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Five Factors Relating to Students' Academic Advising Experience at a Small, Private, Liberal Arts University

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FIVE FACTORS RELATING TO STUDENTS' ACADEMIC ADVISING EXPERIENCE AT A SMALL, PRIVATE, LIBERAL ARTS UNIVERSITY

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by

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CERTIFICATE OF APPROVAL

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MASTER'S THESIS

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This is to certify that the Thesis of

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Abstract

Academic advising is an important part of the college experience but has innate challenges. Much research has been done to try to improve the quality of students' academic advising experiences, but limited research has focused on student factors that contribute to their experiences. This project sought to discover if certain factors impacted students' academic advising experiences for better or worse at one institution. The research question guiding the study was "Is there a relationship between students' academic preparedness, school, gender, class, and ethnicity with their academic advising experiences at a small, private, liberal arts university?" The 2012 NSSE 2.0 Pilot Study, Academic Advising Module served as the dependent variable and Independent Samples T-tests and Analyses of Variances were calculated for the five aforementioned factors. Statistical results indicated that four factors did not strongly correlate to students' academic advising experiences, positively or negatively. However, students' ethnicity (White vs. Non-White) did produce a strong statistical correlation between the means (p = .002). A main reason for this may be the number of international students who were part of the sample and the multiple ways in which they were supported at the institution in the study. While contributing to academic advising literature, the study also draws attention to the high value of multiple touch-points on students' academic advising experiences. The more faculty and staff take time to invest in students' academic success, the greater those students' estimation and satisfaction with their advising.

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Chapter 1

Introduction

Improving student retention, engagement, and success are significant challenges for higher education. Every student is unique and each institution offers a distinct environment for individuals to develop. Yet research has shown that high-quantity and high-quality interaction between college students and faculty is directly and consistently correlated to student satisfaction, success, and retention (Astin, 1999; Chickering & Gamson, 1987; Kuh, 2003; Kuh & Hu, 2001; Pascarella & Terenzini, 1979, 1991, 2005; Tinto, 1987, 1993, 2004). One of the best ways to provide exceptional opportunities for meaningful student-faculty interaction is academic advising (Campbell, Nutt, & The National Academic Advising Association [NACADA], 2007; Chickering & Gamson, 1987).

Students want and need various types of support, feedback, and information (Chickering & Gamson, 1987; Kuh, 2005). When done well, academic advising incorporates these practices (Hunter & White, 2004; NACADA, 2006; Tinto, 1987, 1993). Academic advising also provides space for naturally communicating other valuable information—one-on-one—that provides positive results in students' overall success and satisfaction in college (Astin, 1999; Levitz, Noel, & Richter, 1999; National Institute of Education, 1984; Pascarella & Terenzini, 2005; Seidman, 2005; Tinto, 1987, 1993). Hunter and White (2004) noted, "Academic advising, well developed and

appropriately accessed, is perhaps the only structured campus endeavor that can guarantee students sustained interaction with a caring and concerned adult who can help them shape [their college] experience" (p. 21).

Unfortunately, the results of academic advising have historically tended to be poor for many reasons (Chun-Mei, Golde, & McCormick, 2007; Coll & Draves, 2009; Tinto 1987). This may be attributed largely to some of its innate challenges (Habley, 1986). Faculty academic advisors often struggle to provide consistent, high-quality advising to their students (Grites, 1984; Habley, 1986, 1994). Faculty academic advisors regularly communicate that their advisory responsibilities feel like extra or "tag-on" responsibilities (Allen & Smith, 2008; Pizzolato, 2008). They often teach full time, research, write, assist in institutional governance, and have other responsibilities that can take precedent over advising. Many faculty advisors also bear the internal struggle of feeling (and being) under-supported and underappreciated for their time and energies (Donnelly, 2009). The numbers of advising centers and professional academic advisors have grown in recent years, but faculty advisors are still very common (Habley, 1997). Numerous attempts have been made to improve the faculty academic advising experience (Bean & Metzner, 1985; Crookston, 1978; Dassance & Batdorf, 1980; Hunter & White, 2004; Kroll, 1990; O'Banion, 2009; Pizzolato, 2008, Yarbrough, 2002), but academic advising often receives low student satisfaction ratings on assessment instruments such as the National Survey of Student Engagement (NSSE) (Kuh, 2003).

Problem Statement

Existing research has sought to examine key factors that impact students' advising experiences. Museus and Ravello (2010), for instance, found that students were most

satisfied when their advisors created a welcoming environment for personal interaction, utilized multifaceted approaches, and were proactively engaged. If faculty and administrators can discover what impacts students' academic advising experience, then they may be better equipped to address institutional weaknesses and meet their students' needs. Few studies have focused on impacts of students' undergraduate academic advising experience at a small, private, liberal arts institution (Frost, 1990; Kroll, 1990). This study sought to answer the question: Is there a relationship between students' academic advising experience and their academic preparedness, school, gender, class, and ethnicity at a small, private, liberal arts university in the Midwest?

From the results of the current study, practitioners should be able to gain a greater understanding of whether any of the aforementioned factors students bring into the advising experience affect what academic advisors are hoping to accomplish. There also may be results that help influence advisors decision-making concerning their interaction with particular groups of students. The hope would be that administrators will utilize the study to inform decisions about strategic planning and academic advising structure at their institutions. Regardless, the study should contribute to the valuable research that is needed to improve such a vital component of students' college experience and institutions' care for students.

Chapter 2

Literature Review

Academic advising has become a prevalent point of interest and research in higher education because of its importance to issues like retention and engagement (Carstensen & Silerhorn, 1979; Habley, 2009; Metzner, 1989; Seidman, 2005; Shane, 1981; Yarbrough, 2010). Effective academic advising is a challenge for all stakeholders. The students, advisors, and institutions would benefit from further research development of this construct (Light, 2001; Schulenberg & Lindhorst, 2008). Healthy academic advising involves a conscientious blending of meaningful structure, curriculum, pedagogy, and learning outcomes (NACADA, 2006). Many have proposed and implemented effective academic advising structures, theories, models, and methods to facilitate student retention, engagement, and success. Research has shown that academic advising is a highly valuable component of a broader student experience and that it incorporates meaningful factors that contribute to student success (Tinto, 2004). Yet, there is very little research surrounding the demographic factors, such as school, ethnicity, and gender, that impact students' academic advising experience.

Background: Student Engagement

Following Pace's (1979) concept of Quality of Effort, Astin (1984) wrote a seminal work entitled, *Student Involvement: A Development Theory for Higher Education.* Astin argued that students' behavior identified and defined their involvement.

He also described the value of quantifying this involvement, namely students' physical and psychological energy in their academic experience and its relationship to their retention and success. A positive correlation has been found for students regardless of what type of student they were before entering college (Tinto, 1987) or what college they attended (Pascarella & Terenzini, 1991, 2005). Other research confirmed Tinto's findings that the higher the student's level of involvement in academics, extracurricular activities, and/or peer or faculty relationships, the greater the likelihood of their success and degree completion (Astin 1993; Barefoot, et al., 2010; Chickering & Gamson, 1987; Chickering & Kuh, 2005; Kinzie, Schuh, Whitt, & Kuh, 2010; Kramer, 2007; Pascarella & Terenzini, 1991, 2005; Seidman, 2005; Tinto 1987, 1993).

