<tr>
<th>Reason</th>
<th>N</th>
<th>Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>No value in MAP-Works</td>
<td>3</td>
<td>7.3</td>
</tr>
<tr>
<td>Not interested</td>
<td>2</td>
<td>4.9</td>
</tr>
<tr>
<td>Not in my contract</td>
<td>2</td>
<td>4.9</td>
</tr>
<tr>
<td>New to MAP-Works</td>
<td>1</td>
<td>2.4</td>
</tr>
<tr>
<td>No incentive to attend the training</td>
<td>2</td>
<td>4.9</td>
</tr>
<tr>
<td>Initial training</td>
<td>1</td>
<td>2.4</td>
</tr>
</tbody>
</table>

The next section provides the findings of the academic adviser’s satisfaction with the training they received while at the summer conference. As can be seen in the first column of Table 12, the majority of academic advisers (58%) expressed that they either agreed or strongly agreed that the presenter’s provided clear explanations on the use of the MAP-Works software while 17% disagreed.

The second column of Table 12 discusses the extent to which the academic advisers agreed or disagreed that the presenter’s clearly explained why it is important to use MAP-Works when advising first-year direct from high school freshmen. As can be seen by this column, the majority of respondents (67%) indicated that they either agreed or strongly agreed that the presenter’s explained why it was important to use MAP-Works, while another 17% disagreed.

The third column of Table 12 presents the results of whether or not the academic adviser’s thought attending the MAP-Works summer conference improved their understanding of using the MAP-Works software. As can be seen by this column, the majority of academic advisers (50%) indicated that they either agreed or strongly agreed that attending the summer conference improved their understanding of the importance of
using MAP-Works when advising their first-year direct from high school freshmen, while only 17% disagreed.

The fourth column of Table 12 investigated the extent to which academic adviser’s thought attending the summer conference was useful to them. As can be seen by this column, the majority of respondents (58%) who attended the summer conference indicated that they thought attending the conference was useful to them, while 25% were neutral about their experience and finally, 17% disagreed that attending was useful.

The last column of Table 12 explored the extent to which the academic advisers indicated whether or not they would recommend attending the summer conference to their colleagues. As this column indicates, the majority of academic advisers (43%) indicated they would recommend the summer conference to their colleagues, while 33% were neutral and 16% indicated they would not recommend attending the summer conference.
Table 12

*Academic Adviser’s Satisfaction with Summer Conference Training*

<table>
<thead>
<tr>
<th>Presenters Clearly Explained Why it is Important to use MAP-Works</th>
<th>The Conference Improved my Understanding of the Importance of the use of MAP-Works</th>
<th>The Summer Conference was Useful</th>
<th>Would Recommend the Summer Conference to my Colleagues</th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
<td>%</td>
<td>N</td>
<td>%</td>
</tr>
<tr>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>Agree</td>
<td>8</td>
<td>66</td>
<td>6</td>
</tr>
<tr>
<td>Neutral</td>
<td>2</td>
<td>17</td>
<td>4</td>
</tr>
<tr>
<td>Disagree</td>
<td>2</td>
<td>17</td>
<td>2</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
<th>SD</th>
<th>Mean</th>
<th>SD</th>
<th>Mean</th>
<th>SD</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>3.67</td>
<td>0.98</td>
<td>3.41</td>
<td>0.9</td>
<td>3.5</td>
<td>0.9</td>
<td>3.23</td>
<td>1.09</td>
</tr>
</tbody>
</table>
On-Campus MAP-Works Training. The final section of the survey asked respondents to rate their level of satisfaction with the on campus training that the site institution provides. This training is presented by employees who have attended the summer conference and therefore have been trained by the MAP-Works creator’s. The site institution offers three different types of trainings as well as makes a help room available at certain points within the semester. The first is the level one training which is intended for employees who have not attended the summer conference and the purpose of this training is to introduce MAP-Works to the employees as well as give them enough information that they can begin to use the most basic MAP-Works features immediately. The second training option is the level two training, and it is intended for employees who have not attended the summer conference but who have attended the Level One training. The purpose of this training session is to introduce employees to the more advanced features of MAP-Works, such as creating groups within the students for which the employee is a direct connect. The third type of training offered is the MAP-Works “refresher” and that is open to any employee who has attended the summer conference or the on-campus training. The purpose of this training session is to answer the employees’ questions as well as remind them of how to perform certain functions within MAP-Works. Finally, the training committee makes a “help room” available at certain points within the semester so that employees can get individualized help with the specific MAP-Works features they are trying to use.