Similarly, Kuh (2001, 2005) developed a large body of research around the idea of *student engagement*. As founder of the National Survey of Student Engagement (NSSE), he described student engagement as "the time and energy students devote to educationally sound activities inside and outside of the classroom, and the policies and practices that institutions use to induce students to take part in these activities" (Kuh, 2003, p. 25). At first glance, Astin's (1984) and Kuh's (2001) *student engagement* may seem the same. Indeed, many use the terms interchangeably. However, Wolf-Wendel, Ward, and Kinzie (2009) clarified that the concept of involvement "focuses on the individual and the activities the individual does to become involved" while student engagement "emphasizes academic, out of class setting, and extracurricular activities" (p. 412). In other words, student involvement focuses on what the individual does to become involved in his or her institution while student engagement seeks to understand and

quantify the student's broader scope of interaction with his or her college experience. Kuh (2003) put it candidly:

> The engagement premise is deceptively simple, even self-evident: The more students study a subject, the more they learn about it. Likewise, the more students practice and get feedback on their writing, analyzing, or problem solving, the more adept they become. (p. 25)

The likelihood of persisting and enjoying a postsecondary experience may be positively related to the level of mental, emotional, and relational engagement during the college years.

Students' college experiences are greatly influenced by their relationships with professors and other college professionals. For administrators and faculty, "the challenge is directing students toward those activities that are the 'right' ones for student learning and success" (Campbell & Nutt, 2008, p. 5). Kuh and his associates simplified some educationally purposeful activities with five clusters, or benchmarks, which are included in the NSSE (Kuh, Kinzie, Schuh, Whitt, & Associates, 2005). It is these benchmarks that create a framework for the NSSE. They are (a) the level of academic challenge, (b) active and collaborative learning, (c) student-faculty interaction, (d) enriching educational experiences, and (e) supportive campus environment. Together, these factors are used to quantify a student's engagement in their collegiate pursuits and may be the best predictor of student learning and development (Carini, Kuh, & Klein, 2006; Kuh, 2001; Umbach & Wawrzynski, 2004; Wolf-Wendel, Ward, & Kinzie, 2009). The present study focused on the student-faculty interaction benchmark of NSSE.

Faculty-Student Interaction

Tinto (1975, 2004) confirmed the importance and value of student-faculty interaction. Other research corroborated Tinto's studies. Student-faculty interaction greatly benefits students, faculty, and their institutions (Astin, 1993; Beal & Noel, 1980; Bean & Metzner, 1985; Chickering & Gamson, 1987; Heisserer & Parrette, 2002; Kuh, Kinzie, & Indiana University Center for Postsecondary Research, 2005; Kuh, Nelson, Laird, & Umbach, 2004; Pascarella & Terenzini 1979; Pascarella & Wolfe 1985; Seidman, 2005; Umbach & Wawrzynski, 2004). Astin (1999) stated, "Frequent interaction with faculty is more strongly related to satisfaction with college than any other type of involvement or, indeed, any other student or institutional characteristic" (p. 525). Other research demonstrated that poor academic advising had a strong impact on student departure, while positive faculty and staff attitudes seemed to be the strongest contributors to students' persistence and satisfaction (Bailey, Bauman, & Lata, 1998; Beal & Noel, 1980; Frost, 1991; Kuh & Hu, 2001; Tinto, 1987, 1993).

Academic advising is an important component of any institution and has a strategic place in the life and structure of the college experience. As Frost (1991) contended:

> The faculty-student relationship is important to advising coordinators and advisers for at least three reasons: (1) Advising, unlike most out-of-class activities, is a service provided to most students; (2) advising provides a natural setting for out-of-class contacts with faculty to occur; and (3) advising involves intellectual matters, the most important area of concern for students. For these reasons, those

> responsible for advising cannot afford to discount the influence of frequent and meaningful contact with students. (p. 10)

Hunter and White (2004) also argued that "academic advising, well developed and appropriately accessed, is perhaps the only structured campus endeavor that can guarantee students sustained interaction with a caring and concerned adult who can help them shape such an experience" (p. 21). Campbell and Nutt (2008) agreed:

> The concept of engagement is significant when thinking about academic advising, for we would argue that *all* institutions have some control over the design and delivery of academic advising. We would also argue that, when done well, academic advising can serve as a powerful lever in improving the college student experience and in supporting an institution's goals with regard to persistence and time to graduation because it provides the structured opportunity to direct student behavior toward the 'right' activities. (p. 5)

Thus, finding ways to encourage students to seek out and engage their faculty and faculty likewise to interact with students, especially in an advising context, appears to be highly productive for colleges to foster and encourage.

Other Values of Academic Advising

Along with general faculty-student interaction, research has shown strong relationships between academic advising and a host of variables including student retention (Drake, 2011; King, 1993a; Seidman, 2005), engagement (Kuh, 2001), satisfaction (Chickering & Gamson, 1987), and learning outcomes (Campbell & Nutt, 2007, 2008, 2010). Crockett (1978) considered academic advising the cornerstone of student retention. Tinto (2004) noted, "…effective advising is an essential part of

successful retention programs…" (p. 8). The 2005 NSSE found that academic advising was the most important factor in determining student satisfaction with their college experience (Seidman, 2005).

Concerning student success, Kuh (1997) stated, "It is hard to imagine any academic support function that is more important to student success and institutional productivity than advising" (p. 11). Academic advising, in its own way, is not only at a structural nexus, but an ideological and relational intersection of student and advisor experience: "Academic advising synthesizes and contextualizes students' educational experiences within the frameworks of their aspirations, abilities and lives to extend learning beyond campus boundaries and timeframes" (NACADA, 2006). Owing to this general understanding of its potential, further research has explored productive structures or models for academic advising.

Advising Models

Habley (1983, 1987, 1997) organized seven separate organizational advising models. These include *Faculty Only* and *Supplementary* (each student is assigned a faculty advisor with an ancillary advising office as a resource with advisor's approval), *Split* (faculty advisors and professional advisors are available for students who have not declared a major), *Dual* (every student has two advisors—faculty and professional), *Total Intake* (initial advising is handled by professional advisors until certain requirements are met, at which time students are assigned to a faculty advisor), *Satellite* (each school or department functions within its own choice of structure), and *Self-Contained* (all students are advised by a centralized advising staff from entrance to departure). Virtually all institutions utilize one or more of these advising structures.

For the sake of the present study, academic advising will be synonymous with faculty advisors. This is largely motivated by faculty's traditional role as advisor. Habley (1997) notes, "the two models where all advising is conducted by faculty (Faculty Only and Supplementary) account for the vast majority of structures utilized in…72% of the 4-year colleges using one of those two systems" (p. 40). There is also a larger body of research into faculty advising than into other advising organizational models (Frost, 1991), and it is easier to measure in conjunction with student engagement, faculty-student interaction, and the NSSE than other advising models.

Advising Theories

Crookston (1972) wrote a foundational work on what he called a developmental view of academic advising in which advising was part and parcel of the professorial teaching process. This included the belief that:

> [The advisor and student] differentially engage in a series of developmental tasks, the successful completion of which results in varying degrees of learning *by both parties*. These developmental tasks include reaching an agreement on who takes the initiative, who takes responsibility, who supplies knowledge and skill, and how they are obtained and applied. (Crookston, 1972, p. 6)

Crookston's conclusions on student preference for developmental advising have been supported by many (Carstensen & Silerhorn, 1979; Dassance & Batdorf, 1980; Ender, Winston, Jr., & Miller, 1982; Frost, 1990; Shane, 1981; Winston & Sandor, 1984; Winston, Jr., 1994).

O'Banion (1972) established a foundational and logical order for topics to be discussed in the advising context while maintaining a whole-person paradigm. Others

have followed with their own attempts to improve advising models and the academic advising experience for all parties involved. For example, Yarbrough (2002) suggested an engagement model that allows the advisor and advisee to have a greater return on their investment in the relationship. He suggested the perspective of a meaningful rite of passage with the advisor rather than a set of obstructions to overcome. Pizzolato (2008) also used Baxter-Magolda's Learning Partnerships Model in the context of academic advising.

Advising Methods

There is a great deal of responsibility and high expectations associated with academic advising (Biggs, Brodie, & Barnhart, 1975). Many studies have been conducted to help further define what advisors should know, be aware of, and strive for. Crockett (1978) noted that dynamic advisors are characterized by frequent, high-quality contact with their advisees throughout the semester and do not limit that interaction to their office or a narrow set of topics. This additional time is important because academic advisors should be familiar with each student's needs and expectations (Barefoot, et al., 2010; Fielstein, 1989; Museus & Ravello, 2010; Stebleton, 2011; Wiseman & Messitt, 2010).

Advisors often struggle to spend the necessary amount of time with their advisees for many reasons, including the fact that they are noticeably outnumbered. To foster consistent contact with students, especially those who would not normally seek assistance, Glennen and Baxley (1985) proposed the idea of *intrusive advising*, a set of planned interventions for advisors to deliberately create points of contact with students throughout the semester. Others have investigated ways and areas in which intrusive advising may be particularly helpful with students who are new (Garing, 1993), at-risk

(Heisserer & Parrette, 2002), under-prepared (Fowler, 2007, 2010), or on probation (Austin, Cherney, Crowner, & Hill, 1997).

Advisor attitude (Broadridge, 1996), accessibility (Barnes, Williams, & Archer, 2010), experience (Ford & Ford, 1989, 1993), personality (Zhao, Golde, & McCormick, 2007), worldview (Coll & Draves, 2009), and advising style (Hale, Graham, & Johnson, 2009) all affect student-advisor interactions and relationship. How advisors think about and pursue their roles as advisors impacts the quality of advisor-advisee relationships, too (Frost, 1991). Other research has shown that other methods mesh nicely within an academic advising context.

Paul, Smith, and Dochney (2012) studied the connection between servant leadership and academic advising. They found that wisdom was the greatest predictor of whether developmental advising behaviors would be implemented within the relationship. Yarbrough (2010) suggested that mentorship may be a helpful way to view the advising relationship when trying to make a difference in students' lives. Shaffer and Zalewski (2011) noted that advisors would do well to not only incorporate academic and career advising, but also utilize a human capital approach. This means that advisors should keep in mind the dynamic and fluid nature of the job market. Students' should be educated in the importance of investing in themselves as professionals, knowing that most people will change jobs and even careers multiple times during their lifetime.

Similarly, Shockley-Zalabak (2012) was a proponent of *interaction design*, creating deliberate interactions with students that "help them grow, understand their options, and get them motivated to persist" (p. 14). Cooperrider and Whitney (1999) proposed that advisors utilize *appreciative inquiry* within an advising context. In this

method, advisors guide students into formulating some of their own solutions to their current issues through positively-phrased questions (Bloom & Martin, 2002; Cooperrider, Whitney, & Stavros, 2008; Hutson, 2010). Naturally, the higher the quality of the interaction with an advisor, the greater the student satisfaction.

Advisor-Student Perspectives

Many studies have focused on academic advising from the advisor's perspective. Most academic advisors acknowledge that advising is a vital component of the undergraduate experience (Johnson-Garcia, 2010), and most report high satisfaction with their position (Biggs, Brodie, & Barnhart, 1975; Donnelly, 2009). Yet it is difficult for even for the most well-intentioned advisor to consistently operate at a high level due to the time and effort required that is inconvenient and, at times, even unreasonable (Allen & Smith, 2008; Carstensen & Silerhorn, 1979; Fant, 2010). Also contributing to advisor burnout, few institutions provide meaningful emphasis on advisor training and evaluation, or rewards for high-performing advisors (Artman & Gore, 1992; Crookston, 1972, 1994, 2009; Kuh & Kinzie, 2005; Ramos, 1993).

Another set of struggles that many faculty advisors report are situations in which students themselves are responsible for a poor academic advising experience. Students can make their situation more difficult by not being proactive (Grites, 1984; Pizzolato, 2008; Varney, 2007). It is not unusual for students to underutilize or even avoid their advisor, only to discover a conflict in their schedule or have some other problem (Alextich, 2002). These students either tend to sheepishly admit their mistake and ask their advisor to fix the problem, or turn the advisor into an object of blame and contempt (Henning, 2009; Hunter & White, 2004). Students may even avoid meeting with advisors

as an excuse for poor academic performance (Covington, 2000) or leaving college (Seidman, 2005).

Research concerning the advisor-student relationship has also taken the student perspective into account (e.g., Broadbridge, 1996; Light, 2001). Students often experience difficulty in various aspects of their relationships with their advisors (Grites, 1984). Crookston (1972, 1994, 2009) found that the relationship itself was the most critical component of the interaction between advisor and student. This was supported by others, including Light (2001), whose extensive interviews with students found it very common for them to view their academic advisors as mentors and role models. This relationship, then, is a double-edged sword: the quality and satisfaction of the advisor-student relationship, and their satisfaction with it, often affects their entire college experience for better or worse (Bai & Pan, 2010; Bailey, Bauman, & Lata, 1998; Dreisbach, 1990; King, 1993b; Seidman, 2005; Zelazek, 2011).

This relationship is usually based on a student's major or department, can be treated as an information transmission relationship, and can feel artificial or stilted (Carstensen & Silerhorn, 1979; Crookston, 1972, 1994, 2009). Crookston (2009) captured a poor, but all too common, situation:

> The student also reacts to the confusion between what the advising concept purports to be and what it really is. Presumably an advisor is a person whose "advice" may be accepted or rejected at the option of the student. In reality, this option does not, in many instances, exist. The student often must go to the advisor to get his sanction or approval. Hence, from the student's view, the advisor controls the relationship as well as any resulting decisions, in spite of the

> advisor's conscientious efforts to advise and to place the responsibility for decisions on the student. This ambiguity must be clarified early in the development of a relationship between the advisor and student. In fact, the developmental advisor makes the establishment of the relationship the first order of business with the student. (p. 82)

Many advisors do not listen well or treat the student's needs as most important (Crookston, 1972). The situation is only exacerbated when students feel or legitimately discover that their advisor is guilty of a logistical oversight (Grites, 1984). What may make the student-advisor relationship most complicated, however, is the chemistry of the relationship, which consists of the blending of unique personalities, expectations, strengths, weaknesses, and perceptions. This chemistry may influence the success or failure in the advising relationship (Allen & Smith, 2008; Grites, 1984; Light, 2001).