Only 62% or 37 of the respondents had attended the on-campus training sessions, while 38% had not. To gain more insight into why employees had not attended the on-campus training sessions, the open-ended question was analyzed. As a result, two themes
emerged. First, 6 (40\%) of respondents stated they did not have the time to attend and the second theme was that 4 (26.7\%) employees reported that they were not aware that on-campus training was available. The results of this analysis can be found in Table 13.

Table 13

*On-Campus Training Non-Attendance*

<table>
<thead>
<tr>
<th>Reason</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>See previous answer</td>
<td>1</td>
<td>6.7</td>
</tr>
<tr>
<td>No time</td>
<td>6</td>
<td>40</td>
</tr>
<tr>
<td>Not enough interest</td>
<td>1</td>
<td>6.7</td>
</tr>
<tr>
<td>Not aware of training</td>
<td>4</td>
<td>26.7</td>
</tr>
<tr>
<td>Time conflict</td>
<td>2</td>
<td>13.3</td>
</tr>
<tr>
<td>No real value given to advising on campus</td>
<td>1</td>
<td>6.7</td>
</tr>
</tbody>
</table>

Table 14 presents the results of the type of on-campus training that respondents had attended. As can be seen from the table below, the majority of respondents (35.7\%) have attended the level two training, while another 33.3\% could not remember which training they had attended. Level two training was the intermediate training that was offered and taught employees how to use the advanced features, such as creating groups, within the MAP-Works software. Table 13 also indicates that 35.7\% of respondents had attended the level one training session, which was an introduction on how to use the MAP-Works software while another 21.4\% of respondent’s have attended a “refresher” training session. The purpose of the “refresher” training sessions were to review what had been taught in either the level one or level two training session. The aspects of MAP-Works taught during this session depended on the needs of the audience and why they elected to attend the “refresher” session.
Table 14

*Type of On-Campus Training Attended*

<table>
<thead>
<tr>
<th>Training Type</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>MAP-Works Refresher</td>
<td>9</td>
<td>21.4</td>
</tr>
<tr>
<td>Level One Training</td>
<td>15</td>
<td>35.7</td>
</tr>
<tr>
<td>Level Two Training</td>
<td>4</td>
<td>9.1</td>
</tr>
<tr>
<td>Cannot Remember</td>
<td>14</td>
<td>33.3</td>
</tr>
</tbody>
</table>

The second section of Table 15 indicates the extent to which respondents thought that the on-campus presenters were knowledgeable about why it was important to use MAP-Works with first-year direct from high school freshmen. As can be seen from this column, the majority of respondents (80%) either agreed or strongly agreed that the on-campus presenters were knowledgeable about why it was important to use MAP-Works.

The third column of Table 15 presents the results of the survey question that asked whether or not the respondents believed that the training taught them enough to begin using MAP-Works immediately. As can be seen from this column the majority of respondents (78%) either agreed or strongly agreed that the on-campus training session was comprehensive enough to allow them to begin using the MAP-Works software immediately following attending the training session.

The fourth column of Table 15 presents the results of the survey question that asked whether or not the on-campus training session was long enough for each respondent to get all questions answered. As can be seen from this column, the majority of respondents (70%) indicated that they either agreed or strongly agreed that the on-campus training session was long enough for them to get all questions answered.
The fifth column of Table 15 indicates the results of the survey question that asked whether or not the handouts given at the on-campus training were helpful. As can be seen from this column, the majority of respondents (61%) indicated that they either agreed or strongly agreed that the handouts given were helpful.