Successful academic advising, then, appears to be grounded in more than tactics and values, but a mutual striving, centered on each individual student-advisor relationship (Gordon, 1994). Fielstein (1989) found that students prefer a combination of personal developmental advising activities and instructive prescriptive advising activities. Further research is needed for each institution to be able understand who their students are and organize how to address their needs.

Factors Concerning Engagement and Advising

A variety of studies have considered subsets of undergraduate students and how their particular demographic features have impacted their engagement and, specifically, their academic advising experience. Gonyea and Kuh (2006) explored the impact of religious affiliation of an institution and its students' engagement, finding that faith-based

institutions are most likely to foster learning, engagement, and development. Harper and Quaye (2009) studied diverse populations, Pike and Kuh (2005) compared the engagement and intellectual development of first-generation and second-generation undergraduates, Umbach, Palmer, Kuh, and Hannah (2006) studied intercollegiate athletes, and Zhao, Carini, and Kuh (2005) studied student engagement among male and female science, mathematics, engineering, and technology majors. Although the NSSE 2003 annual results have, for over a decade, provided broad and insightful data concerning student engagement that is applicable to academic advising, limited research focuses on factors related to students' academic advising experience.

Metzner (1989) investigated student and faculty perceptions of students' first-year experiences with academic advising and how it affected their retention. She found that high-quality advising lessened student attrition and that even low-quality advising had more positive results than when students received no advising at all. Unfortunately, Jones' (1998) study of new students, found that 49% of respondents never met with their new faculty advisor. Of those who did, 60% indicated positive or neutral feelings when asked whether the faculty advising experience had had a positive effect on them.

Abghari (2007) studied African-American, male business students at a historically black institution and found that they were strongly dissatisfied with academic advising. Incidentally, Museus and Ravello (2010) examined the role minority students' academic advisors played in facilitating their students' success at predominantly white institutions. They found that advisors who were proactive, who "humanized" the process, and who did so within a multidimensional approach were most successful. These studies are valuable and helpful in adding depth and clarity to the understanding of what various

student experiences are and how institutions can seek to meet their students' needs. There is, however, not only a gap in the literature, but also a need for further clarity in understanding what affect academic preparedness, gender, ethnicity, class, and academic discipline have on students' academic advising experience.

Summary

Effective academic advising is valuable for both students and their institutions (NACADA, 2006; Wiseman & Messitt, 2010). Many have sought to improve academic advising structures and methods (e.g., Campbell & Nutt 2008, 2010; Crockett, 1978; Crookston, 1972, 1994, 2009; Glennen, 1985; Grites, 1984; Habley, 1983, 1988, 1997; Habley & Morales, 1998; O'Banion, 1978), but there is still room for improvement (Gordon, Habley, & Grites, 2008; Habley, 1986, 2000; Johnson-Garcia, 2010; Jones 1998). Quality academic advising incorporates positive practices that facilitate student learning and, in turn, retention, student success, and satisfaction (Astin, 1993; Campbell & Nutt, 2008, 2010; Hunter & White, 2004; Tinto, 1993, 2004, 2005). However, academic advising is a complex component of the higher education learning environment. It is a convergence of institutional priorities and resources. Both advisors and advisees also offer a range of engagement, expertise, and expectations (NACADA, 2006).

Institutions need to continue to place an emphasis on quality advising and must seek to understand what impacts their students' academic advising experiences on an individual institutional basis. Kuh (2003) exhorted researchers to "probe more deeply into the nature of the student experience at a particular institution, and not assume that all colleges of a certain type and size are comparable" (p. 26). Answering his call to research, students' academic advising experiences were foundational to the present study.

Hypotheses

Based upon the available literature, students' academic discipline, sex, and class should not make a significant difference in their interaction with academic advisors; advisors should be helpful and considerate of all students, university-wide. Generally, however, students who are more academically prepared are more successful and satisfied with their college experience. Minority students, on the other hand, tend to struggle for a variety of reasons at institutions that accept largely White students. Thus, the hypotheses for the current study were as follows:

- **Hypothesis 1**. Students' school, sex, and class will not impact advising quality ratings.
- **Hypothesis 2**. Academic preparedness will have a positive impact on the academic advising experiences.
- **Hypothesis 3**. Ethnicity will negatively impact students' academic advising experiences.

Chapter 3

Methods

Instrument

There is limited research concerning factors relating to students' academic advising experiences. Further understanding is needed as to whether students' academic preparedness, school, gender, class, and ethnicity impact their academic advising experiences. The present quantitative study utilized secondary data from The National Survey of Student Engagement, 2012 Pilot Study (NSSE 2.0) to address the gap in the literature.

The original NSSE survey has been utilized by higher education professionals and organizations since 2000 to assess the extent to which undergraduate students engage in positive learning and developmental practices (Annual Results, 2011). NSSE annually calculates participating institutions' scores on five effective educational practices so that colleges and universities can better understand and regularly monitor their performances. These benchmarks are (a) academic challenge, (b) active and collaborative learning, (c) student-faculty interaction, (d) enriching educational experiences, and (e) supportive campus environment. Almost all post-secondary institutions in the U.S. and Canada have participated (95%) in a NSSE survey at some point (Annual Report, 2011). Throughout the years, survey reliability has been high (Cronbach's $\alpha = .91$).

The NSSE provides data on many important aspects of academic advising and its relationship to student engagement on a national level (Kuh, 2003, 2001-2011). This information is aggregated annually and provides significant insight on a macro level into ways that colleges and universities can pursue greater success, including focusing on student-faculty interaction. While NSSE data is useful at all levels, "too often, NSSE results are delivered in too large a dose" (Annual Results, 2011, p. 10). Kuh (2001) made the point that "the greatest impact and utility of NSSE data will come when they are integrated with other institutional data about the student experience" (p. 15). The data can also offer institution-specific information that should be taken into account, which the current study also hoped to offer.

The new pilot NSSE 2.0 was administered in the early spring semester of 2012 to 50 different institutions, consisting of 126 questions which measured a wide variety of student's experiences and personal perceptions of their institutions. Additionally, schools involved in the NSSE 2.0 pilot study were offered a choice of any two out of five additional modules to draw out more data on specific undergraduate experiences. These modules were (a) *academic advising,* (b) *student engagement with diverse perspectives,* (c) *development of transferable skills,* (d) *civic engagement,* and (e) *technology*. The institution in the present study chose to focus on students' Development of Transferable Skills and Academic Advising.

Procedures

Data for the quantitative study was retrieved from an existing data set. Five invitations were sent to all first-year and senior students via email by the Office of Assessment and Quality Improvement during February, 2012. Students voluntarily

completed a web-based version of the NSSE 2.0 pilot study. Permission was secured to access 2012 NSSE 2.0 data files through a NSSE-University agreement.

Dependent Variable: Academic Advising Experience

The NSSE Pilot Study 2.0 Academic Advising Module (AAM) included 12 additional questions designed to explore students' academic advising experience (Appendix A). From a brief look at the AAM, it was apparent that the first question was related strictly to the students' satisfaction ("Overall, how would you rate your academic advising experience at your institution?") and the remaining questions sought to address the quantity and quality of their advisors' actions (e.g., "During the current school year, to what extent has your academic advisor(s) helped you understand your school's academic rules and policies?"). Students were asked to rank how strongly or frequently their experiences were consistent with the question on a four point Likert scale (Very little, Some, Quite a bit, Very much).

Of the 315 participants, 62 skipped answering either some (at least 7) or all 12 of the AAM questions. For intermittent questions marked as "Not Applicable" or left blank/unanswered, the standard mean was inserted. This left 264 respondents who answered most or all of the module questions and comprised the sample from which the corresponding data and results were drawn (See Appendix B). The new composite variable was chosen to serve as the dependent variable: academic advising experience (ADVEXP). An inter-item correlation and factor analysis was performed on the ADVEXP and Chronbach's Alpha was .931, indicating very high reliability. Inter-item correlations ranged from .472 to .616, indicating high correlation (see Appendix C).

Independent Variables

School. In order to classify each student into a School, respondents' specific majors were manually reassigned according to the institution's online catalog. Three students in the sample did not have a major recorded in institutional data at the time of the survey. Their major was determined via institutional identification number during the Fall of 2012 (1 respondent was enrolled in Natural and Applied Sciences, and 2 in the School of Liberal Arts). Five students were "Undecided" at the time of the survey. Since then, one has chosen a business major and the remaining four were still in the School of Liberal Arts as of this study. In summary, of the 264 respondents, 56.8% (n = 150) were in the School of Liberal Arts, 11% (n = 29) were in the School of Natural and Applied Sciences, 11.7% (n = 31) were in the School of Business, and 20.5% (n = 54) were in the School of Professional Studies.

Academic preparedness. For the purpose of the study, academic preparedness was defined as the level of academic accomplishment according to the students' college entrance exam. Institutional data was utilized to find respondents' SAT scores (n = 156). Reading and math portions of respondents' SAT scores were combined into one compute variable, namely composite SAT ("COMPSAT"). The minimum score submitted was 570 (out of 1600), the maximum was 1600, and the mean was 1190. Institutionally recorded composite ACT scores ("actt") were also used (n = 185) in the quantifying of academic preparedness. The minimum ACT score submitted was 16 (out of 36), the maximum was 35, and the mean was 26.42. Seven students did not have ACT or SAT scores submitted. The composite ACT and SAT scores were then relabeled into quartiles. COMPSAT was recoded (0 thru 1089=1; 1090 thru 1209=2; 1210 thru 1309=3; 1310 thru 1600=4) into

"SATQ" variable. Composite ACT scores (labeled as "act" in data set) were recoded as 0 thru 23=1; 24 thru 26=2; 27 thru 28=3; 29 thru 99=4 into "actt" variable. These quartiles were labeled as follows: 1=Very Low, 2=Low, 3=Medium, and 4=High (see Appendix D). These two variables were combined into one compute variable ("ACPREP"), which served as the academic preparedness independent variable. For students who submitted both SAT and ACT scores, the greater of the two quartiles was used (see Appendix E).

Gender. Institutional data indicated that of the 264 respondents, 32.6% were male (*n* = 86) and 67.4% (*n* = 178) were female.

Class. The class of the students fell into two groups, first-year students (FY), and seniors (SR). FY and SR students were the only respondents invited to take the survey and the designation of respondent class status was based upon institutionally reported data, ensuring accuracy. Of the 264 respondents, 46.2% (*n* = 122) were FY students and 53.8% (*n* = 142) were SR students.

Ethnicity. Respondents' ethnicity was determined utilizing institutional data. The ethnicity of respondents was as follows: 1.1% (*n* = 3) African American/Black, 86% (*n* = 227) Caucasian/White, 2.3% (*n* = 6) Hispanic, 6.8% (*n* = 18) "Foreign," and 3.7% (*n* = 10) "Unknown." Because of the vast majority of Caucasian/White respondents in this sample (and at this institution in general), respondents were grouped into "Majority," meaning Caucasian/White, and "Minority," including all other respondents. Thus, 86.7% (*n* = 227) were Majority respondents and 13.3% (*n* = 35) Minority respondents.

Participants Summary

Participants in the study included 32.6% male (M, *n = 86*) and 67.4% female (F, *n* = 178) First-Year (FR) and Senior (SR) undergraduate students, ages 17-32 (M = 20),

from a small, private, liberal arts institution in the Midwest. Students at the institution were relatively similar in ethnicity, the majority being White/Caucasian. FY students were determined according to cumulative credit hours earned after completing a high school degree or equivalent. Seniors were those considered probable graduates for spring or summer 2012. For the institution, seniors were within 12-24 hours or 6-8 courses of graduation (based on semesters) at the start of spring semester. Fall 2012 graduating seniors were not included in the file. Student anonymity was maintained through the use of institutional ID numbers (Hayek & Kuh, 2004).

Analyses

Independent t-tests were chosen to compare the mean scores of the institutionally reported gender (Male/Female), ethnicity (Majority/Minority), and class (FY/SR) of the participants. Two separate one-way between-subjects ANOVAs were conducted to compare the effect of school and academic preparedness on students' academic advising experiences.

Summary

The study was designed to quantify relationship(s), if any, between five factors (Academic Preparedness, Gender, Ethnicity, Class, and School) and students' academic advising experiences as measured through the pilot NSSE 2.0 survey. Analysis of the data was used to further understand students' experiences and implement policies targeting student populations experiencing lower academic advisor satisfaction. Through the study, the institution gleaned quantifiable evidence of students whom their advisors were serving well and those who may require more attention.

Chapter 4

Results

The present study conducted independent samples t-tests and One-Way Analyses of Variance (ANOVAs) of NSSE 2.0 Pilot student data to gain a better understanding of whether or not students' Academic Preparedness, School, Gender, Class, or Ethnicity were correlated with their Academic Advising Experience (AAE) at a small, private, liberal arts university in the Midwest. More specifically, independent T-tests were used to calculate Gender, Ethnicity, and Class variables. A One-Way ANOVA was used to analyze and predict the impact of School and Academic Preparedness on students' academic advising experiences. Statistical significance was determined at $p < .05$. Results do not claim to be causal, but they do draw attention to whether any of the factors provided a noticeable difference in students' experiences at the institution.

Ethnicity

An Independent Samples t-test was utilized to calculate whether ethnicity (Majority, White; Minority, all other ethnicities represented in the sample) had any relationship to students' AAE. Findings showed that Ethnicity had a statistically significant difference ($t(262) = 3.09$, $p = .002$) between means of Majority ($N = 229$, $M = 33.28$, $SD = 7.588$) and Minority ($N = 35$, $M = 37.49$, $SD = 7.00$) students' academic advising experiences. Further statistical analysis found Cohen's d to be -0.577. This indicated a small effect-size or "practical strength" of the above conclusions (Creswell,

2008, p. 195). Likely, this was due to the size of the Minority group (n = 35). Table 1 shows the means, standard deviations, and computations of Cohen's *d* and effect-size *r*.