The last column of Table 15 explored the extent to which the academic advisers indicated whether or not they would recommend attending the on-campus training to their colleagues. As this column indicates, the majority of academic advisers (57%) indicated they would recommend the on-campus training to their colleagues, while 31% were neutral and 12% indicated they would not recommend attending the on-campus training to their colleague.
Table 15

Academic Advisers’ Satisfaction with On-Campus Training Sessions

<table>
<thead>
<tr>
<th>Presenters Were Knowledgeable about MAP-Works and How to use it</th>
<th>Presenters Were Knowledgeable about Why it is Important to use MAP-Works</th>
<th>The On-Campus Training Taught me Enough to Start using MAP-Works Immediately</th>
<th>On-Campus Training Session was Long Enough for me to get all of my Questions Answered</th>
<th>The Handouts Given Were Helpful</th>
<th>Would Recommend Training to Colleagues</th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
<td>%</td>
<td>N</td>
<td>%</td>
<td>N</td>
<td>%</td>
</tr>
<tr>
<td>Strongly Agree</td>
<td>34</td>
<td>94</td>
<td>29</td>
<td>81</td>
<td>28</td>
</tr>
<tr>
<td>Neutral</td>
<td>2</td>
<td>6</td>
<td>7</td>
<td>19</td>
<td>6</td>
</tr>
<tr>
<td>Disagree</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>2</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Mean</th>
<th>SD</th>
<th>Mean</th>
<th>SD</th>
<th>Mean</th>
<th>SD</th>
<th>Mean</th>
<th>SD</th>
<th>Mean</th>
<th>SD</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.41</td>
<td>0.60</td>
<td>4.08</td>
<td>0.77</td>
<td>4.08</td>
<td>0.91</td>
<td>3.92</td>
<td>0.94</td>
<td>3.81</td>
<td>0.95</td>
<td>3.83</td>
<td>0.99</td>
</tr>
</tbody>
</table>
Summary of Training, Satisfaction with Training and Perceptions of the Usefulness of the Training

1. There were two training opportunities available to the academic advisers of the site institution. One was a summer conference hosted by MAP-Works. The second was an on campus training session presented by employees who had attended the summer conference.

2. The majority of respondents (47) or 80% of survey respondents had not attended the summer conference while (12) or 20% of respondents had attended.

3. Two themes emerged from the analysis of the open-ended question which asked why academic advisers had not attended the summer conference. The first theme was that 12 or 29.3% of respondents were not available to attend. The second was that 8 or 19.5% of employees reported that they were not aware the summer conference training was available.

4. The majority of academic adviser’s (58%) indicated that they agreed or strongly agreed that the summer conference presenter’s provided clear explanations on how to use the MAP-Works software while 17% disagreed.

5. The majority of academic adviser’s (67%) indicated that they either agreed or strongly agreed that the presenter’s explained why it was important to use MAP-Works, while another 17% disagreed.

6. The majority of academic adviser’s (50%) indicated that they either agreed or strongly agreed that attending the summer conference improved their
understanding of the importance of using MAP-Works when advising their first-year direct from high school freshmen while only 17% disagreed.

7. The majority of respondents (58%) who attended the summer conference indicated that they thought attending the conference was useful to them, 25% were neutral about their experience while another 17% disagreed that attending was useful.

8. The majority of academic adviser’s (43%) indicated they would recommend the summer conference to their colleagues, while 33% were neutral and 16% indicated they would not recommend attending the summer conference.

9. The majority of respondents (62%) had attended at least one of the on-campus training sessions, while 38% had not.

10. Two themes emerged as to why respondents had not attended an on-campus training session. The first theme was that 6 or 40% of respondents stated they did not have the time to attend and the second theme was that 4 or 26.7% of employees reported that they were not aware that the on-campus training was available.

11. The majority of respondents (35.7%) had attended the level two training, while another 33.3% cannot remember which training they attended.

12. Another 35.7% of respondents had attended the level one training session, while 21.4% of respondents had attended a “refresher” training session.
13. The majority of respondents (84%) either agreed or strongly agreed that
the presenters were knowledgeable about MAP-Works and how to use it.

14. The majority of respondents (80%) agreed or strongly agreed that the on-
campus presenter’s were knowledgeable about why it was important to use
MAP-Works.

15. The majority of respondents (78%) either agreed or strongly agreed that
the on-campus training session was comprehensive enough to allow them
to begin using the MAP-Works software immediately following attending
the training session.

16. The majority of respondents (70%) indicated that they either agreed or
strongly agreed that the on-campus training session was long enough for
them to get all of their questions answered.

17. The majority of respondents (61%) indicated that they either agreed or
strongly agreed that the handouts given were helpful.

18. The majority (57%) of respondents stated that they either agreed or
strongly agreed that the on-campus training was useful enough for them to
recommend the training to their colleagues. However the problem is, few
academic advisers elect to attend the on-campus training sessions.

**Implications for Policy and Practice at the Site Institution**

This study represented the first exploratory examination of how academic
advisers at the site institution used MAP-Works when advising their first-year direct from
high school freshmen yet there were several aspects which the site institution could
embrace in an effort to encourage more academic advisers to embrace the use of MAP-Works.

Understanding how academic advisers at the site institutions currently used MAP-Works was the first step toward determining what the next steps should be. The findings of this study provided several implications for the site institution. This study explored the extent to which academic advisers used MAP-Works when advising their first-year direct from high school freshmen. The results from this study also illuminated that MAP-Works was being underutilized and was also just one tool advisers used when advising. For example, the results indicated that the majority of academic advisers used MAP-Works in conjunction with other tools and techniques which ensured they were meeting the students individual needs holistically.

It was clear that first-year direct from high school student experienced a variety of transitional issues, ranging from loneliness to homesickness to expecting what worked in high school would work in college, however this rarely is the case. All of these issues tended to present themselves within the first few weeks and months of college.

Academic advisers, considered to be central members, in the creation of student success pathways played a critical role in providing any necessary interventions to ensure that students successfully mastered their new environment. Both the quantitative and qualitative results draw attention the fact that how an academic adviser responded to student’s individual needs greatly influenced their decision to change their behavior and adopt the academic behaviors needed to successfully persist to graduation as well as many of the other decisions students made early on in their academic careers. For many students, their academic adviser was the one person on campus that they have had the
most interaction with and had established a solid adviser/advisee relationship. This relationship built on honesty and mutual respect was critical for them to begin opening up if academic difficulties and transition issues began to arise.

Given how important the academic adviser’s role is in assisting students to transition successfully both personally and academically, and the vast amount of information that MAP-Works provides it seemed that the site institution should make use of MAP-Works by academic advisers a priority. This could be done by creating institutional norms that include the use of MAP-Work as a part of the academic adviser’s tool belt. One way to help begin cultivating new norms would be to increase the current advertising campaign for MAP-Works training. Several of the survey respondents indicated that they were not aware of MAP-Works, what it was, and why they should use it. These types of questions could be answered by launching a campus wide campaign encouraging all academic advisers to use MAP-Works. Additionally bringing the MAP-Works summer conference to campus versus sending a select group of employees to the conference would indicate to the academic advisers that the institution truly believes MAP-Works is worth the investment and by having the training readily available on campus there may be more academic advisers who would opt to attend.

The Department of Residence and Dean of Students offices at the site institution heavily use MAP-Works therefore they could use their experiences as well as the benefits they have gained from MAP-Works to encourage academic advisers to get excited about what MAP-Works has to offer as well as the value that MAP-Works adds to the advising experience.
Currently, none of the colleges at the site institution require their academic advisers to use MAP-Works. Additionally, there are no formal intervention programs in place that the academic advisers use to address students who are struggling. While there are a variety of resources available to students, those resources require the student take responsibility for his/her own education. They also require that the student follows through. Since there is really nothing the academic adviser can do to ensure the student does his/her part, the site institution could consider developing formal intervention plans that the academic advisers could administer on their own. Doing so would allow for both the student and the academic adviser to work together collaboratively and resolve the issues students face. It would also allow them to work collaboratively with other offices on campus to ensure the student was utilizing the resources available to them to the fullest extent possible.

Finally, the site institution could collaborate with EBI to provide more transparency regarding how the warning indicators are weighted and which factors carry the most weight in determining which warning indicator category students responses fall into. If the academic advisers were provided with this information it is entirely plausible that more of them would choose to use MAP-Works because they would better understand the predictive power of the MAP-Works warning indicators.

**Applications of the Study**

The findings of this study may be useful to a multitude of student affairs professionals as well as faculty members at the site institution because knowing how academic advisers used MAP-Works may open the door for a variety of offices to collaborate with one another to develop appropriate intervention strategies to ensure that
the students who enter the site institution reach their academic goals in a timely and efficient manner. For example, the academic advisers could work with the residence halls directors to ensure that programming regarding homesickness is available. Another example would be for the academic advisers to work with the financial aid office to ensure that students understand what scholarships opportunities are available to them as well as ensure that they understand their financial aid package and how it will impact them once they graduate.