Table 1

Cohen's d of the correlation between Ethnicity and AAE

	Mean	Standard Deviation	Cohen's *d*
Majority	33.279	7.588	
Minority	37.493	7.001	-0.577

Thus, for Ethnicity, the Null Hypothesis was rejected, which stated that ethnicity was not correlated to students' academic advising experiences at the institution in the study. In other words, there was found to be a statistically significant probability that the relationship of minority students' ethnicity and positive academic advising experiences was not due to chance.

Class and Sex

Independent Samples T-tests were also conducted for Class and Genders' correlation with students' AAE. Results for Class showed no statistical significance (t(262) = 1.68, p = .095). Being a First-Year (M = 32.99, SD = 7.33) versus a Senior student (M = 34.56, SD = 74) did not correlate to AAE. Similarly, results for gender showed no statistical significance (t(262) = .77, p = .44). Males (M = 33.32, SD = 7.67) had very similar experiences to Females (M = 34.09, SD = 7.62). Thus, while Class was closer to a level of statistical significance (<.05), the Null Hypothesis was accepted for both Gender and Class in addition to School and Academic Preparedness. None of the correlations for these four factors were statistically significant in relation to the students' academic advising experiences in the study.

Table 2 shows the means, standard deviation, and levels of significance for factors analyzed via Independent Samples t-test.

Table 2

Descriptives of Ethnicity, Class, Sex in relation to AAE

	Sig. (2-tailed)		Number	Mean	Std. Deviation
Ethnicity	.002**	Maj.	227	33.28	7.58
		Min.	35	37.49	7.00
Class	.095	FY	122	32.99	7.33
		SR	142	34.56	7.84
Sex	.444	Male	86	33.32	7.68
		Female	178	34.09	7.62

Note. Equal variances are assumed
***Note. P* < .01

School and Academic Preparedness

An ANOVA was calculated to measure any correlation of Academic Preparedness and Schools with students' academic advising experiences (AAE). Table 3 shows that the correlation between students' school and academic preparedness was not statistically significant.

Table 3

One-Way Analyses of Variance Summary for Academic Preparedness and School

	Sum of Squares	df	Mean Square	F	Sig.
School	182.197	109	1.672	.938	.636
Academic Prep.	139.556	109	1.280	.986	.528

Thus, for both School and Academic Preparedness and their statistical correlation to students' AAE, the Null Hypothesis was accepted, which stated there was no statistical correlation between School or Academic Preparedness and students' AAE.

Summary

Results show Academic Preparedness, Gender, Class, and School did not have statistically significant correlations to the sample of students' Academic Advising Experience. It appeared that students at all levels of academic preparedness, Males and Females, First-Year students and Seniors, throughout all four Schools, had similarly positive academic advising experiences at the studied institution. Ethnicity was found to provide statistically significant results. The data supported the statement that Minority students at the institution had better Academic Advising Experiences than Majority students.

Chapter 5

Discussion

The current study utilized Independent Samples T-tests and Analyses of Variances to investigate the correlations between students' academic preparedness, school, gender, class, and ethnicity and their academic advising experiences at a small, private, liberal arts university in the Midwest. Results indicated four of the five factors mentioned above did not significantly impact students' AAE positively or negatively. The exception was Ethnicity, which produced a very strong statistical correlation (p = .002). The following dialogue includes discussion on how and why minority students received better advising, limitations of the study, and ideas for future research. The intent of the study was to provide broader applicability, to add to the academic advising literature, and to draw attention to ways in which students can have an excellent AAE.

Ethnicity

Given the university's homogeneity and sample size, it was interesting that minority students rated their academic advising experiences higher than the majority. The low level of racial diversity at the institution was difficult to overlook: about 91% to 9%, Caucasian/White to Other ethnicities. So, why did students' ethnicity correlate strongly with their AAE? There could be at least a few reasons for this results.

Included in the minority populations were international students. These students may have been compelled by any number of cultural forces to rate their advisors highly

(i.e., cultural respect for elders). Also, results may indicate a greater level of proactivity on the part of minority students to seek out their advisors, whether motivated by insecurities or a sense of duty. Regardless, consistent with the literature (Museus & Ravello, 2010), proactive interaction with advisors may also lead to a greater level of appreciation and thankfulness on the part of minority students for the efforts made by faculty and personnel, hence a greater level of satisfaction.

Additionally, international minority students at the institution were required to participate in an extended orientation before entering their first year, often creating strong bonds with other international students and their facilitators, directors, and advisors. Students may also be assigned an additional counselor from the English Language Studies program to help with their English competency. The international students could have asked probing questions and sought to facilitate their academic and personal success in addition to their academic advisor and professors.

It would stand to reason that the more personal support students receive, the more highly they will rate their overall advising experience. This being the case and consistent with the literature (Abghari, 2007; Astin, 1993; Tinto, 1975), colleges and universities should consider how they can increase students' interaction with their assigned academic advisors as well as other personnel who have a vested interest in students' academic achievement. This is the main lesson from the study: multiple touch-points of collaboration among academic allies should facilitate student success and increase student satisfaction with their AAE.

Instrument

The second strength of the study came from the creation of the dependent variable: the students' AAE. This was especially valuable for the study because of the singular weight placed upon the dependent variable. With this in mind, factor analyses and inter-item correlations were conducted as part of the study on the AAM itself to gain a deeper understanding of the instrument and thus the dependent variable. The results were pleasantly surprising. Consistent with NSSE's past record, Chronbach's Alpha was calculated for the 11-question academic advising experience variable. It was .931 (see Appendix C). Inter-item correlations ranged from .472 to .616 indicating unusually high reliability and correlation. So, using the NSSE 2.0 Pilot study's AAM proved to be a strength of the study. In the future, institutions may utilize the Academic Advising Module with confidence of its internal validity. Similarly, there were a number of positive talking points that could be taken away from the four remaining independent variables in the study.

Academic Preparedness

While students' academic preparedness did not correlate strongly with their academic advising experiences in this study ($p = .528$), combining test scores to create the variable highlighted the high academic caliber of the institutions' students. The students in the sample placed in the "Very Low" and "Low" test score quartiles had ACT test scores of 0-23 and 24-26, respectively, and SAT scores of 0-1089 and 1090-1209, respectively. The national average students' combined math and reading SAT scores is currently 1010 (Princeton Review). For the ACT, average scores ranged from 20 to 21 (College Board). In other words, students considered to be less academically prepared

within the context of the study were actually over 5 points higher in the ACT and 80-199 points higher on the SAT than the national average.

School

The decision to divide the respondents into four schools was based solely upon the structure of the institution in the study. This distinction made the decision simple and pragmatic, but also produced an unevenly distributed sample. The School of Liberal Arts had 123 respondents, making up almost half the sample. Professional Studies contained 80 of the 264 respondents and the schools of Natural and Applied Sciences and Business had 30 and 31 respondents, respectively. It was hard to determine if this had any effect on the results of the study, but given the sample sizes, other institutions should be able to expect similar results; students were having positive experiences in their academic advising regardless of the school in which they studied. This conclusion seemed to prove true from the beginning to the end of the college experience.