Understanding the transitional issues that first-year direct from high school freshmen may face is critical to their success. The academic adviser plays a key role in ensuring that they have the most positive experience possible by providing them realistic advice on the expectations of the classes they will be taking as well as the amount of time they can expect to study to be successful in their coursework. Finally, the academic adviser also plays a role in helping the student to balance course loads and ensure that the student is not setting themselves up for failure simply because of courses he/she has registered for. First-year direct from high school freshmen rely on the expertise of their academic adviser to set them up for the most positive academic experience within the first semester because the adviser knows all too well all of the transitional issues that could derail the student should they arise.

**Recommendations for Future Research**

This is the first study of this kind conducted at the site institution. For that reason the study was highly exploratory. Understanding the issues that first-year direct from high school freshmen experience is critical if institutions want to develop appropriate and effective techniques to increase their retention rates. MAP-Works is only one tool
available at the site institution that contributes to the retention of freshmen because the report provides the academic adviser with a snapshot of their individual students quickly once the student completes the MAP-Works survey.

Both qualitative and quantitative research is necessary to fully understand the myriad of issues facing first-year direct from high school freshmen. It is also noteworthy to consider that pre-collegiate characteristics, socioeconomic status, familial support, gender, race, and ethnicity also factor into whether or not a student will experience transition difficulties. It is also important for academic advisers to be aware of and recognize the role each of the above mentioned factors have on their new students so they can provide interventions that best meet the student’s individual needs.

The site institution has collected MAP-Works data on all incoming freshmen for the past five years however to date no one has conducted a comprehensive cohort study which tracked the “red”, “yellow” and “green” students through their academic careers. Therefore, it would be interesting to conduct a study of the students who have taken MAP-Works and track their success rates as well as retention rates on the students who have completed their degrees at the site institution.

Another aspect that would be critically important to analyze is the extent to which students at the site institution use their MAP-Works report, how they use the MAP-Works report as well as examine how useful students find the reports to be. This type of research is important because it could assist administrators in making the appropriate decision regarding the usefulness and effectiveness of the MAP-Works tool.

Finally, this project was limited to one site therefore future research should include conducting the study at various types of institutions. It would also be interesting
to conduct this type of study at both a non-research intensive institution, such as a liberal arts college as well as a community college to see if there are any significant differences between institution type in how academic advisers use MAP-Works.

**Final Thoughts**

Academic Advisers are recognized as the hub of the wheel that establishes links to all other student support services on campus and as such is clearly a key factor in challenging and supporting students in making a successful transition to college, feeling part of their institution and achieving their educational goals (King & Kerr, 2005). Therefore it is imperative that academic advisers truly understand the impact their role has on their undergraduates because as Richard Light states, “good academic advising may be the single most underestimated characteristic of a successful college experience” (2001, pg. 81).
REFERENCES


APPENDIX A. LETTER TO THE PARTICIPANTS

Dear Academic Adviser:

My name is Kristin Mauro and I am a doctoral candidate in Educational Leadership and Policy Studies. For my dissertation, I am conducting research on how Map-Works is being used by academic advisers at Iowa State. I know your time is valuable, but I would be very grateful if you completed this survey for my study. This survey will take about 15 minutes to complete. After completion of the survey you will be invited to participate in an interview to further discuss your use or non-use of Map-Works. Your participation in this study is completely voluntary and anonymous. There may not be direct benefits to you as a participant in this study. There are no foreseeable risks at this time from participating in this study. You may skip any question if you are uncomfortable answering it. Your responses will be used for research purposes only and remain strictly confidential. Your decision whether or not to participate will not prejudice your present or future relationships with the university.

Here is the link for the survey.
(Include link)

If you have any question regarding this survey, please contact me by email Kristin Mauro at kmmauro@iastate.edu. For questions regarding the rights of research subjects, any complaints or comments regarding the manner in which the study is being conducted, you may contact the Iowa State University Office for Responsible Research at 515-294-4566. Thank you for your time and consideration. Your participation is greatly appreciated.

Sincerely,
Kristin M. Mauro, PhD student
Educational Leadership and Policy Studies Program
N243 Lagomarcino Hall
Iowa State University, Ames, IA 50011
APPENDIX B. 2012 ACADEMIC ADVISERS’ USE OF MAP-WORKS

Do you give your consent to participate in this research project? Yes or No.

If yes, the survey will continue. If no, the survey will stop.

You have been identified as someone who advises undergraduate students at Iowa State. For my dissertation I am investigating the extent to which academic advisers use Map-Works when advising their undergraduate students. Whether you are a faculty member or a P&S staff member, your participation in this survey is greatly appreciated because if more people use MAP-Works, more student issues can be resolved before it is too late. The survey should take no longer than 15 minutes.

Please indicate the following background information.

1. Your College. If you have a split appointment, please indicate all colleges involved.

- Agriculture and Life Sciences
- Business
- Design
- Engineering
- Human Sciences
- Liberal Arts & Sciences

2. Please specify your ISU Status.
- Faculty (branches to question 3)
- P & S (branches to question 4)
3. **What is your position/rank at ISU?**
   - Full Professor
   - Associate Professor
   - Assistant Professor
   - Instructor/Lecturer
   - Other (please specify) ____________________

4. **Please indicate your job title.**
   - Adviser 1
   - Adviser 2
   - Adviser 3
   - Adviser 4
   - Program Coordinator
   - Other (please specify) ____________________

**END BRANCH**

5. **Please indicate your gender.**
   - Male
   - Female

6. **Please indicate your age.**
   - Less than 30
   - 30 - 39
   - 40 - 49
   - 50 - 59
   - 60 years or older

7. **How many years have you been an academic adviser at ISU?**
   - 5 years or less
   - 6-10 years
   - 11-15 years
   - 16-20 years
   - More than 20 years

8. **How many years have you been at ISU (as a student, employee, etc.)?**
   - 1-5 years
   - 6-10 years
   - 11-15 years
   - 16-20 years
   - More than 20 years
9. How do you see your role as an academic adviser?  Answer will be open ended, include a text box.

10. Which type(s) of undergraduate students do you advise? Check all that apply.
- Direct from high school
- Transfer students from outside of Iowa State
- Veterans
- Non-traditional
- Other (please specify) __________________________

11. What is the average advisee load assigned to you each semester?
- Fewer than 25
- 25-49
- 50-149
- 150-249
- 250-349
- 350-449
- 450-549
- 550 and above

12. How is your advisee load determined?
- Department formula used to determine my advisee load
- No department formula used, just advise the number of students assigned to me
- I don't know
- Other __________________________

The following questions ask about your knowledge of and use of Map-Works when advising your undergraduate students.

**BRANCH QUESTION ON MAP-WORKS AWARENESS/USE OF MAP-WORKS**

13. Are you familiar with Map-Works?
- Yes (branches to Question 14 and 16)
- No (branches to Question 14 and 15)

14. I am aware that MAP-Works is available.
- Strongly Agree
- Agree
- Neutral
- Disagree
- Strongly Disagree
15. I do not use MAP-Works because the notes are shared between people on campus.
   - Strongly Agree
   - Agree
   - Neutral
   - Disagree
   - Strongly Disagree

16. What Functions of the MAP-Works software do you use? Check all that apply.
   - Individual data only
   - Aggregate reports
   - Make lists
   - Track notes
   - Other (please specify) ____________________________

17. How often do you use MAP-Works? Check all that apply.
   - Once per semester
   - Twice per semester
   - 3 or more times per semester
   - Never
   A text box will also be included for those who wish to provide more detail on their use of MAP-Works.