Class

Comparisons of first-year versus senior students indicated a greater likelihood that a correlation could be made than other variables (*p* value = .095), but were not statistically significant. Nothing conclusive can be stated about these results, but the institution in the study, along with all institutions, should consider how to carefully cater their advising structure, staff, and communication to different classes of students. It should not be assumed that any class needs more or less consideration. Rather, first-year students may need different forms of encouragement and guidance than graduating seniors, regardless of gender.

Gender

Results from the study showed very low probability that students' gender impacted their academic advising experiences at the institution. This was consistent with a cross-tabulation of gender and academic advising satisfaction. This was a positive reality. Two out of three respondents were female, but the majority of both males and females reported positive AAEs. Nonetheless, considering most faculty members at the institution are male, it was encouraging to see that the majority of both males and females felt positively about their AAE.

For the university in the study, analyses indicated students were generally receiving a high level of quality academic advising institution-wide. Evidence of this claim was found in first question of the AAM (dropped from the compute dependent variable), which asked students to rank their satisfaction with their academic advising experience. Most (81.5%) indicated their experience was "good" or "excellent," while the rest (18.5%) indicated room for improvement. In other words, 4 out of 5 students at the institution felt they had a positive academic advising experience. While appropriate attention should be paid to the smaller group who have lower satisfaction with their academic advising, so also should proper acknowledgment be offered for a largely satisfied student constituency at the institution. Given the applicability of the study, its hypotheses and limitations should be properly considered.

Hypotheses

Results from the study were not exactly as hypothesized. Consistent with the available literature, students' academic discipline, sex, and class did not make a significant difference in students' academic advising experiences. Contrary to

expectation, students who were more academically prepared were not more successful or satisfied with their academic advising experiences. Most surprising, minority students tended to have notably better academic advising experiences than their majority, White peers.

Limitations

An implicit limitation of the study was the use of self-reporting surveys. Kuh (2001) willingly noted that the NSSE "relies entirely on students' testimony" (p. 13), which poses a problem for some who infer biased responses by students. In its defense, however, Kuh also countered,

> The survey questions are clearly worded and refer to recent activities with which student have first-hand experience. The questions don't intrude into private matters nor do they prompt socially desirable responses. Psychometric analyses produce acceptable levels of reliability and demonstrate reasonable response distributions for most items. (Kuh, 2001, p. 13)

Additionally, the survey for FY students was taken during their first semester on the campus, and there was no account taken for their limited experience and exposure to their academic advisor or their college experience as a whole.

A main limitation of the study was its scope. While the study was purposeful in seeking institution-specific information for the betterment of that university, there was limited value for other schools, even those of similarity. The institution in the study was a private university in the Midwest with a student body of approximately 1900 undergraduate students. The sample size may be considered a limitation. While 264 respondents were plenty to run statistical analyses, a larger sample could have proved

useful. Even more valuable would have been a larger sample of minority students (*n* = 35). Still, 9% of the student body was minority students and 13% of the 264 respondents were minority students, so the distributions of the institution were fairly well represented in the study.

Another limitation of the applicability of the study was this institutions' advising structure. Given the variety of models represented nationally and internationally, it was worth noting the institution in the present study utilized a Split model of academic advising (Habley, 1997). There was an advising office that advised a specific group(s) of students (e.g., those that were undecided about a major, underprepared, probationary). All other students were assigned to academic units or faculty for advising. While many of the same issues may be present regardless of the model, the degree to which the study could be helpful to those at institutions using different advising models was unknown.

Lastly, having a correlational design, the study implicitly lacked any causal or predictive conclusions. Statistical analysis (Cohen's *d* of -0.577 and a Pearson *r* effect-size of -0.27) indicated a small effect-size of practical strength of the results of the study. Thus, the study should be accepted as valid yet incremental in its value to the literature and carefully applied to other universities appropriately.

Future Research

Similar studies could be performed at other institutions to see if the findings of the present study were consistent with their research. If enough institutions did such a study, data could be aggregated and broader conclusions drawn concerning whether there were trends based upon institutional type.

Individual institutions, including the one in the study, would likely benefit from additional studies evaluating individual majors. Institutions may also benefit from studying the quality of individual advisors through various research methods. If not already in place, qualitative data could be gathered or evaluation forms utilized to discover whether or not individual academic advisors are offering quality advising to their advisees. This may prove worthwhile in assessing which advisors are doing well and who may need further motivation in providing beneficial advising help to students.

Given the strong statistical difference between Minority and Majority students, the institution in the study could do an assessment/evaluation of the process minority students go through during their academic advising experiences and seek to model the rest of the students' care after it. Similarly, institutions could hone in on the group of students who indicate they had a "poor" or "very poor" academic advising experience and consider doing qualitative studies to discover themes of dissatisfaction with their individual advisors or AAE.

Conclusion

Academic advising is an important component of the academic experience. Although, every student has a unique experience, every student deserves a positive advising experience. Administrators should note the high validity and reliability of the NSSE 2.0 Academic Advising Module and feel confident in using it in the future to gauge their students' academic advising experiences.

The findings in the present study highlighted that minority students at the institution were having a better academic advising experience. Since structures that are in place for minority students were doing an outstanding job, administrators should consider

how they could assimilate a multiple touch-point strategy for all students. Whether through institutional changes in structure, resources, or training, universities should reaffirm and demonstrate that students' academic success is everyone's responsibility.

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Appendix A

NSSE 2.0 Pilot 2012 Population File

Instructions
The population file specifications for the NSSE 2.0 Pilot 2012 generally match the specifications for the standard NSSE administration, but with some exceptions. Please use the Excel template entitled "PilotTmpl.xls" to help create your student population file. Use the same column headers in your file, even if you don't use the template.

Population files must include all baccalaureate degree-seeking first-year students and seniors enrolled and classified as such by your institution in the spring/second semester of academic year 2011-12 as defined below:

Population File Definitions
All students must have been enrolled in both fall and spring/second term 2011-12.

First-year students –include transfer, part-time, distance education, and returning students if they are still considered first-year students according to cumulative credit hours earned after completing a high school degree or equivalent. Do not count any Advanced Placement (AP) credits or other college credits earned prior to completing high school. To ensure that sophomore, junior and senior transfer students are classified correctly (and not as first-year students), please confirm transfer credit validation before creating your population file.

Seniors – those considered probable graduates for spring or summer 2012. For most institutions, seniors will be within 12-24 hours/6-8 courses of graduation (based on semesters) at the start of spring semester, but use your own institutional guidelines to determine likely spring or summer graduates. Fall 2012 graduating seniors should not be included in the file.

Eligible – All student categories listed below must be included in your population file:

1. Traditional age and older/non-traditional age students
2. Full-time and part-time students
3. Commuters and residents
4. Distance education students
5. Students from all campuses and institutions sharing the same IPEDS number

Ineligible – Students enrolled in programs that terminate with master's or doctoral degrees without earning a baccalaureate degree along the way (e.g., pharmacy, occupational therapy, physical therapy, etc.). NSSE 2.0 2012 Pilot Population File Instructions, page 2.

Population Field Content

Student ID is required for all students, and:

1. *Must be unique* for each student in your population (to eliminate confusion over duplicate records and to ensure students with the same name are correctly identified).
2. *Must NOT be a social security number* (SSN). Your file will be checked for the appearance of SSNs as it is uploaded. If SSNs appear to be included, you will be asked to confirm SSNs were not in fact used. If your institution currently uses SSN to identify students, you must generate alternative student ID numbers for your population file, and maintain records that will allow you to link the alternate student ID number back to the SSN.