18. Indicate which of the following events triggers your use of MAP-Works. Check all that apply.
   - When the transition survey opens
   - When the transition survey closes
   - Every time my advisee contacts me
   - Every time my advisee comes in to see me
   - After mid-term grades are released
   - As part of an orientation course assignment
   - After the spring check up survey opens
   - After the spring check up survey closes
   - After final grades are released
   - Other (please specify) ____________________________
19. I contact the “Reds” and ask them to come in and see me to discuss their results.
   - Strongly Agree
   - Agree
   - Neutral
   - Disagree
   - Strongly Disagree

20. I contact the “Yellows” and ask them to come in and see me to discuss their results.
   - Strongly Agree
   - Agree
   - Neutral
   - Disagree
   - Strongly Disagree

21. I contact the “Greens” and ask them to come in and see me to discuss their results.
   - Strongly Agree
   - Agree
   - Neutral
   - Disagree
   - Strongly Disagree

22. How long have you used Map-Works?
   - Less than one year
   - 1-2 years
   - 2-3 years
   - 4-5 years

The following questions are relative to your use of MAP-Works.

23. I understand how to use all of the MAP-Works features.
   - Strongly Agree
   - Agree
   - Neutral
   - Disagree
   - Strongly Disagree
24. I am MAP-Works trained.
   ○ Strongly Agree
   ○ Agree
   ○ Neutral
   ○ Disagree
   ○ Strongly Disagree

25. I find MAP-Works confusing.
   ○ Strongly Agree
   ○ Agree
   ○ Neutral
   ○ Disagree
   ○ Strongly Disagree

26. MAP-Works is useful.
   ○ Strongly Agree
   ○ Agree
   ○ Neutral
   ○ Disagree
   ○ Strongly Disagree

27. I do NOT have time to use MAP-Works.
   ○ Strongly Agree
   ○ Agree
   ○ Neutral
   ○ Disagree
   ○ Strongly Disagree

28. I have faith in MAP-Works ability to predict first year student transition.
   ○ Strongly Agree
   ○ Agree
   ○ Neutral
   ○ Disagree
   ○ Strongly Disagree

29. I have access to MAP-Works.
   ○ Strongly Agree
   ○ Agree
   ○ Neutral
   ○ Disagree
   ○ Strongly Disagree
30. I use another tracking system.
   - Strongly Agree
   - Agree
   - Neutral
   - Disagree
   - Strongly Disagree

Please specify the system you use (a text box will be available for them to fill in the system they use).

31. I use multiple tracking systems.
   - Strongly Agree
   - Agree
   - Neutral
   - Disagree
   - Strongly Disagree

Please specify the systems you use (a text box will be available for them to fill in the system they use).

32. I understand the significance of the MAP-Works color codes (i.e. Red, Yellow and Green).
   - Strongly Agree
   - Agree
   - Neutral
   - Disagree
   - Strongly Disagree

33. I use the MAP-Works report when advising my undergraduates.
   - Strongly Agree
   - Agree
   - Neutral
   - Disagree
   - Strongly Disagree

END BRANCH
The following questions ask about any training you may have received regarding how to use MAP-Works as well as the importance of using MAP-Works.

**BRANCH QUESTION ON “OFF CAMPUS” MAP-WORKS TRAINING**

34. Have you attended the MAP-Works Summer Conference?
   - Yes (branches to Question 35)
   - No (branches to the text box for further explanation of why they have not gone).
   **ADD A COMMENT BOX FOR THOSE WHO ANSWER “NO” TO Q34 AND WISH TO EXPLAIN WHY THEY HAVE NOT ATTENDED THE MAP-WORKS SUMMER CONFERENCE.**

35. I found the MAP-Works Summer conference to be useful.
   - Strongly Agree
   - Agree
   - Neutral
   - Disagree
   - Strongly Disagree

36. The presenters provided clear explanations on the use of MAP-Works.
   - Strongly Agree
   - Agree
   - Neutral
   - Disagree
   - Strongly Disagree

37. The presenters clearly explained why it is important to use MAP-Works.
   - Strongly Agree
   - Agree
   - Neutral
   - Disagree
   - Strongly Disagree

38. The conference helped me improve my understanding of the importance of using Map-Works when advising my undergraduate students.
   - Strongly Agree
   - Agree
   - Neutral
   - Disagree
   - Strongly Disagree
39. I would recommend attending the MAP-Works summer conference to my colleagues.
- Strongly Agree
- Agree
- Neutral
- Disagree
- Strongly Disagree

**END BRANCH**

**BRANCH QUESTION ON “ON CAMPUS” MAP-WORKS TRAINING**

40. Have you attended Map-Works training on campus?
- Yes (branches to Question 41)
- No (branches to the text box)

ADD A COMMENT BOX TO CAPTURE INFORMATION ON WHY THEY DID OR DID NOT ATTEND AN ONCAMPUS TRAINING SESSION.

41. Which training session(s) did you attend? Check all that apply.
- MAP-Works Refresher
- Level One Training
- Level Two Training
- Can’t Remember
- Other (please specify) ________________________________

42. The presenters were knowledgeable about MAP-Works and how to use it.
- Strongly Agree
- Agree
- Neutral
- Disagree
- Strongly Disagree

43. The presenters were knowledgeable about why it is important to use MAP-Works when advising first-year, first time students.
- Strongly Agree
- Agree
- Neutral
- Disagree
- Strongly Disagree
44. The on-campus training session taught me enough so that I could begin using Map-Works.
   - Strongly Agree
   - Agree
   - Neutral
   - Disagree
   - Strongly Disagree

45. The training session was long enough for me to get all of my questions answered.
   - Strongly Agree
   - Agree
   - Neutral
   - Disagree
   - Strongly Disagree

46. The handouts given were helpful.
   - Strongly Agree
   - Agree
   - Neutral
   - Disagree
   - Strongly Disagree

47. I would recommend attending the on-campus training to my colleagues.
   - Strongly Agree
   - Agree
   - Neutral
   - Disagree
   - Strongly Disagree

END BRANCH

BRANCH QUESTION ON WILLING TO PARTICIPATE IN A FOLLOW UP INTERVIEW

Would you be willing to participate in a short confidential interview to further discuss how you use Map-Works in your advising role? The interview will take no longer than 30 minutes.
   - Yes
   - No

Please email your contact information to Kristin Mauro at kmauro@iastate.edu.

END BRANCH
APPENDIX C. FOLLOW-UP INTERVIEW QUESTIONS

1. Could you please describe your role as an academic adviser? What responsibilities do you embrace with respect to your students?

2. Do you use MAP-Works?

3. How many students do you advise?

   If yes, ask the following questions:

   How do you use MAP-Works in a typical advising appointment?

   How do you treat your “reds”, “yellows” and “greens”?

   Do you have intervention programs in place to address a specific warning indicator code(s)? “red”, “yellow” or “green”? If yes, please describe.

   If no, ask the following questions.

   Why have you chosen NOT to use MAP-Works?

   How do you identify/classify students who are at risk?

   How do you advise a student you have identified as high risk versus someone you perceive to be at low risk?

   For each warning indicator category a vignette will be created and given to the academic advisor to examine. The vignette will include personality characteristics and other characteristics relative to the student and their warning indicator. The advisor will then be given the MAP-Works report and asked to walk the interviewer through a typical advising appointment for that student. This set of questions will be asked to everyone whether they currently use MAP-Works or not.

1. Here is an example of a report for one of your students who is coded as “red”.

   Here is an example of a report for one of your students who is coded as “red”.
a. After reading this report, what would be your first step?

b. What additional information or kinds of questions would you ask this student?

c. Why do you ask those questions?

d. How would you advise this student? Please be as detailed as possible.

e. Would you encourage the student to set up additional meetings with you? How often?

f. What campus resources would you refer the student to?

g. How useful do you find the MAP-Works report to be?

h. What could be changed on the MAP-Works report to make it more useful?

2. Here is an example of a report for one of your students who is coded as “yellow”.

   a. After reading this report, what would be your first step?

   b. What additional information or kinds of questions would you ask this student?

   c. Why do you ask those questions?

   d. How would you advise this student? Please be as detailed as possible.

   e. Would you encourage the student to set up additional meetings with you? How often?

   f. What campus resources would you refer the student to?

   g. How useful do you find the MAP-Works report to be?

   h. What could be changed on the MAP-Works report to make it more useful?

3. Here is an example of a report for one of your students who is coded as “green”.
   How would you advise this student? What campus resources would you refer the student to?
a. After reading this report, what would be your first step?

b. What additional information or kinds of questions would you ask this student?

c. Why do you ask those questions?

d. How would you advise this student? Please be as detailed as possible.

e. Would you encourage the student to set up additional meetings with you? How often?

f. What campus resources would you refer the student to?

g. How useful do you find the MAP-Works report to be?

h. What could be changed on the MAP-Works report to make it more useful?