Student name – First and last names in separate columns are required for all students.

E-mail address – Please follow these guidelines:

1. Provide either the students' school-provided e-mail addresses or their e-mail addresses from outside Internet service providers. Use the e-mail addresses which you believe students are most likely to check.
2. If you have two e-mail addresses available, provide both for each student in "Primary e-mail address" and "Secondary e-mail address" fields. NSSE will utilize both addresses to ensure message delivery to students.
3. Be sure to include domain names (e.g., studentname@indiana.edu).
4. Verify student e-mail addresses before submitting your population file.

Student records – Class level, enrollment status, and gender are required for sample selection and proper weighting. If your institution uses non-traditional enrollment status or class level, please contact your client service team prior to submitting your file.

1. **Class level** –
   - Use FY for First-year students
   - Use SR for Seniors

2. **Enrollment status** –
   - Use FT for Full-time
   - Use PT for Part-time

3. **Gender** –
   - Use F for Female
   - Use M for Male

4. **Race** – Designate race/ethnicity for each student using the following three-letter abbreviations:

Code	Category
AFR	African American/Black
IND	American Indian/Alaska Native
API	Asian/Pacific Islander
WHI	Caucasian/White
HIS	Hispanic/Latino
OTH	Other
FOR	Foreign
MUL	Multi-racial
UNK	Unknown

4. **Standardized test scores** – ACT and SAT scores in four fields are required, as presented in the table below. We advise checking your data against the score ranges. For students who have multiple sets of scores for individual tests, provide the most recent set of scores.

Field	Description	Score Range
ACTcomp	Composite ACT score	1-36
SAT_V	SAT verbal or critical reading scores	200-800
SAT_M	SAT math score	200-800
SAT_W	SAT writing score (new SAT)	200-800

Recent studies by the College Board indicate comparability between the older (pre-2005) and newer versions of the SAT test; therefore, we do not distinguish between these types of scores. The presence of an SAT writing score will indicate that a particular student's scores come from the newer version of the test. If you have technical difficulties combining both new and old SAT scores into a single field, please let us know.

Appendix B

ADVEXP Reliability

Result Variables of AAM questions transformed

	Result Variable	N of Replaced Missing Values	Case Number of Non-Missing Values First	Last	N of Valid Cases	Creating Function
1	ADV1201_1	1	1	264	264	SMEAN(ADV1201)
2	ADV1202a_1	11	1	264	264	SMEAN(ADV1202a)
3	ADV1202b_1	13	1	264	264	SMEAN(ADV1202b)
4	ADV1202c_1	10	1	264	264	SMEAN(ADV1202c)
5	ADV1202d_1	6	1	264	264	SMEAN(ADV1202d)
6	ADV1202e_1	20	1	264	264	SMEAN(ADV1202e)
7	ADV1202f_1	36	1	264	264	SMEAN(ADV1202f)
8	ADV1202g_1	21	1	264	264	SMEAN(ADV1202g)
9	ADV1202h_1	12	1	264	264	SMEAN(ADV1202h)
10	ADV1202i_1	62	1	264	264	SMEAN(ADV1202i)
11	ADV1202j_1	39	1	264	264	SMEAN(ADV1202j)
12	ADV1202k_1	9	1	264	264	SMEAN(ADV1202k)

Reliability

Case Processing Summary of ADVEXP Variable

		N	%
Cases	Valid	264	100.0
	Excluded[a]	0	.0
	Total	264	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics of ADVEXP Variable

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.931	.933	11

Appendix C

ADVEXP Inter-Item Correlation Matrix

Inter-Item Correlation Matrix of the NSSE 2.0 Pilot Study Academic Advising Module

	a	b	c	d	e	f	g	h	i	j	k
a		.616	.555	.483	.459	.396	.473	.504	.510	.472	.483
b			.647	.482	.549	.447	.500	.474	.518	.517	.495
c				.594	.561	.485	.502	.574	.547	.509	.545
d					.697	.470	.558	.714	.560	.530	.525
e						.664	.631	.664	.619	.612	.553
f							.628	.594	.598	.559	.473
g								.711	.646	.635	.540
h									.667	.594	.553
i										.656	.578
j											.649
k											

Note. All variables include the standard mean and in the data read SMEAN(ADV1202*x*)

Appendix D

Descriptive Statistics of SAT and ACT Scores

Descriptive Statistics of Composite (math and verbal) SAT scores

	N	Minimum	Maximum	Mean	Std. Deviation
math + verbal scores	156	570.00	1600.00	1190.6410	173.36026
Valid N (listwise)	156				

Descriptive Statistics of Institutionally Reported Composite ACT scores

	N	Minimum	Maximum	Mean	Std. Deviation
Institution reported: Composite ACT score	185	16	35	26.42	3.845
Valid N (listwise)	185				

Appendix E

Academic Preparedness Quartile Descriptive Statistics

Academic Preparedness Quartiles

Preparedness	Quartile	SAT Scores	ACT Scores
Very Low	1	0-1089	0-23
Low	2	1090-1209	24-26
Medium	3	1210-1309	27-28
High	4	1310-9999	29-99

Academic Preparedness (ADVEXP) Descriptives

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Min.	Max.
					Lower Bound	Upper Bound		
Q1	55	34.514	8.190	1.104	32.300	36.729	16.00	44.00
Q2	61	34.851	7.924	1.014	32.821	36.880	12.00	44.00
Q3	60	32.980	7.920	1.022	30.934	35.025	16.00	44.00
Q4	81	33.214	7.064	.784	31.652	34.776	17.00	44.00
Total	257	33.826	7.717	.481	32.878	34.774	12.00	44.00

Multiple Comparisons

Dependent Variable: ADVEXP

Tukey HSD

(I) ACT/SAT Quartiles	(J) ACT/SAT Quartiles	Mean Diff. (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Q1	Q2	-.3362	1.4357	.995	-4.049	3.3768
	Q3	1.5348	1.4414	.711	-2.192	5.2625
	Q4	1.3006	1.3490	.770	-2.188	4.7896
Q2	Q1	.3362	1.4357	.995	-3.376	4.0493
	Q3	1.8710	1.4039	.543	-1.759	5.5019
	Q4	1.6369	1.3089	.595	-1.748	5.0221
Q3	Q1	-1.5348	1.4414	.711	-5.262	2.1929
	Q2	-1.8710	1.4039	.543	-5.501	1.7597

	Q4	-.2341	1.3151	.998	-3.635	3.1671
	Q1	-1.3006	1.3490	.770	-4.789	2.1883
Q4	Q2	-1.6369	1.3089	.595	-5.022	1.7483
	Q3	.2341	1.3151	.998	-3.167	3.6354

ADVEXP

Tukey HSD

ACT and SAT Quartiles combined	N	Subset for alpha = 0.05
		1
Q3	60	32.9800
Q4	81	33.2141
Q1	55	34.5148
Q2	61	34.8510
Sig.		.526

Note. Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 62.905.

b. The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed.