MEASURING WHAT MATTERS: A CASE STUDY OF ALIGNING ASSESSMENT PRACTICES IN STUDENT AFFAIRS WITH INSTITUTIONALLY IDENTIFIED STUDENT LEARNING OUTCOMES

A Dissertation Presented to the
Faculty of the College of Education
University of Houston

In Partial Fulfillment
of the Requirements for the Degree

Doctor of Philosophy in Educational Psychology and Individual Differences

by

Pamelyn Klepal Shefman

University of Houston

May 2014

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May 2014

Dedication

To Drew Shefman, thank you for your unwavering support, I dedicate this work to you and your knowledge of that this is now behind us. To Quinntera (Quinn) Shefman (age 6) and Brockston (Brock) Shefman (age 4), you will only have fleeting memories of this “book”; though to date, we have been on this journey for most of your life.

Thank you for your love, patience, and understanding.

Acknowledgement

For my committee, thank for the support and guidance in this process. I would like to acknowledge Dr. Catherine Horn, my advisor and dissertation chair. Cathy, you challenged and supported me through this entire process which I am indebted to you for. You not only opened space in your calendar but in your life. You have shown me what it means to be a mentor and leader and I want to thank you for everything. Thank you for being an advisor who cares and puts your work on equal with your students. Thank you for your support and acceptance of my ever changing directions before I truly found my research niche and current career path.

Dr. Lyle McKinney, thank you for your time and intentionality; both were irreplaceable. Lyle, it has been a wonderful journey for us both. I acknowledge that you were the first faculty member who I encountered in the program and our first impressions were meant to be challenged. Between your sponsorship of my graduate assistantship and chairing my candidacy while Cathy was leave, things were being set into motion. Even though our methods and styles were not on the same “frequency” we found an ebb and flow and have become complimentary.

Thank you, Dr. Richard Walker, for your mentor-ship and setting my journey on its course. You provided me not only direction but opportunity. You've taught me the importance of a personal connection, putting yourself into your work, and to paying attention to the bigger picture. Richard, your willingness to let me join your team years before there was a place for me at the table is not only characteristic of your passion but of your vision.

The final committee member on my dissertation was Dr. Frank Ross. Frank, your entry into my process has been invaluable to me and my topic. Your willingness to be part of my project and understanding the nuances of not only this work but the undertaking of the endeavors of student affairs is irreplaceable. You have given much considering the additional effort it takes to be the “off-site” committee member. I hope that you and your family accept my deepest appreciation for your contributions.

This project would not have been possible without the support of many colleagues, friends, and family members that have encouraged me along the way. I want to first thank the members of my doctoral cohort at the University of Houston, who have kept me focused, motivated, and balanced throughout this long process over these four years. Particularly: Dr. Mac Griswold who walked first and will pull the rest along; without you this would not be done and I cannot thank you enough. Kate Noonan, thanks for your warm smile and endearing friendship. Amber Mollhagen, thank you for keeping us in line and always seeing the positive side. Patricia Rehak, you alone are motivation for not only your wisdom and whit but for your willingness to drive so many miles without a complaint. Toya (Roberts) Conston, Jerrel Wade and Cory Owen somehow our classes rarely matched but yet we are all still in it together. You have all kept me engaged, positive, and productive!

The colleagues who helped mentor me from the beginning, at points from the start, in the middle, and through the end – I have a special place for you in my heart forever; namely Boyd Beckwith, Alison (Von Bergen) Wells, Carrie Miller, Zack Coapland, De’Awn Bunch, and Daniel Maxwell. My friends, who have endured many ignored invitations, thank you for your patience; especially Patrick Walsh, Imrana Malik,

Omar Sharief, Becky Hall, Tina (Villard) Camp, Lisa and Mark Livingston and many others! And to Sue Shefman and Mandy Shefman… thanks for all your help, time, cheerleading, and , of course, babysitting.

And the most important being my parents! Even though my mom, Phyllis Klepal, is not here to see it I know that she would be proud in knowing I have done this for me. And though my dad, Paul Klepal, who may not always understand what I am doing, he knows how important this has been for me. I love you and appreciate knowing that part of you is in me!

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May 2013

Shefman, Pamelyn, Klepal. "Measuring What Matters: A Case Study of Aligning Assessment Practices in Student Affairs with Institutionally Identified Student Learning Outcomes". Unpublished Doctor of Philosophy, University of Houston, May 2014.

Abstract

This study documented the measurement development processes and alignment of learning outcomes for a student affairs division at a large, urban research institution. A significant contribution of this study was the identification of the extent to which assessment instruments used across a division effectively measured intended outcomes. The three research questions for this study were:

1. What processes did departments within a division of student affairs at a large urban research university use to develop assessment measures of student learning outcomes?

2. To what extent are department-level assessment measures aligned with the specific institution's student learning outcomes?

3. To what extent do items used in measuring the institution's specific student learning outcomes across student affairs departments agree with similarly identified constructs (based on departmental identification) across the division of student affairs?

The theoretical framework and principles that foundationally guided this study were based on Biggs' (1996) link to a constructivism framework within a higher education context, the need for and utility of aligning learning outcomes and the measures used both inside and outside of the classroom (Astin, 1993; Banta & Kuh, 1998; Kuh et al., 2007; Pace, 1980; Pascarella & Terenzini, 2005), and the role of assessment in a learning culture (Shepard, 2000).

For this research, a case study of a division of student affairs from a metropolitan area in the mid-western United States (MMU) was conducted. In academic year 2012-2013, the year of this study, there were eight departments within the Division of Student

Affairs at MMU; six of which participated. The methods employed in this study included: interviews of leadership within the division of student affairs; document analysis of the 34 instruments used; and intraclass correlation analysis utilizing a random sample of items (n = 147) across outcome assignments from cognitive-interviewed coding debriefers and the departments.

This study found that in-house developed survey measures were most prominent across departments within a division of student affairs. Of the division's 34 measures, 32 were developed by staff members with varying degrees of division-level input. Across all measures, 585 items were used with 394 assigned, by the departments, to measure institutional-identified student learning outcomes. Of this group, 171 items met the study's rubric benchmark ranking for measuring these outcomes while none of the items met milestone or exemplar ratings. Primary student learning outcome agreement between the department and the coders met the threshold of ICC > 0.70 (Cicchetti, 1994) in all analyses. The debriefers' primary codes were 81.3% in agreement as a group of coders ($ICC_{(2,3)} = .813$, $p<.001$). Further the departments' assignments were in agreement for 76.2%, 71.7% and 76.7% for code debriefer A, B, and C respectively ($ICC_{(1,2)} = .762$, $p<.001$, $ICC_{(1,2)} = .717$, $p<.001$, and $ICC_{(1,2)} = .767$, $p<.001$).

Scholars agree student learning outcomes should be measurable, meaningful, realistic, and ongoing while in the alignment with the institutional mission (Bresciani et al., 2004; Huba & Freed, 2000; Maki, 2004) and these findings expand this work. This study also highlights the competency needs for student affairs professional in assessment and instrument design particularly given the reliance on in-house developed measures supporting the efforts of NASPA & ACPA (2010). Further, this study suggests that more analysis is needed at an item level to investigate the potential of confounding across learning outcomes and create a richer understanding of item alignment. For practitioners, findings from this study serve as process documentation and provide guidance in the alignment of learning outcomes for student affairs divisions at postsecondary institutions.

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Chapter I

Introduction

The current political and economic climate of American higher education has resulted in increased accountability measures that require colleges to demonstrate student learning and success through data-driven assessment. Reflected by the increase in outcomes-based funding, pressure has shifted from access to postsecondary education toward a completion-focused agenda for higher education institutions (Hughes, 2012). Assessment methods provide information for formative and summative functions for an institution and can help understand incremental impacts that contribute toward student success. Ultimately, well-developed and utilized assessment can provide demonstrable effectiveness of outcome data to the institution's external constituents, including students, parents, legislators, and accreditors (Upcraft & Schuh, 1996).

Institutions need to know now not only how well but to what extent they are achieving their educational intentions (Maki, 2010). "Higher education is beyond the question of whether assessment should exist and is now asking how it can yield greater benefits for students and society" (Erwin & Wise, 2002, p. 67). Institutions hold the primary responsibility of demonstrating student learning and success (New Leadership Alliance for Student Learning and Accountability [NLASLA], 2012). Understanding how student learning assessment measures contribute to that primary responsibility is critical.

The Guidelines for Assessment and Accountability, which is supported by 27 national higher education organizations and associations and the Board of the NLASLA, outlines the principles of effective assessment. These guidelines include obtaining, using, and reporting evidence of student learning (NLASLA, 2012). For some institutions, factors such as degree completion, retention, and time to degree completion have been used to demonstrate student success and achievement (Arum & Roksa, 2011; Sternberg, Penn & Hawkins, 2011). Beyond these course grained factors, a more detailed understanding of student success can be measured in the outcomes of learning. Additionally, accrediting agencies today expect that assessments of student learning outcomes need to be occurring throughout all aspects of higher education (Banta, Lund, Black, & Oblander, 1996; Blimling, Whitt, & Associates, 1999; Breciani, Zelna, & Anderson, 2004; Upcraft & Schuh, 2001). Student affairs divisions, as an explicit non-academic example area within higher education, are impacted by this increased demand for accountability. As prior trends of simple satisfaction surveys fall out of favor, there is a move towards more reliable measures of student learning, success, and achievement of institutional goals (Schuh, 2009). Effectively measuring student affairs' contributions toward the outcomes of students' learning and development outside of the classroom experience has been a challenge and shifts toward measuring learning have become more evident since the call for reform in student affairs measurement (ACPA, 2005; Breciani, Zelna, & Anderson, 2004; Doyle, 2004; Green, Jones, & Aloi, 2008; Keeling, 2004).

Beginning in 1994, the American College Personnel Association (ACPA) sponsored the Student Learning Imperative resulting in a guiding statement for student affairs that advocated for divisions' focus to become learning-oriented. In less than two years, Ender, Newton, and Caple (1996) approximated that nearly 25% of all student affairs divisions had changed their guiding philosophies to incorporate an emphasis on learning. In a collaborative effort to outline how student affairs practitioners are integrated into the fabric of the learning landscape of an institution, ACPA and National

Association of Student Personnel Administrators (NASPA) produced a report in 1997 called the “Principles of Good Practice for Student Affairs”. This influential joint document demonstrated a strong national call for assessment based guidelines addressing the need for student affairs to be part of the seamless learning landscape (Doyle, 2004). The authors of the principle document suggested seven components that would confirm student affairs programs support the central mission of their institution (ACPA & NASPA, 1997). These seven principles included (a) engaging students in active learning; (b) helping students develop coherent values and ethical standards; (c) setting and communicating high expectations for student learning; (d) using systematic inquiry to improve student and institutional performance; (e) using resources effectively to achieve institutional missions and goals; (f) forging educational partnerships that advance student learning; and (g) building supportive and inclusive communities.

Many student affairs departments and divisions focus their efforts on an individual student’s success without utilizing accurate measures to better understand how their efforts holistically impact student success and learning (Shutt, Garrett, Lynch, & Dean, 2012). Furthermore, from a student affairs perspective, insufficient explanation of the contributing factors to overall student learning and success at the institutional level occurs when the focus is solely on the individual student’s comprehensive development over the student’s complete learning that occurs (Shutt et al., 2012). This study proposes to understand the processes of student learning measurement development from a division-wide lens. Specifically, this study evaluates the assessment measures of one campus, as that division worked to accurately and broadly demonstrate student affairs’ role in addressing student learning through evaluating the alignment of these measures to the institutionally-defined student learning outcomes.

Purpose of the Study

Literature asserts that distinguished student affairs educators comprehend and incorporate the institution's mission, values, and goals prior to the articulation of student learning outcomes (AAHE, 1992; Bresciani, Zelna, & Anderson, 2004; Huba & Freed 2000; Maki, 2010; Palomba & Banta, 1999). Research further indicates that sustainable assessment efforts are rooted in learning outcomes that align with other departments' learning outcomes in the division and the overall mission of the institution (Pascarella & Terenzini, 1991; AAHE, 1992; Schroeder, 1999; AAHE et al., 1998; Banta & Kuh, 1998; Kuh & Banta, 2000; Green, Kirkland, & Kulick, 2002; Maki, 2010; Kezar, 2003; NASPA & ACPA, 2004).

The purpose of this study, then, is to understand how an incorporation of the institutional mission and learning outcomes is evident in the assessment activities within a division of student affairs. Specifically, this study evaluates the extent of alignment between the measured outcomes of the division of student affairs and institutionally identified student learning outcomes. The three research questions for this study were:

1. What processes did departments within a division of student affairs at a large urban research university use to develop assessment measures of student learning outcomes?

2. To what extent are department-level assessment measures aligned with the specific institution's student learning outcomes?

3. To what extent do items used in measuring the institution's specific student learning outcomes across student affairs departments agree with similarly identified constructs (based on departmental identification) across the division of student affairs?

Significance of this Study

Higher education today is pushing for demonstrations of student learning with evidence that student success is happening across all areas on college campuses. Student affairs offices and administrators must meet these demands by moving beyond the simple student satisfaction surveys of the past. The current literature provides an understanding of assessment practices in student affairs, but it is lacking regarding the process of assessment measurement and the potential alignment that student affairs has with its institution. Additional research is needed to help guide student affairs professionals in creating a culture of assessment on their campuses that reflect the goals and outcomes outlined by their institutions.

This study documents the processes and alignment of learning outcomes of a student affairs division at a large, urban research institution based on the institution's established, recognized contribution toward the field of understanding of student learning outcomes. Another significant contribution of this study was the identification of the extent division-wide assessment instruments effectively measured the intended outcomes. A nuanced understanding of the relationship between the process and outcomes is presented. Findings from this study are timely and valuable because they can serve as a guide for student affairs divisions at other postsecondary institutions that intend to prioritize assessment in today's demanding higher education environment. By understanding how the literature and actual practices of student affairs programs do or do not align, researchers can update the literature and practitioners can be more congruent and, by extension, more effective.

Definition of Key Terms

Student affairs is defined as the "programs, experiences and services that cultivate student learning and success" provided outside of the classroom (NASPA, n.d.). Buyarski (2004) characterized the work culture of student affairs through principles of teamwork/family and job competency with service and care for students. For this study a student affairs division is used to reflect the whole unit of student affairs programs offered at the institution. This is differentiated by the departments that make up that unit. Departments are defined by the functional and/or content area that they represent (i.e. student housing, counseling services, etc.).

Assessment generally is defined as "any effort to gather, analyze, and interpret evidence which describes institutional, divisional or agency effectiveness" (Schuh, & Upcraft, 2001, pp. 4-5). Bresciani, Gardner, and Hickmott (2009b) define assessment as a method within student affairs as the process of "improving student success and informing improvements in the practice of student services and programming" (p. 15). For the purposes of this study, assessment is defined as "a systematic and critical process that yields qualitative information about what programs, services, and/or functions of a student affairs department or division that positively contributes to students' learning and success and which ones could be improved" (Bresciani et al., 2009b, p. 16).

Over the last three decades several sources have similar definitions in the context of higher education (e.g. Angelo, 1995; Ewell, 2001; Polumba & Banta, 1999; Suskie, 2004) for how we have come to understand student learning outcomes and their assessment. For the purpose of this study, student learning outcomes are broadly defined in terms of "the knowledge, skills, and abilities that a student has attained at the end (or as a result) of his or her engagement in a particular set of higher education experiences" (CHEA, 2003, p. 5). More specifically, this study is focused on the institutional specific learning outcomes of the Principles of Undergraduate Learning (PUL): Core Communication and Quantitative Skills, Critical Thinking, Integration and Application of Knowledge, Intellectual Depth, Breadth, and Adaptiveness, Understanding Society and Culture, and Values and Ethics.

Outline of the Study

The sections of this study are organized into five chapters. This opening chapter provided background and context for the work; establishing the need for this research in this area. The subsequent two chapters contain a review of the relevant literature and the methodology of the research. Chapter two's critical and specific review of literature includes the context of higher education and student affairs and the relevant assessment related research. Chapter two closes with literature as it relates to student outcomes in undergraduate education and the framework that guides the study. The third chapter outlines the methods, procedure, and case selected for this study. Chapter four outlines the data collected to answer the questions of this study. In closing, chapter five includes a discussion of the findings from chapter four, limitations of this study, and the implications for future work; both research and practice.

Chapter II

Review of the Literature

This study evaluates the extent to which there is alignment between the outcomes measured by a division of student affairs and institutionally identified principles of student learning outcomes. These outcomes are typically reported annually based on what the departments within the division of student affairs have purported that they are measuring. The topics covered in this literature review provide context for the present study. First, the chapter opens with the theoretical framework and principles that foundationally guide the study. Then it is important to review the evolution of assessment in higher education and to understand student affairs more specifically. There is a dearth of existing literature that specifically examines the role that assessment plays within student affairs divisions in the context of their specific institution, but this review provides an overview of the studies that have been conducted on this topic. A review of the literature as it relates to student learning outcomes in undergraduate education is of interest to this study and closes the discussion of literature. This literature review contains an emphasis on the gaps in extant studies and highlights what questions remain unanswered in regards to what we know about divisional assessment processes within the context of student affairs in higher education.

Conceptual Framework and Guiding Principles for the Study

To consider how assessment practices in student affairs might be conceptualized, an elaboration of the framework guided by theories of constructivism, learning, and assessment are addressed. This review begins with Biggs' (1996) links of constructivism framework with the instructional design within a higher education context. This framework leads to a conceptualization of the need for and utility of alignment of the learning outcomes and the measures both inside and outside of the classroom. From this learning outcomes alignment, the role of assessment in a learning culture as conceived by Shepard (2000) as a reorientation of assessment practices from testing toward learning. These theoretical frames give way to the proposal that we must assess the right way at the right time, further suggesting that the alignment of measures and outcomes be a critical part of the new theories for assessment.

Biggs (1996) argues that higher education ought to apply constructivist theory to learning where the learner arrives at knowing through the commutation and construction knowledge. To this end, there is importance in providing for understanding of the education and holistic development of students beyond the classroom knowledge (Astin, 1993). Experiences outside of classroom, such as participation in campus organizations, community service, peer interaction, working on camps, and living on campus, also contribute to student learning (Pascarella & Terenzini, 2005, Kuh et al., 2007). In particular, a greater level of student’s involvement in college has a positive influence on that student's cognitive development (Astin, 1993; Pace, 1980). Consequently, this long documented contribution of the out of the classroom experience toward the enhancement of learning must be measured along with the academic assessment. As Banta and Kuh (1998) describe:

> Assessment programs that focus exclusively on classroom-related goals and performance cannot capture all that students learn, including some of the outcomes that policy-makers and employers say are increasingly important, such as knowledge application, decision-making and

communication skills and getting along with people who are different. A holistic view of learning is needed if assessment programs are to capture accurately what students gain from attending college. (p. 46)

And as Shepard (2000) proposes, we must assess at the right times and in the right ways to measure learning. Therefore the alignment of outcomes and measures matters to how we engage in understanding student learning.

Further, this study uses three conceptual principles, the Principles of Good Practice for Student Affairs (ACPA & NASPA, 1997), Hallmarks of Effective Outcomes Assessment (Banta, 2004), and Banta, Jones, and Black’s (2009) discussion of the principles of effective assessment practice. First, the *Principles of Good Practice for Student Affairs*, recognizes the systems of good practice in student affairs; the second, *Hallmarks of Effective Outcomes Assessment*, operationalizes tenets for performing program assessment in higher education practice; and the third *Designing Effective Assessment: Principles and Profiles of Good Practice* draws on the processes needed in the design of assessment measurement.

The authors of the *Principles of Good Practice for Student Affairs* suggested seven components of practice that would confirm student affairs programs’ support for the central mission of their institution (ACPA & NASPA, 1997). These seven principles included engaging students in active learning; helping students develop coherent values and ethical standards; setting and communicating high expectations for student learning; using systematic inquiry to improve student and institutional performance; using resources effectively to achieve institutional missions and goals; forging education partnerships that advance student learning; and building supportive and inclusive communities. The *Hallmarks of Effective Outcomes Assessment* as the second guiding model/framework states that assessment should include the following: (1) produce credible evidence of learning and organizational effectiveness; (2) take place in an environment supportive and conducive to assessment; (3) that communications be continuous regarding assessment findings and activities; (4) that data used to improve programs and services as well as be a vehicle to demonstrate accountability; and (5)that it be ongoing, not episodic (Banta,2004). Finally in the third framework, Banta, Jones, and Black (2009) discuss the principles of effective assessment practice and provide profile examples of these practices. In order to develop effective assessment the necessary steps are to engage the stakeholders, create a connection to goals and processes, write a plan, time assessment appropriately, and to assess the process (Banta et al. 2009).

With the theoretical framework described earlier, these principles present conceptual insights into what is known about the composition of best practices for assessment measurement in student affairs. The themes of connection of assessment practices toward institutional mission and outcomes, alignment of measures to outcomes based in literature, and an association of the department measures toward divisional understanding build the framework that guides this study.

Evolution of Assessment in Higher Education

With the 1988 reauthorization of the Higher Education Act of 1965, accrediting agencies have required institutions to include the assessment of student outcomes (Eaton, 2006; Jones & RiCharde, 2005; Palomba & Banta, 2001). This reauthorization became a crucial moment in higher education in the evolution of assessment. Congress' requirements included that for institutions to remain eligible for federal funding that the agencies require identification and assessment of educational objectives for students (Peterson & Augustine, 2000). This push toward outcomes assessment for higher education frames the more specific inquiry into the inclusion of assessment in student affairs. This review, therefore, offers a brief discussion of the evolution of student outcomes assessment within higher education.

Peterson and Einarson (2001) provide a "comprehensive portrait of institutions' approaches to student assessment, specific dimensions of organizational and administrative support for student assessment, assessment management policies and practices, and institutional uses and impacts stemming from assessment" (p. 636). They surveyed chief academic officers from 2,524 institutions and combined Integrated Postsecondary Education Data System (IPEDS) data to gain an understanding of the institutional support for assessment as carried out in undergraduate programs. Institutions reported heavy use of testing as the means of collecting student-learning data despite a call from research that regards cumulative work (e.g. capstone projected, portfolios, etc.) and post-college data of current student outcomes on performance and affective development as better measures (Peterson & Einarson, 2001). Further, findings indicated that conducting student assessment was first most heavily influenced by accreditation and second by state requirements; noting that institutional mission emphasis was only a moderate motivator for institutions toward assessing student learning.

Most important, the results of Peterson and Einarson's study (2001) showed that following a decade of assessment research, most institutions had produced "little documented evidence of whether and to what degree their assessment efforts have influenced decision making or produced discernible impacts on students, faculty, or external constituencies" (p. 658). This study within academic affairs, which has a lengthier history of assessing student learning when compared to student affairs, recommended that assessment of student learning outcomes needed to become the mainstay in practice beyond accreditation purposes (Peterson & Einarson, 2001). Since this study shifts have been seen across the academy in approaches to outcomes assessment.

In 2006, *Outcomes-Based Academic and Co-Curricular Program Review: A Compilation of Institutional Good Practices* reported on a survey administered to 43 institutions that have had recognized practices in assessing student learning (Bresciani, 2006). The included institutions were nominated based on criteria from three sources: *Nine Principles of Good Practice for Assessing Student Learning* (AAHE, 1994), *On Change V—Riding the Waves of Change: Insights from Transforming Institutions* (Eckel, Green, & Hill, 2001), and *Levels of Implementation* (Lopez, 2002). Findings showed that all but one institution required student-learning in cognitive and affective outcomes from their programs (both in academics and student affairs). Equally, 80% also required descriptions of methods used in assessment and follow-up recommendations that resulted from the assessment activities. Bresciani (2006) discusses how this select group of institutions illustrates that measures of student outcomes need to advance in the ability to determine student learning and provide data for institutions to continually improve their programs. However, the author warned that as external constituent pressures grow, the ability of institutions to address the issues of accountability and show evidence of quality is on a tight timeline. Student affairs program assessment was not central in the work, yet this study helps demonstrate that even in institutions known for having best practices in assessment, there still exists a disconnect between literature and research and the daily practices in our institutions of higher education.

In the second edition of Assessment for Excellence, Astin and Antonio (2012) look at higher education's assessment practices from three "conceptions" of excellence: the reputational, the resource, and talent development views. Astin and Antonio (2012) argue that the assessment practices are too focused on ratings or reputation and the accumulation of resources (i.e. faculty research output, facilities, high-achieving students admitted) and not on the development of the students. Using Astin's (1991) input-environment-outcome (I-E-O) model continues to be central to the author's recommendations of assessment practices for higher education to regain excellence in the current results-based funding and outcomes-based accreditation environment of accountability to external constituencies (Astin & Antonio, 2012). The authors' focus on creating a general resource to all of higher education, while also adding to the practice of assessment with real contextual examples of how to assess, analyze data, and use results accentuates assessment practices as ever evolving. Student affairs is tersely mentioned with this work, therefore a more nuanced understanding of assessment practices within student affairs is addressed.

This is by no means an extensive review of the literature related to the evolution of student affairs assessment but it is deliberately focused on the most relevant content related to the present research questions. This review intentionally highlighted the path of student learning outcomes from within the broader context of higher education through the discussion of seminal work on learning outcomes in higher education, setting the stage to understand where assessment from the narrower context of student affairs fits. It is important to transition into the next section by summarizing that this work has continued to echo that assessment practices move beyond accreditation and into practice and that shifts in approaches toward assessing what students learn have been seen.

Assessment in Student Affairs

Today, expectations for student affairs assessment are high and have significantly changed over the past several years from satisfaction and utilization-based results to student learning outcomes and effectiveness (ACPA, 1996; Breciani, Zelna, & Anderson, 2004; Doyle, 2004; Green, Jones, & Aloi, 2008; Keeling, 2004). A growing number of student affairs divisions are now demonstrating their effectiveness to stakeholders through assessment practices. As a method within student affairs, assessment is defined as “a systematic and critical process that yields information about what programs, services, or functions of a student affairs department or division positively contribute to students’ learning and success and which ones should be improved” (Bresciani et al., 2009b, p. 16). Bresciani et al. (2009b) continue by defining the process as “improving student success and informing improvements in the practice of student services and programming” (p. 15).

Improvements in the practice of student affairs arguably ought to be in consideration of how the division provides for student success and how assessment data informs knowledge about the impact to student success (Bresciani et al., 2009b). This increasing and expected demonstration of data has begun a shift toward a culture of assessment within student affairs. A culture of assessment creates an environment where practice and decisions are data-centric pervasively threaded into the practice of student affairs. Schuh and Upcraft (2001) addressed assessment within programmatic areas of student affairs and methods of utilizing and applying assessment in these areas. Assessment as a cyclical process of gathering, analyzing, and interpreting data for use in making changes is often addressed from an application perspective in texts (Bresciani et al., 2009b; Schuh & Upcraft, 2001).

The literature further asserts that the necessity for assessment in student affairs is identical to that of the necessity of assessment for all higher education programs (AAHE, 1992; ACPA, 1996; Blimling, Whitt, & Associates, 1999; CAS, 2011; Keeling, 2004; Schuh & Upcraft, 2001; Upcraft & Schuh, 1996). In 2003, Upcraft provided a clear list of seven reasons why engagement in assessment is needed in student affairs. Those reasons are survival, quality, cost-effectiveness, evaluation, strategic planning, informing policy and decisions, politics, and accreditation (Upcraft, 2003). A rich and descriptive body of literature regarding assessment practices in student affairs provides much in the "how-to" literature regarding assessment focusing on the necessity of assessment, types of assessment, recommendations for effective assessment, examples of institutions' assessment practice, uses of assessment, and the strengths and pitfalls of assessment (Bresciani, 2006; Schuh & Upcraft, 2001; Schuh & Associates, 2009; Strayhorn, 2006; Upcraft & Schuh, 1996; Upcraft, 2003).

Further in 2010, NASPA and ACPA focused on the competencies practitioners need to be successful. Their focus on competencies like assessment and evaluation was intended to inform the professional development opportunities and curriculum for student affairs preparations in a profound and joint effort (NASPA & ACPA, 2010). An identified gap in this literature, however, is that it does not address the implementation or application of these practices of assessment measures or competencies in the field.

However, a compilation of case studies of institutions who have implemented assessment in their division of student affairs provides a tool of reflection on the implementation of assessment practices (Bresciani, Gardner, & Hickmott, 2009a). Recognizing a lack of literature that examines implementation or applications, Bresciani et al. (2009a) requested first-hand accounts from division of student affairs leaders to report on culture, examples addressing how assessment is used, tips for implementation, and descriptions of any barriers and strategies to overcome them. The book's presentation of the case studies was one of institutional reflection and academic case study (i.e. for use in professional development or master's study courses) but was not intended to be an empirical view of assessment in student affairs. There exists a limitation in that each case was selected to be included in the book and the reporting staff chose to share these items (i.e. the contents were not empirically driven). There is great value in this manuscript looking at the successes and challenges as the divisions moved toward assessment as a priority.

Included in this review of literature on assessment in student affairs is intentional work that both situates and illustrates the path of assessment practices. This body of literature draws from prolific and established authors in the field and represents a detailed scope of what is covered about assessment practices in student affairs. Within this group of literature, an understanding of how the assessment in student affairs has evolved is supported, the practical application of assessment practices is addressed, and anecdote as to what division have done shift toward a culture of assessment is inlcuded. Missing from this work is a clear understanding of the steps undertaken to assess student learning or the steps in creation toward measurement of outcomes. Finally, this work does not provide clear connections in assessment practices toward the overall institutional student learning outcomes. Also absent from this body of work is the empirical lens of assessment in student affairs which follows in the next section.

Empirical Work in Student Affairs Assessment. Woodard, Hyman, von Destinon, and Jamison's (1991) study was among the earliest documentations of the prevalence of assessment practices (or lack thereof) particular to student affairs. Specifically, the authors focused on the involvement of student affairs in the development and implementation of outcomes assessments through a survey of assessment practice in student affairs. Surveying 821 senior student affairs officers of NASPA member institutions, the authors observed that the senior student affairs officers saw the call for assessment as evident, but that the process approach was not clear. At the time of the study, the majority of institutions in NASPA did not have, nor were they planning to create an assessment program. Of the limited student affairs officers that reported having assessment practices, the most frequent reason provided was for external accountability and not for student learning or internal improvement. Regarded as a pioneering study of student affairs assessment and planning at the time, Woodard et al.'s work was limited to an analysis of the plans toward assessment and not the actual practice of assessment in student affairs.

Banta, Jones, and Black (2009) profiled four student affairs programs and their respective assessment practices. Although the focus of the book was on designing effect assessment for academic programs, the authors did describe assessment in student affairs programs at selected public institutions with long-established and well-respected assessment practices. The student affairs divisions included were California State

University–Sacramento, The Pennsylvania State University, University of Hawaii at Manoa, and Truman State University in Missouri. Banta et al. (2009) provide a range of efforts that student affairs divisions and departments within the division undertook, but were unable to provide a deep or rich understanding of the processes used and how each aligned with the institutional student learning outcomes.

To provide empirical findings to support student affair's development and use of assessment and assessment plans, Green, Jones, and Aloi (2008) studied three different research institutions in order to examine high quality assessment practices. The three cases selected were based on the specific divisions of student affairs' expertise and implementation is assessment of student learning and development, recommendations from the NASPA's Assessment Knowledge Community of institutions to select, and a thorough research team case review. A total of 25 individuals from the three institutions were interviewed with an average of eight subjects per institution. Green et al. (2008) found that significant leadership support for assessment was common in all cases. Further, the most common reported assessment method for these divisions of student affairs was locally developed surveys (58% of outcomes measured used surveys) followed by interviews, observations and documents analysis (18%, 16%, and 10% respectively) of outcomes measured used these other methods (Green et al., 2008).

Of specific interest to the current study, Green et al. (2008) found that over half of the interviewed participants in the study agreed that assessment in student affairs should support the overall mission of student learning. Further, it was found that most student affairs areas depend on local surveys associated with a functional area and measures were not tied to the overall mission of the division or the institution (Green et al., 2008). Other noteworthy findings were that respondents felt that data from assessment was being used in decision making and about one-quarter of results were being used to change the assessment methods. The recommendations from this study include ensuring that leadership support assessment practices and that learning objectives that support the institutional mission be used within student affairs.

Other work has considered student affairs' contribution to the institutional mission. Doyle (2004) found that the primary reason for student affairs to engage in assessment was to demonstrate contribution at an institutional level. This quantitative study of 216 chief student affairs officers from small colleges (enrollment under 3,000 students) undertook an analysis comparing the *Principles of Good Practice for Student Affairs* (ACPA & NASPA, 1997) to the extent to which survey respondents described incorporating those principles into practice. Using the survey responses the researcher used repeated measures analysis of variance with tests of within-subjects and contrast bivariate correlations between the seven rated principles reported (i.e. to see if the highest mean principle ranked was different than the second highest, the second to the third, and on through the seventh). The dependent variable was the rankings the respondents gave to each principle based on the perceived incorporation of each principle at their institution. Comparison of the differences of means in the principles revealed that student affairs divisions rated themselves as most successful at incorporating principles of learning based on direct interaction with students. This included engaging students in active learning, helping students develop coherent values, and building supportive and inclusive communities. The areas where senior student affairs officers self-reported being less successful were in the incorporation of principles related to management, including using systematic inquiry, and utilization of resources to achieve institutional mission/goals. This study recommended future work look at better understanding in the practices and process behind assessment measures and how those measures align to student learning outcomes.

A study of the conditions at small colleges and universities and student affairs assessment addressed the need to consider the uniqueness of the small college environment (Seagraves & Dean, 2010). This qualitative study looked at generalized resources student affairs utilized in assessment at three intuitions, each with a student enrollment under 5,000. The data was collected from this purposeful sample of small-sized institutions utilizing interviews and focus groups of student affairs staff members responsible for assessment practices and implementation and senior student affairs leaders found that the senior student affairs officer's role had a positive impact on perceptions and attitudes about assessment. The authors also drew connections between the accreditation processes and specific characteristics of a small institution, but little attention was given to the assessment processes undertaken at the institutions.

Using a cross-sectional survey of senior student affairs officers from 168 small colleges, a study investigated how those divisions assessed and evaluated their programs based on the *Principles of Good Practice in Student Affairs* (ACPA &NASPA, 1997) (Ashley-Pauley, 2012). Findings from this study demonstrated that small schools' (undergraduate enrollment under 3,000) divisions of student affairs used assessment primarily toward measuring the program's use of resources to achieve the institutional mission and the campus climate of inclusivity. Few divisions from the study measured student learning outcomes or their own programs' practices. Further, respondents infrequently used assessment for external accountability, personnel evaluation, or resource acquisition. This dissertation provides a useful understanding of the practices of the divisions of student affairs at small schools and asserts that the literature and research should become a stronger focus for smaller schools in their assessment of student learning.

A dissertation study of three student affairs divisions at Carnegie classified American Research I institutions looked at the assessment practices from a comparative view across these institutions. Green (2006) used a case study with a document analysis approach to understand the practices across these divisions to provide more insight into what was occurring at institutions in regards to student affairs assessment. This study was one of the first to discuss the interconnections of departments across a division of student affairs and found that departments were not collaborative in assessment practice across the units within a single division. However, there was commonality across institutions, in that two of the three divisions studied found it necessary to have an assessment expert to create the collaborations needed. Of interest to this study, Green (2006) found that the divisions of student affairs felt that outcomes they did report should contribute to learning outcomes. However, the outcomes that the divisions were using to measure student outcomes were not derived from the institutional learning outcomes (Green, 2006). There are significant limitations in this small scale study, yet the influence needed from the institutional outcomes and collaborative efforts across a division are show as influential to student affairs as a practice. The study calls for in depth look at alignment of student learning outcomes by the student affairs division and the institution; work that this study addresses.

In summary, the existing body of work shows that early on Woodard et al. (1991) demonstrated that student affairs divisions saw the need for and shared an intention to plan for assessment. The *Principles of Good Practice for Student Affairs* (ACPA & NASPA, 1997) has been studied and been related to student affairs practices of interactions with students toward learning (Dolye, 2004) and in small schools stewardship of resources toward the mission of the institution (Ashley-Pauley, 2012). However neither study provides a better understanding of a division's impact on the institution's mission or the assessment of student learning. Further, we have seen that divisions of student affairs have relied on locally developed surveys and used data used for decision making but the data have not been tied to the institutional mission or learning outcomes (Green et al., 2008). Previous work has called for a more in depth look at the assessment practices in divisions of student affairs (Doyle, 2004; Green, 2006; Green et al., 2008) and a need to provide a connection between the institution, the division of student affairs and student learning (Doyle, 2004; Green, 2006).

Student Learning Outcomes in Undergraduate Education

Outcomes assessment, as the act of measuring student learning outcomes in comparison with institutional mission and departmental goals and objectives (Bresciani et al., 2009), may be perceived as an important form of assessment in a learning context. Student learning outcomes are indicators that explain what students know or can do rather than what educational experience will be offered (Huba & Freed, 2000). Huba and Freed (2000) state that institutions need to maintain clearly stated learning outcomes to offer guidance for all activities, services, and programs and inform undergraduates about student affairs educators' intentions. Additionally, Bresciani et al. (2004) explain that student learning outcomes are related to both the affective and cognitive dimensions of the student experience. Scholars agree student learning outcomes should be measurable, meaningful, realistic, and ongoing and in alignment with the institutional mission (Bresciani et al.,2004; Huba & Freed, 2000; Maki, 2010).

For the purpose of the present study, it is important to understand the context for and evolution of student learning outcomes in higher education. Therefore, the following subsection examines how student learning outcomes have become situated in a national effort to establish common outcomes for all of higher education. In addition, this review explains how these national efforts have resulted in an increasing number of colleges and universities establishing their own institutional-specific student learning outcomes. This review concludes by discussing the specific learning outcomes addressed in prior research literature that were adopted by the institution serving as the case study for the current investigation.

National Efforts to Establish Student Learning Outcomes. In 2003, the Council of Higher Education Accreditation published their Statement of Mutual Responsibilities for Student Learning Outcomes: Accreditation, Institutions, and Programs. The purpose was to "provide a common platform upon which to develop appropriate policies and review processes that use evidence of student learning to improve practice, to improve communication with important constituents, and to inform judgments about quality" (CHEA, 2003, p. 1). Association of American State Colleges and Universities (AAC&U) (2004) drew together the consensus of leaders in education and stakeholders toward essential learning outcomes for all baccalaureate graduates. Central to these statements is the need for accreditors and institutions to clearly understand their role in addressing how student learning outcomes and the evidence of these outcomes are necessary in the call for accountability within higher education.

AAC&U sponsored a campaign to champion the issues of outcomes that address the "learning that will truly empower today's students to succeed and make a difference in the twenty-first century" (Humphreys, 2006, p. 1). This campaign is the Liberal Education and America's Promise: Excellence for Everyone as a Nation Goes to College (LEAP). From this LEAP project, the essential outcomes for education based on research and dialogue address what education should be providing to today's students. There is considerable consensus between business, educators, and students as to what learning should occur in undergraduate education and the outcomes of such education (AAC&U, 2011; Humphreys, 2006; King, Brown, Lindsay, & VanHecke, 2007). Today, these outcomes drive undergraduate education in the areas of understanding core curriculum content, intellectual skills, social and civic responsibility, and knowledge application (AAC&U, 2011; Humphreys, 2006).

Situated in the context of the current political and economic climate of American higher education, increased accountability measures require colleges to demonstrate student learning and successes. As a discrete example of these pressures, the AAC&U released a policy agenda that supports a reliance on student outcomes for accrediting bodies. One of the federal policy priorities is to "[p]romote the enhancement of educational quality through increased reliance on student outcomes" (2013, p. 8). These national efforts in policy support and campaigns are resulting in institutionally-identified student learning outcomes.

Institutionally-Identified Student Learning Outcomes. National efforts to establish and measure student learning outcomes have led a growing number of colleges and universities to establish their own learning outcomes. A survey of chief academic officers conducted by Hart Research Associates and AAC&U (2009) found that more institutions were adopting broad learning outcomes that applied to all students. Outcomes included skills and abilities valued by employers – critical thinking, communication (written and oral), intercultural skills, quantitative reasoning, information literacy, civic engagement, ethical reasoning, etc. – were reported by 80% of those surveyed. Further, 70% reported that these learning outcomes were assessed across the curriculum and two out of ten respondents reported that these identified learning outcomes are also assessed in the co-curricular environments.

Increasingly, student affairs divisions are being asked to demonstrate and assess their specific contributions towards these outcomes (ACPA, 1996). Upcraft and Schuh (1996) concluded that in order to be effective, student affairs outcomes assessments should be guided by the institution's mission and goals, beginning with educational values. Additionally, assessment policies and practices used by a student affairs division should be guided by prior research and institutional assessment on student learning outcomes (ACPA, 1996). Measuring the contributions of student affairs to student learning requires alignment between the institution's student learning outcomes and the assessment practices used by student affairs. "The extent to which [student affairs] contribute[s] to student learning will solidify their role in the university" (Schuh, 2013, p. 93). Therefore, it is important that institutionally-identified student learning outcomes be well-articulated and student affairs divisions align their assessment efforts with these outcomes.

The development of student learning outcomes at the institutional level is an explicit example of how a college or university can support national efforts to promote learning that prepares students for success beyond the institution. Establishing student learning outcomes also supports accreditor's call for accountability and ensures that the assessment of student learning is expected across all disciplines and campus programs. A specific example of institutionally-identified student learning outcomes are the "Principles of Undergraduate Learning" (PULs) adopted by Midwestern Metropolitan University (MMU)[1], the site for the present study. MMU was purposefully selected for this study because the student affairs division at this university has attempted to align their contributions to student success, as well as division-wide assessment efforts, with these PULs. Specifically, the PULs identified by MMU are: 1) Core Communication and Quantitative Skills, 2) Critical Thinking, 3) Integration and Application of Knowledge, 4) Intellectual Depth, Breadth, and Adaptiveness, 5) Understanding Society and Culture, and 6) Values and Ethics. There are similarities in what AAC&U have called for in student outcomes and the PULs developed at MMU. The next sections outline each PUL, the relevance to this study, and how each outcome has been addressed in literature.

Core Communication and Quantitative Skills. Skills in communication are measured as demonstrated behaviors and may allow for comparisons across programs or institutions when similar measures are used (Nusche, 2008). Literature on literacy competency - having proficiency in communication - emphasizes that students must

[1] MMU serves as the case for the present study and it is noted that the institution, departments, and/or division names have been changed in order to protect confidentiality.

carefully formulate a problem or question to be answered; identify, evaluate, and organize information in an applied fashion; and assimilate new information into existing knowledge (Eisenberg et al., 2004; King & Kitchener, 2004). Further, written and oral communications are emphasized as necessary outcomes in undergraduate education (AAC&U, 2011; Allan, 1996; Banta, 2002; Bresciani et al., 2004; CHEA, 2003; Hamilton et al., 2006; King et al. 2007). AAC&U developed rubrics as an exemplary measure for student learning and assert that communication competency is measured by "evaluating a collection of work, rather than a single work sample" (Rhodes, 2010, p. 9).

The Council for the Advancement of Standards in Higher Education (CAS) published *Frameworks for Assessing Learning and Development Outcomes (FALDO)* which "gives 16 learning outcome domains from which learning can be assessed as well as offers examples of learning indicators" (Strayhorn, 2006, p. iii). Strayhorn (2006) asserts that communication can be measured qualitatively using an ethnographic study of the student's use of skills or quantitatively using valid measures such as the *College Outcome Measures Program* by ACT. Between these selected exemplars in literature for communication learning, these sources' methods to measure communication and quantitative skills have a common thread that the student work or skills demonstrated are the common variable to understand in measuring students' learning in this dimension. Further, the methods of using rubrics and standardized testing are the trusted method in understanding student learning outcomes for communication. For MMU, the skills of communication and quantitative analysis are "demonstrated by a student's ability to: a.) express ideas and facts to others effectively in a variety of formats, particularly written, oral, and visual formats; b.) comprehend, interpret, and analyze ideas and facts; c.)

communicate effectively in a range of settings; d.) identify and propose solutions for problems using quantitative tools and reasoning; and e.) make effective use of information resources and technology" (IUPUI, 2007,"Core Communication and Quantitative Skills", outcomes section).

Critical Thinking. While multiple perceptions exist, the principal viewpoint in literature considers critical thinking as having judgment that is reflective and characterized by process of problem-solving or questioning when an evident or precise solution is not present (King & Kitchener, 2004; Wolcott, 2006). Others stress critical thinking as a "purposeful, self-regulatory judgment, a human cognitive process" (Giancarlo & Facione, 2001, p. 30). Critical thinking is centered on an individual's ability to evaluate opinions and evidence, construct one's own arguments for their beliefs, and scrutinize one's own thinking (Bruning, 1994; King & Kitchener, 1994). Further, researchers have defined critical thinking as weighing information based on validity and reliability (Pithers & Soden, 2000) or as assessing and making judgments about the implications of inferences from reading passages (Cheung, Rudowicz, Kwan, & Yue, 2002). The critical thinking literature stresses the cognitive processes linked with applying knowledge and recognizing that uncertainty is characteristic in making decisions and is often measured using standardized national measures or rubrics.

The Collegiate Assessment of Academic Proficiency (CAAP) from ACT, the Collegiate Learning Assessment (CLA) from the Council for Aid to Education (CAE), and the ETS Proficiency Profile (formerly known as the Measure of Academic Proficiency and Progress) from the Educational Testing Service (ETS) are three common measure for critical thinking in higher education institutions (Steedle, Kugelmass, &

Nemeth, 2010). Steedle et al. (2010) extensively studied thirteen institutions that utilize these measures and found them to be valid at the institutional level. Further, using sample student data from the CLA, Klien and Benjamin (2007) found that the measure was a good direct measure of student learning based on reliability and validity. As an illustrative case of how critical thinking is understood, a more recent research as case study of 40 students in a Critical Thinking in Science course demonstrated changes in critical thinking using a rubric of student work (Terry, 2012). This study found that using case studies of current press could help measure the changes in how students used information to determine validity of arguments used in the press articles. Further, the AAC&U Value rubrics provide comprehensive template that can be used to measure student's critical thinking across academic disciplines (Rhodes, 2010).

Across these selected exemplars in literature for critical thinking, these sources' methods to measure critical thinking skills have a common thread that the student demonstrations or observable work are a common variable to understand in measuring students' learning in this dimension. Further, the methods of using rubrics and standardized testing are the trusted method in understanding student learning outcomes for critical thinking. Specific for this study MMU defines critical thinking as a student demonstrating "the ability to: apply, analyze, evaluate, and create knowledge, procedures, processes, or products to discern bias, challenge assumptions, identify consequences, arrive at reasoned conclusions, generate and explore new questions, solve challenging and complex problems, and make informed decisions" (IUPUI, 2007,"Critical Thinking", outcomes section).

Integration and Application of Knowledge. Palmer (2004) addressed the need to formally evaluate a student's ability to "reflect the world of professional practice and to allow students to demonstrate their integration of knowledge and skills" (p. 200). His assessment was based on fourth-year student group work and presentations across technology and policy as related to engineering (Palmer, 2004). In the comprehensive Wabash Study, "[i]ntegration of learning is the demonstrated ability to connect information from disparate contexts and perspectives—for example, the ability to connect the domain of ideas and philosophies with the real world, one field of study or discipline with another, the past with the present, one part with the whole, the abstract with the concrete—and vice versa" (King et al., 2007, p. 5). Elder (2004) stresses the importance of assessment in higher education to inform an institution about students' application of knowledge to real world settings. It is an expectation that higher education provides students gains in the "ability to: a.) enhance their personal lives; b.) meet professional standards and competencies; c.) further the goals of society; and d.) work across traditional course and disciplinary boundaries (IUPUI, 2007, "Integration and Application of Knowledge", outcomes section)." Methods to measure an integration and application of knowledge include a demonstration of a student's ability to apply knowledge or integrate knowledge into new contexts. Further, the method of using observation is a trusted technique in understanding this student learning outcome.

Intellectual Depth, Breadth, and Adaptiveness. Pascarella and Terenzini (2005) found that undergraduate students have the largest gains in areas that are in alignment with their major area of studies. Further, improvement and depth within domain-specific knowledge for students in higher education institutions are clearly related to what is being learned in the classroom (Allan, 1996). For a student to possess general content knowledge they will have gained knowledge of a certain curriculum where essential learning is the content core (Nusche, 2008). Therefore, to have a demonstrated intellectual depth and breadth of a field of study would be adapted to the context of the situation and discipline in which an issue arises (IUPUI, 2007).

Understanding Society and Culture. Intercultural competence involves looking beyond knowledge of culture and society and toward the acquiring of attitudes, behaviors, and skills that aid a student in succeeding a cross-cultural environment (Watson, Siska, & Wolfel, 2013). In the Watson et al. (2013) study, the Intercultural Development Inventory (IDI) was the primary assessment tool to assess cross-cultural competency toward better understanding the inter-cultural competency of students who participated in study abroad experiences during post-secondary education. A secondary index, the Developmental Model of Intercultural Sensitivity (DMIS) (Bennett, 1986 as cited in Watson et al., 2013), was also used in the study to determine change in student's level of sensitivity. They found when assessing gains in language proficiency, cross-cultural competence, and regional awareness of students during a study abroad experience that gains in the IDI average scores did occur. However, the movement of a student along the DMIS did shift to minimization level, but did not fully develop to the acceptance/adaptation level. Undergraduate experiences, such as study abroad, can use such standardized tools to measure our understanding of a student's understanding of society and culture and shifts in competence. As a student gains the "ability to: a.) compare and contrast the range of diversity and universality in human history, societies, and ways of life; b.) analyze and understand the interconnectedness of global and local communities; and c.) operate with civility in a complex world" the measure of student's understanding of society and culture can be considered (IUPUI, 2007, "Understanding Society and Culture", outcomes section).

Values and Ethics. In the early AAC&U (2005) outcomes, individual and social responsibly held that ethical reasoning was an outcome that was essential to the undergraduate experience. However, the connection between one's values and beliefs on the one hand and observable activities and behaviors on the other were not clearly understood (Pascarella & Terenzini, 2005). Two typical select methods for measuring values and ethics learning has been in surveying and rubrics. Three recent studies are used as examples of typical applications for measuring learning in value and ethics.

Quesenberry, Phillips, Woodburne, and Yang (2012) developed a rubric used in a case study in business curriculum to measure if the ethical issue could be identified by students. Included in the rubric was a student's ability to recognize the ethical foundation in the issue and acknowledge the stakeholders of the issue at hand. Further, students needed to be able to discuss the implication and effects of situational case study on stakeholders. The claim was made that using such a rubric could aid in identifying the activities and behaviors of students that connect to their values and ethics (Quesenberry et al., 2012).

Terry, Wygant, Olsen, and Howell (2007) found that at Brigham Young University (BYU) a student's demonstration of character would align with a demonstration of values and ethics. They applied multiple measures from benchmarks and adapted measures to determine student character. The benchmarks used were the Higher Education Research Institute (HERI) Faculty Survey, the National Survey of

Student Engagement (NSSE), and the National Academic Integrity Study survey. They developed or adopted institutional instruments: the BYU Alumni Questionnaire; the BYU Senior Survey; the Employers of BYU Graduates Survey; the BYU Mission, Aims, and Objectives Study; and BYU Student Ratings.

A program introduced in Northern Illinois University College of Business program Building Ethical Leaders using an Integrated Ethic Framework (BELIEF) Program measured their students' change in responses to ethical situations using a rubric (Dzuranis, Shortridge, & Smith, 2013). Dzuranis et al. (2013) used data from 2005 through 2011 and compared the change in student recognition and decision-making skills by scoring authentic student work using common coursework and expectations for work for 1,159 students. The results of the study found students' increased in ability to recognize and identify appropriate decision alternatives to be statistically significant. Of interest for this study is the use of a rubric as a reliable method of measuring ethics.

Typical methods for seeing student learning in the dimensions of values and ethics rely on the student to either report on their value and ethics (i.e. in a survey response) or to observe values and ethics from actions. CAS FALDOs (Strayhorn, 2006) assert that values can be measured quantitatively using valid measures such as the Hall-Tonna Inventory of Values or qualitatively through responses to open-ended questions about the change in values. For MMU (2007), a sense of values and ethics is demonstrated by the student's ability to: a.) make informed and principled choices and to foresee consequences of these choices; b.) explore, understand, and cultivate an appreciation for beauty and art; and c.) understand ethical principles within diverse cultural, social, environmental and personal settings" ("Values and Ethics", outcomes section).

Gaps in the Literature

This existing literature is valuable because it provides some groundwork and transferable information on assessment and how student learning outcomes, as a central function of higher education, are connected. However, there are notable gaps in the extant literature with regards to outcome measurement development and how institutional-level learning outcomes are measured within a division of student affairs.

Student learning outcome assessment is a requirement for accreditation purposes and was found to be a motivator more than a demonstration of progress toward achieving the institutional mission and student learning (Peterson & Einarson, 2001). There are disconnects between research and practice as we measure student learning outcomes (Banta, 2004). Within programs in academic affairs it has been seen that outcomes assessment is taking hold within the program yet the conversation was not centered on institution-wide outcomes (Weber, 2005). Also absent from the conversation of the context of assessment in higher education is the impact of how we align our assessment practices toward achievement of overall institutional outcomes (Chemoist, 2012).

In student affairs outcomes assessment literature, much is covered related to "how" assessment should be done (Bresciani et al., 2009; Upcraft, 2003; Upcraft & Schuh, 1996) but little is related to what is being done. Student affairs divisions have been shown to have planning toward assessment (Woodard et al., 1991) and are dependent on locally development measures of student learning (Green et al., 2008). We know that for smaller institutions, practices are intentioned toward contributions directed to the institutional mission, but the management and support of the contribution may be low (Doyle, 2004). The literature also demonstrates that leadership, perceptions/attitudes, and accreditation affect the use of assessment (Seagraves & Dean, 2010). However, the actual processes at the institutional and divisional levels involved in each case reported were not provided and, therefore, processes of assessment for student affairs remain unclear. Student success measures may be linked to divisional views and strategic planning in student affairs (Taylor & Matney, 2007); yet the role of assessment and how to align outcomes across the division and toward the institution remains less clear.

Divisions of student affairs have demonstrated that they should assess and report their impact on student learning outcomes, but collaborations often do not exist across departments, let alone have a connection toward larger institutional outcomes (Green, 2006). Further, student affairs in small school contexts have broadly looked at how they are using resources toward the institutional mission, yet are not measuring their contribution to the mission or student outcomes (Ashley-Pauley, 2012). Missing from this body of literature was an application of program efforts that give attention to a richer understanding of the nuances of division-wide impacts toward measures and a divisional contribution toward the institution’s mission.

Summary

Scholars agree student learning outcomes should be measurable, meaningful, realistic, and ongoing and in alignment with the institutional mission (Huba & Freed, 2000; Bresciani et al., 2004; Maki, 2010). Guidance has been given to divisions of student affairs on the use of assessment and how the educational outcomes for the institution should be central (ACPA 1996; Upcraft & Schuh, 1996). By the early 2000’s, attention had shifted from the how to use student learning outcomes toward having common student learning outcomes across institutions of higher education (AACU, 2011; CHEA, 2003; Humphreys, 2006). In order to show their value to constituents, institutions are working toward providing specific student outcomes that they will be able to demonstrate with data. Given the limited attention to how student affairs divisions' assessment contributes to these larger outcomes more research is needed on the processes student affairs used and how they are collecting data to provide evidence of contributions to student learning and success. Shutt et al. (2012) call for a model that allows for a better process of establishing efficacy in programs and services of student affairs practices. This model includes assessment as a key practice. The present study addresses the areas that are still absent from the literature on student affairs: the processes and the development of assessment measures and how those departmental and divisional contributions feed into the larger student learning outcomes for the institution.

Chapter III

Methodology

This chapter outlines the methodology for this study. The goal of this study is to better understand the process of incorporating the institutional mission and student learning outcomes in the assessment activities within a division of student affairs. Specifically, this study evaluates the extent to which there is alignment between the outcomes measured by a Division of Student Affairs and institutionally identified student learning outcomes. The three guiding research questions for this study are:

1. What processes did departments within a division of student affairs at a large urban research university use to develop items assessment measures of student learning outcomes?

2. To what extent are department-level questions aligned with the literature-based description of the specific institution's student learning outcomes?

3. To what extent do items used in measuring the institution's specific student learning outcomes across student affairs departments agree with similarly identified constructs (based on departmental identification) across the division of student affairs?

This chapter is organized as follows. First, the research design and context for the study are discussed. Second, the data collection and analysis methods are addressed in turn for each of the three research questions. In closing the chapter, ethical considerations taken during this study are addressed.

Research Design and Context for the Study

This study is an inquiry of the interaction between a division of student affairs and its department units' assessment processes as they relate to their institution of higher education's student learning outcomes. A case study is an in-depth investigation or study of a specific or illustrative example of a subject (Creswell, 2005). Case study methodology is valuable when investigating a process (Creswell, 2005; Glesne, 1999; Yin, 2003). Hence, the case study design is most appropriate and useful to address the guiding research questions above.

This case was selected as an instrumental case; a unique case that illustrates a particular issue (Creswell, 2005). MMU provides insight into an institution with stated student learning outcomes that are intended to be pervasive while focusing on the Division of Student Affairs in their incorporation of those larger student learning outcomes into their measures. The timeline for data to be reviewed included a single academic year's measurement (Fall 2012 through Spring 2013). Data was collected from interviews with departmental and division leadership, documentation, instruments used during the study timeframe, and aggregate student data collected at the institution.

Case Study Context. Mid-Western Metropolitan University (MMU) was selected as the specific case for examination in this study because the institution has established campus-wide student learning outcomes that were adopted by the division of student affairs. The university is located in a large metropolitan area in the mid-west region of the United States. The institution is designated a four-year high research activity campus by Carnegie classifications/categories. The institution is further classified with an enrollment profile is high undergraduate where 60-79% of the undergraduates are enrolled full-time. The institution is also rated as selective with a higher transfer-in rate (i.e. greater than 20 percent of the undergraduates transfer in). For the year of the study, the student population at MMU was 71.76% undergraduate students and 28.24% graduate (for a more detailed breakdown see Table 1). The ethnic breakdown of the total student population was 70.64% white, 21.68% minority and 5.51% international students (for a more detailed breakdown see Table 2).

Table 1

Classification breakdown of the MMU student population at the study location in the 2012-2013 academic year

Classification	Percentage
Undergraduate	71.76%
Freshman	21.64%
Sophomore	21.54%
Junior	19.72%
Senior	33.18%
Graduate	28.24%
Master's	51.62%
Doctoral	42.97%

Table 2

Ethnicity breakdown of the MMU student population at the study location in the 2012-2013 academic year

Ethnicity	% of total population	
White	70.64%	
International	5.51%	
Total minority	21.68%	
Unknown	2.16%	
Breakdown of total minority student population		
Ethnicity	% total student population	% minority population
African American	10.23%	47.20%
Hispanic	4.37%	20.15%
Asian American	4.08%	18.84%
Multiracial (2 or more)	2.82%	13.03%
Native American/Alaska native	0.13%	0.59%
Native Hawaiian/Pacific Islander	0.0041%	0.19%

MMU's Student Learning Outcomes. The learning outcomes identified by MMU and discussed earlier in the review of literature are: 1) Core Communication and Quantitative Skills, 2) Critical Thinking, 3) Integration and Application of Knowledge, 4) Intellectual Depth, Breadth, and Adaptiveness, 5) Understanding Society and Culture, and 6) Values and Ethics. These Principles of Undergraduate Learning (PUL) outcomes[2] had been adopted by a faculty council representing all of the academic departments responsible for undergraduate learning in 1998. By 2002, the outcomes were being mapped to the core curriculum and being used as a basis for the general education plan for undergraduate students (Plater et al., 2005). The culture of the PULs was pervasive at MMU as the outcomes were prevalent in the courses students took and rhetoric across campus (Evenbeck & Hamilton, 2006; Hamilton, 2003; Hamilton, Banta, & Evenbeck, 2006). The Division of Student Affairs at MMU was not part of this initial push for mapping the institutionally-defined student learning outcomes but joined the effort in 2010 (Aaron, 2010).

MMU Division of Student Affairs. The division of student affairs at MMU was comprised of eight departments and programs that provide a wide-ranging array of services, programs, and activities. The focus of the division is toward a commitment "to building a community that supports learning and success, increases student engagement, and promotes persistence to graduation." With over 80 employees (including graduate employees), the division oversees residential life, student leadership and activities, and facilities for health, wellness, recreation and counseling (see the unit list in Table 3 for a departmental overview and description). The administration at the divisional level

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[2] In the initial form there were eight outcomes adopted in 1993; however most academic schools did not accept the principles in this first iteration (Plater, Banta, & Hamilton, 2005).

includes a director of assessment and planning who has been in the role for the past six years. All the departmental leadership reports directly to a vice president level senior student affairs professional.

Table 3

List of departments in the division of student affairs with brief descriptions in the 2012-2013 academic year

Department*	Brief Description
University Union	The hub of student life on campus, serving as a one-stop destination for students, faculty, and staff.
Campus Recreation	Offering a variety of recreational opportunities, fitness programs, and intramural sports to promote fitness and develop leadership, understanding, and respect.
Counseling and Psychological Services (CAPS)	When personal issues interfere with success, CAPS offers confidential counseling and support for a wide range of concerns.
Dean of Students Office	Providing services in student advocacy, parent and family programs, first-year programs, and off-campus life to enhance student transitions and success at MMU.
Student Residential Life	A variety of living options, activities, and residential learning communities makes living on campus a great way to experience college life.
Office of Student Leadership and Engagement	Connecting classroom learning with real-life experiences in leadership, student organizations, social justice education, civic engagement, and community service events and programs.
Student Conduct and Judicial Affairs	Promoting student rights and helping to maintain a civil learning environment.
Student Health Center	Health care providers are available to treat everything from the common cold and flu to chronic illnesses.

Note. * Institution, departments, and/or division names and the description may have been changed in order to protect confidentiality

MMU's Division of Student Affairs adopted the institutional student learning outcomes three years prior to the current study timeframe (Aaron, 2010). During the

2009-2010 academic year, the division started its first ever use of a division based student learning outcome model and mapped selected departments to the model (Aaron, 2010). The following year, the division worked to begin mapping to the institutional outcomes between the 2010-2011 academic year and the 2011-2012 academic year. By the year of the study, 2012-2013, three departments were consistently using PULs in their departments based on annual reports. Each department worked with the division's director of assessment and planning on their mapping and measuring of student learning outcomes and were given freedom to report data on the outcomes as each area saw appropriate.

In the data collection process, all eight departments were solicited to participate in the study. One of the departments never responded to any requests and a second declined participation reducing the final subject pool to six departments. The remaining six departments in the study were University Union, Campus Recreation, the Dean of Students Office, Student Residential Life, the Office of Student Leadership and Engagement, and Student Conduct and Judicial Affairs. The following sections outline the major responsibilities of each participating department with a brief background to understand the context of assessment within the department during the academic year 2012-2013.

Dean of Students. For the academic year 2012-2013, the department was newly created within the division and was undergoing significant transition as functional programs and areas of the office were being formed. The work of the department itself began in July of 2012. The leadership of the Dean of Students office was new to their role and was hired 3 months prior to the department's official functions starting on the campus. The functional roles for the area include the 1st year student program, parent & family programming, student advocacy (ombudsman), and off-campus support services are the responsibility of the five full-time professional staff and one graduate assistant. Some of the programmatic functions may have functioned in another department at MMU and were put under the umbrella of the Dean of Students office in the academic year 2012-2013.

Student Residential Life. The department of Student Residential Life oversees the operation and programming in both on-campus and nearby partner properties. Employing both full-time professionals and graduate student hall directors, there are seventeen staff members in Student Residential Life. The department supports available beds for approximately 1800 students. The Director of Student Residential Life was hired one year prior to the year of interest for the study.

University Union. The University Union department manages the central campus center for student life. The facility houses dining and retail, spaces intended for leisure and study, entertainment facilities, and multi-function spaces for events and meetings. Both the director and the associate director were new to their roles during the year of interest for this study; both hired full time in the summer of 2012. The associate director served in a temporary role for the University Union before being hired on full-time. The University Union has a professional full-time staff of seven and one graduate assistant.

Campus Recreation. The department of Campus Recreation oversees the facilities and activities for intramural, fitness, and recreation for the students at MMU. The director is one of three full-time dedicated staff for the department. The department itself moved under the division of student affairs four years prior to the year of interest in this study.

During the academic year 2012-2013, the department leadership was in place and oversaw all functions of the department.

Student Leadership and Engagement. The office of Student Leadership and Engagement oversees the student organizations, leadership programming, Greek Life, campus traditions, and programming for campus wide events. The Director began working at MMU in 2011, the year prior to the year of interest for this study, and leads the general oversight for the objectives of all areas. The associate director has been in their role in Student Leadership and Engagement for two years and at MMU for a total of eight years. The department has a staff of fourteen that includes both full-time professionals and graduate assistants.

Student Conduct and Judicial Affairs. The department of Student Conduct and Judicial Affairs supports student life at MMU by upholding the student’s code of conduct. During academic year of the study, there was no leadership that oversaw the department directly. The previous leadership was promoted within the university and assisted in the daily tasks of the office but did not conduct any assessment for the academic year 2012-2013. The director who was able to participate in the study entered in the summer after the dates of interest for this study.

The breakdown of participating departments and measures used in 2012-2013 is provided in Table 4. Two of the six departments reported no measures used in the year of interest. Student Conduct and Judicial Affairs was without a director for the year of the study and therefore did not conduct any assessments. Campus Recreation worked on measure development during the academic year 2012-2013; however, they did not use any of the measures to collect data from students and did not align items to student learning outcomes. Therefore, the final departments that provided measures that were used during 2012-2013 were University Union, the Dean of Students Office, Student Residential Life, and Student Leadership and Engagement.

The total number of measures used in the year of interest was 34. The final breakdown of total number of measures used in academic year 2012-2013 by department is provided in Table 4. The breakdown of the number of the 34 measures used during the year of interest by department is: two for University Union, two for the Dean of Students Office, five in Student Residential Life, and 25 in the Office of Student Leadership and Engagement.

Table 4

List of departments in the division of student affairs with participation, measure counts and total number of items across all measures

Department*	Participation Status	Number of Measures	Number of Items
University Union	Yes	2	112
Campus Recreation	Yes	0	0
Counseling and Psychological Services (CAPS)	No	unknown	unknown
Dean of Students Office	Yes	2	14
Student Residential Life	Yes	5	105
Student Leadership and Engagement	Yes	25	353
Student Conduct and Judicial Affairs	Yes	0	0
Student Health Center	No	unknown	unknown

Note. * Institution, departments, and/or division names and the description may have been changed in order to protect confidentiality

The following sections of this chapter review each research question in turn. For each question, the sample used to address each question is outlined first. The data collection procedures for each question are also described. Lastly, each section outlines the methods and/or techniques used to analyze the data to answer the specified research question.

Research Question One

The first research question is: What processes did departments within a division of student affairs at a large urban research university use to develop items assessment measures of student learning outcomes?

Sample. In order to address this question, the primary sample is the departmental leadership. Each of the participating department directors answered specific questions about each measure that the department used in order to reflect the process the department used to create each measure. The interview questions asked about measures during the academic year 2012-2013 and were bound by that year.

Data Collection Procedures. In order to address this question, the primary source of data resulted from interviews with participating departmental leadership from the division of student affairs at MMU. Interviews are the foundation of the understanding of the processes used in determining the measures of assessment implemented in measuring student learning outcomes as the subject recalls events and processes. Retrospective interviews describe or attempt to reconstruct the past and explain from the larger context what is observed (Fetterman, 1989). Interviews also assist in the classification and organizations of the individual’s perception of reality (Fetterman, 1989). To examine educational organizations, the interview may be the most important technique that a researcher can employ (Masland, 2000). Wolcott (1994) suggests that observation or reported inquiries (interviews) are used to provide an analysis or description of how things are working and to interpret the meaning and guided the interviews of this study.

The structured interviews followed the protocol outlined (see Appendix B). The protocol was grounded in the assessment alignment literature. The interview protocol is further grounded in Shepard's (2000) work that stresses the use of assessment at the right times and in the right way. Banta and Kuh (1998) also guide the interview protocol centered in the holistic view of learning and that learning can and should be measured outside and inside the classroom. This framework is foundational when looking at the processes departments within the Division of Student Affairs at MMU and their incorporation of assessment practices. Interview questions are further structured to allow for comparisons across members of the staff in the selection and processes of developing measures. The interview protocol used included a total of 12 questions (see Appendix B) and was conducted over the telephone. Subjects' consent was given prior to the start of the interview. Interviews were recorded and documented through thorough notes and recording reviews.

The protocol is grouped into topical areas to better understand the measurement development process, PUL alignment, and the use of data. The protocol developed was piloted with three student affairs professionals that are not from the institution of this study but hold divisional and/or departmental leadership roles similar to those professionals in the study. Further, the final protocol was piloted with the Director of Assessment and Planning at the Division of Student Affairs at MMU to ensure terms and content made sense for the culture of the institution. Based on initial pilot reviews and committee input, questions were reworded to remove ambiguity in terms, to provide a common definitions where needed, and to clearly define the potential roles of the PULs in measurement. The final pilot with divisional leadership confirmed changes made. In preparation for the interviews the departmental leaders received relevant study information on the study timeline, the interest in measures for the academic year 2012-2013, the interview protocol, and were informed that data could be submitted in advance. None of the participants chose to submit materials prior to the interview.

Each department leader who oversaw the reporting process in the academic year of 2012-2013 for the eight departments in the division was invited to interview with the primary investigator. The total number of subjects interviewed was eight. Two departments chose to include additional staff in the process. One department had two separate interviews and a second had two staff participate in the same interview. The remaining four departments were single subject interviews. Interviews ranged from 35 minutes to one hour; seven of the interviews were recorded. One participant requested that the interview not be recorded and the request was respected.

Each interview was conducted over the phone since the researcher is not located in the same region as the institution in the study. The interviews were recorded, thoroughly noted, and data was member checked (Creswell, 2005; Glense, 1999). The interview data were analyzed to better articulate the process of measurement development. In particular, the responses to questions in the headings of Measurement details/PUL Alignment and Measurement process/development (see Appendix B) are the primary source of data for question one. Each director was provided the option to provide alternate data on the processes used by the department including meeting notes or minutes or early version of measures. No department was able to provide detailed records on the process used. Therefore, the final measures from the academic year 2012-2013 were the only source of measure data. Subjects were asked to submit documents and did so using electronic means.

Data Analysis. The responses to the interview question were coded by theme for the final analysis. Data was member checked (Creswell, 2005; Glesne, 1999) for accuracy by emailing findings to the interviewees. The interview data was organized by thematic data analysis using a deductive process (Creswell, 2005) where themes and coding structure are based on literature about measurement design, assessment, and outcomes. The final analysis utilized mapping of any shared patterns, behaviors, and ways of thinking drawn on the interviewees understanding of the processes. The principal investigator performed all coding and used a student affairs assessment professional to perform a coding check to ensure reliability in the themes charted.

Research Question Two

The second research question is: To what extent are department-level questions aligned with the literature-based description of the specific institution's student learning outcomes?

Sample. In order to address this question, the primary sample came from the measurement instruments or supporting documents provided by each department and the division. Specifically, each measure used by the participating departments to look at the student learning outcomes for the department was collected. During the interview and through member checking processes, items from each measure that were designated to map to a principle of undergraduate learning was noted. Only measures used during the academic year 2012-2013 were of interest, and the sample of measures used was bound by that year. Measures were provided by two departments for years before or after the year of the study and therefore were removed from the final sample. Based on the relevant data collected, Table 5 represents the data sample used in this study.

Table 5

Summary list measures collected from the participating departments with brief descriptions

Measure Title	Measure Description
	Dean of Students
JagVenture Feedback	6 items: 2 questions, 5 point Likert scale &4 open-ended response
New Student Welcome	8 items: 6 questions, 5 point Likert scale 2 open-ended response
	Student Residential Life
RA Training Feedback	17 items: 2 single select questions 15 open-ended response questions
Resident Feedback	16 items: 8 questions, 4 point Likert scale, 8 single select question, 1 open-ended response
RBLC Feedback	5items: 4 point Likert scale
Service with Distinction	10 items: 9 questions, 4 point Likert scale &1 single select question
Facility Survey	57 items: 51 questions, 7 point Likert scale & 6 single select questions
	University Union
Manager PUL Self-Assessment	48 items: 48 questions, 4 point Likert scale
Fall 2012 Training Feedback	64 items: 62 questions, 4 point Likert scale 2 open-ended response
	Office of Student Involvement and Engagement
Foundations	52 items: all 4 point Likert scale
Cultural Leadership Lunch	2 items: all 4 point Likert scale
SOLD	13 items: all 4 point Likert scale

Freedom Ride	36 items: 6 questions, 4 point Likert scale, 12 open-ended response, 18 journal reflection questions
Catalyst	11items: all 4 point Likert scale
Project Leadership	5 items: 4 questions, 4 point Likert scale, 1 open-ended response
Advancing Women Mentoring Program	13 items: all 4 point Likert scale
Jagapalooza	16 items: all 4 point Likert scale
Homecoming	10 items: all 4 point Likert scale
Events	2 items: all 4 point Likert scale
Service Event	4 items: all 4 point Likert scale
Involvment Expo	2 items: all 4 point Likert scale
Nuts&Bolts	3 items: all 4 point Likert scale
myInvolvment Training	3 items: all 4 point Likert scale
Student Organizations	9items: all 4 point Likert scale
CUBE	14 items: all 4 point Likert scale
Speaker	5 items: all 4 point Likert scale
Leadership Consultants	12 items: all 4 point Likert scale
NSLC	35 items: all 4 point Likert scale
Project Leadership	57 items: all 4 point Likert scale
LeadtoGo	9 items: all 4 point Likert scale
AFLV	15 items: 3 questions, 4 point Likert scale, 4 open response, 8 focus-group questions
New Greek Member	8 items: all open response questions
Greek President Retreat	9 items: 3 questions, 4 point Likert scale, 6 open response
Greek Council Retreat	9 items: 3 questions, 4 point Likert scale, 6 open response

Data Collection Procedures. This question is addressed using the learning outcomes literature as outlined in Chapter 2. The basis of the institutional learning outcomes are: Core Communication and Quantitative Skills, Critical Thinking, Integration and Application of Knowledge, Intellectual Depth, Breadth, and Adaptiveness, Understanding Society and Culture, and Values and Ethics. Each measurement item was grouped based on the learning outcome as defined by the department that uses the measure. Measures of student learning outcomes from the institution were obtained through the directors of the participating departments within the division of student affairs and/or for the leadership within the Division of Student Affairs. Based on the interviews and confirmed in the annual reporting from the academic year 2012-2013 measures used included surveys and student journals (see Table 5).

The measures were collected through electronic means (i.e. electronic file transfers) and provided by the department leadership or the division's director of assessment and planning. During the initial interview request, the measures used during the academic year 2012-2013 were requested by the researcher in email, however, no measures were provided until after the interviews were held with the respective department. As an interview confirmation, a detailed email of the needed measures and the procedures for transfer were outlined. Since measures were not received before the interview, a follow-up occurred during the interview and an email reminder was sent to three of the participants.

Data Analysis. As a method that applies to case studies, document analysis can provide rich information to a study (Yin, 2003). Further, data collected in document analysis can contextualize interview data (Bowen, 2009). Document analysis is "a process of evaluating documents in such a way that empirical knowledge is produced and understanding is developed. In the process, the researcher should strive for objectivity and sensitivity, and maintain balance between both" (Bowen, 2009, pp 33-34). More specifically, this study utilized document analysis as a means of establishing content validity. Haynes, Richard, and Kubany (1995) defined content validity as "the degree to which elements of an assessment instrument are relevant to, and representative of, the targeted construct for a particular assessment purpose" (p.238).

In analyzing the data, the researcher used the predefined information from literature (see Tables 6 - 11) to inform the extent that the department defined learning outcome items aligns with literature. All measures were analyzed by item to determine the extent to which the measure focuses on single or multiple learning outcomes and were recorded as such. Each outcome, as mapped against the literature-based definitions, was coded for alignment toward that literature based understanding of the outcome (see the data files and code book in Appendix D & E). This process reflects the classic test theory process of index of item-objective congruence of Rovinelli and Hambleton (1997) (as cited in Tojib & Sugianto, 2006) with the addition of the utilization of a rubric to address the need for a communicated standard for measuring congruence.

The extent to which the items and measures used the literature-based references were coded based on the agreement with the literature and then recorded based on a congruence index (Tojib & Sugianto, 2006) obtained by use of the rubric found in Appendix C. The extent of the item alignment was reported on the data file as falling into the categories of benchmark, milestone, or exemplar. The final reporting of the overall alignment was correlated with the processed used in the development of the instruments to see if there are correlations with the extent of alignment with literature and the methods used to create the instrument. The institutional learning outcomes were the primary basis for initial coding of the individual items. After items were grouped based on the defined outcome each item was compared to literature, as outlined in chapter two, using the Alignment Rubric in Appendix C. The extent to which the items align with literature were reported.

Table 6

Outline of the learning outcome, Core Communication and Quantitative Skills, with summarization of the literature based and MMU descriptions

Learning Outcome	Literature-Based Description	MMU Description
Core Communication and Quantitative Skills	1. Measured qualitatively using an ethnographic study of the student's use of skills or quantitatively using valid measures such as the *College Outcome Measures Program* by ACT (Strayhorn, 2006) 2. Includes a demonstration of authentic student work or skills demonstrated	This PUL is demonstrated by a student's ability to: a.) express ideas and facts to others effectively in a variety of formats, particularly written, oral, and visual formats; b.) comprehend, interpret, and analyze ideas and facts; c.) communicate effectively in a range of settings; d.) identify and propose solutions for problems using quantitative tools and reasoning; and e.) make effective use of information resources and technology

Table 7

Outline of the learning outcome, Critical Thinking, with summarization of the literature based and MMU descriptions

Learning Outcome	Literature-Based Description	MMU Description
Critical Thinking	1. Students produce a demonstration of having judgment that is reflective and characterized by process of problem-solving or questioning 2. Measured quantitatively through Collegiate Assessment of Academic Proficiency (CAAP) from ACT, the Collegiate Learning Assessment (CLA) from the Council for Aid to Education (CAE), and the ETS Proficiency Profile 3. Includes authentic student work or case studies and use of rubrics for assessment	This PUL demonstrates a student's ability to: apply, analyze, evaluate, and create knowledge, procedures, processes, or products to discern bias, challenge assumptions, identify consequences, arrive at reasoned conclusions, generate and explore new questions, solve challenging and complex problems, and make informed decisions.

Table 8

Outline of the learning outcome, Integration and Application of Knowledge, with summarization of the literature based and MMU descriptions

Learning Outcome	Literature-Based Description	MMU Description
Integration and Application of Knowledge	1. Students produce a demonstrated ability to connect information from disparate contexts and perspectives or application of knowledge to real world settings 2. Measured through observation of students in new contexts/situations	This PUL addresses a student's ability to: a.) enhance their personal lives; b.) meet professional standards and competencies; c.) further the goals of society; and d.) work across traditional course and disciplinary boundaries

Table 9

Outline of the learning outcome, Intellectual Depth, Breadth, and Adaptiveness, with summarization of the literature based and MMU descriptions

Learning Outcome	Literature-Based Description	MMU Description
Intellectual Depth, Breadth, and Adaptiveness	1. Measures a demonstration of gains in areas that are in alignment with their major area of studies	Measuring this PUL records a demonstrated intellectual depth and breadth of a field of study and would be adapted to the context of the situation and discipline in which an issue arises.

Table 10

Outline of the learning outcome, Understanding Society and Culture, with summarization of the literature based and MMU descriptions

Learning Outcome	Literature-Based Description	MMU Description
Understanding Society and Culture	1. Students show an acquiring of attitudes, behaviors, and skills that aid a student in succeeding a cross-cultural environment 2. Measured through validated instruments (e.g. IDI or DMIS)	This PUL is interested in a student demonstration of an ability to: a.) compare and contrast the range of diversity and universality in human history, societies, and ways of life; b.) analyze and understand the interconnectedness of global and local communities; and c.) operate with civility in a complex world

Table 11

Outline of the learning outcome, Values and Ethics, with summarization of the literature based and MMU descriptions

Learning Outcome	Literature-Based Description	MMU Description
Values and Ethics	1. Measured with student self-reports in surveys 2. Students are observed where rubrics are used 3. Measured quantitatively using valid measures such as the Hall-Tonna Inventory of Values	This PUL is demonstrated by the student's ability to: a.) make informed and principled choices and to foresee consequences of these choices; b.) explore, understand, and cultivate an appreciation for beauty and art; and c.) understand ethical principles within diverse cultural, social, environmental and personal settings.

Research Question Three

The third research question is: To what extent do items used in measuring the institution's specific student learning outcomes across student affairs departments agree with similarly identified constructs (based on departmental identification) across the division of student affairs?

Sample. In order to address this question, the primary sample comes from the measurement instruments provided by each department and the division. Specifically, each measure used by the participating departments was collected and entered item by item with coding that included unique measure names, item numbers, department assignment and the departmental student learning outcome assignments where appropriate. During the interview and through member checking processes questions from each measure that were designated to map to a principle of undergraduate learning was coded as such. Only measures used during the academic year 2012-2013 are of interest, and the sample of measures used was bound by that year. Based on the data collected, Table 4 represents the data sample collected with a total item count of 585 for the four departments that provided measures.

The first step was to code each item of the measures with the departmental identifier, unique measure names, item numbers, and the departmental student learning outcome assignments where appropriate. Descriptive statistics of the data were calculated to look at the departmental measure and items and the percentage of items that were aligned to PULs verses items without PUL alignment. Each item was assigned an item number at the measure level and 25% of the numbered items for each measure were selected (n=147). Using a high quality random number generator from random.org registered by Randomness and Integrity Services Ltd., each measure's total number of items was used to generate the needed number, then the random numbers were generated for each of the three cognitive interviewers. In the cases where the number of items was below four one random item was selected from the measure; also the number of items selected was rounded when the total number of items was above four. The items were then collected into a final bank of questions to review. Further the items in the bank were randomly ordered for each debriefer and saved as separate documents in order to account for debriefer order bias and fatigue.

Data Collection Procedures. The sample items were then combined into a bank of questions and then reviewed through cognitive interviewing for coding structure alignment using the institutionally-defined student learning outcomes by three debriefers. Items in the bank of questions were presented to each cognitive interviewee in a different random order to prevent answer bias based on the viewing order of the questions and interviewee fatigue. Interviewers received a one sheet description of all six PULs to review before the cognitive interview. On the day of the interview, each debriefer was presented with their designated item sample. The 147 items were shared on a digital file so that each debriefer could enter in the codes based on the provided PUL lists. The cognitive interview bank of questions included the unique number for each item, a debriefer item number (for reference), the item wording, and an empty cell for each the primary and secondary PUL.

During the interview process, the debriefer was asked to share the thought processes of each code selected and the primary investigator took notes as the debriefer coded items. Each item code, given by the interviewee, was recorded. The codes were then joined to the master cognitive interview question bank under the variables assigned for each debriefer and the primary and secondary codes (see Appendix D for the code book of the study). The file was analyzed for item continuity or discrepancy with the primary and secondary PULs defined by the departments.

Cognitive interviewing. The primary purpose of cognitive interviewing is to attempt to create a coding check for accuracy and to determine the alignment of items to the PULs. Using a direct probe method (Beatty & Willis, 2007), the assessment peer debrief provided a coding check for accuracy for items that were aligned to a PUL to determine the efficacy of the coding schema used by the departments. Alignments for the PULs were noted and the constructs of the learning outcomes as defined by the departments were compared with the division of student affairs.

Beatty and Willis (2007) recommend that the cognitive interviews represent “demographic variety” (p. 296). Therefore, the following describes the intentionality and diversity of the higher education assessment peer examiners used in this study to debrief and check the accuracy of the coding as provided by the departments.

Participant. Debriefer A is an assessment professional working at a director level for assessment within a division of student affairs and has a background in the work of student affairs. His/her daily work encompasses departments that are similar to those at MMU and they are located in a southern institution. Debriefer B is an assessment professional working in academic affairs with a background from student affairs. Their current work relates to measurement of student learning outcomes and co-curricular outcome measurement. They are located at an institution in the northeastern region. The third interviewee, Debriefer C, is an administrator who directs assessment in student affairs at a southern institution. This interviewee had previous responsibility in measuring student learning outcomes at a departmental level in the division of student affairs at MMU two years before the year of interest for this study.

Intraclass Correlation Coefficient. Intraclass Correlation Coefficient is used to estimate the inter-rater reliability for group ratings when two or more variables are being assessed (Wiersma & Jurs, 2005). To estimate the debriefer's inter-rater reliability, the Intraclass Correlation Coefficient was used because all three debriefers coded the same items (n=147). Intraclass Correlation Coefficient accounts in its calculation for multiple debriefers of the same item's true score and the measurement of error (McGraw & Wong, 1996) allowing for a better value of agreement than descriptive statistics. The Intraclass Correlation Coefficient provides an estimated value of agreement where values closest to one represent complete agreement and those closest to zero as no agreement (Hallgren, 2012). The design and purpose of this analysis was estimating for agreement across debriefer's codings for primary and secondary PULs. This analysis was then replicated for the departmental assignment for primary and secondary PULs as paired with the individual debriefers.

Data Analysis. Given the data collected provided aggregated student responses to items across a single measure, the alignment of items across the division will be assessed by a code review process through cognitive interview and Intraclass Correlation Coefficients. The steps taken for the analysis and the cognitive interviewing are outlined next.

Primary PUL ICC. The analysis for the debriefer's primary PUL codes as a group without the departments was run as a two-way random effects model where both debriefer effects and item effects are random (Landers, 2011). After an acceptable level of agreement met the standard of > 0.7 (Cicchetti, 1994) the departments' primary PUL assignments were run at that same level of analysis with each debriefer as the next pairing level. Debriefer A and Debriefer C had all valid cases for primary PUL coding. Debriefer B had one missing case in the primary PUL coding providing 164 valid cases for comparison. It is noted that this single missing case was lost due to the debriefer data entry during the interview and it was not brought to the investigators attention until data coding for analysis.

Secondary PUL ICC. The analysis for the debriefer's secondary PUL codes as a group without the departments was run as a two-way random effects model where both debriefer effects and item effects are random (Landers, 2011). The ICC was not at an acceptable level of agreement met the standard of < 0.7 (Cicchetti, 1994). Due to the exploratory nature of this work the departments' primary PUL assignments were still run with each debriefer as the next pairing level to see if agreement occurred at the departmental level with individual debriefers. All secondary PUL debriefer codes and departmental assignments had valid cases and no missing data was found.

Ethical Considerations

The researcher's primary ethical consideration in this study was to preserve respect for persons, kindness, and justice in the research process. Within these principles it is an expected responsibility of the researcher to protect the privacy of participants in this study. This study was approved by the Institutional Review Board at the University of Houston and received a letter of support from the institution utilized. Participants interviewed received an informed consent document prior to beginning the interview, providing them information about their rights as voluntary participants in this study, including the ability to conclude their participation at any time. In addition, participants' privacy was protected by removing or masking any items in the interview responses or measurement instruments that ask for personal or departmental identifiable information. Finally, the interview protocol instrument was designed such that individual responses could not be traced back to a particular respondent.

Chapter IV

Findings

The goal of this study is to better understand the process of incorporating institutional student learning outcomes in the assessment activities within a division of student affairs. Specifically, this study evaluated the extent to which there is alignment between the outcomes measured by a Division of Student Affairs and institutionally-identified student learning outcomes. This chapter presents the findings of the study organized by each research question.

Research Question One Findings

The findings related to the first research question are presented in this section. Question one asks: “What processes did departments within a division of student affairs at a large urban research university use to develop items assessment measures of student learning outcomes?” The department by department description of the measures and processes used are covered first. Following the departmental descriptions, findings related to the division, the measures, and the processes used close this chapter section.

Of the departments that participated in the study, Student Residential Life, Dean of Students, University Union, and Student Leadership and Engagement provided measures that were used to assess student outcomes during the academic year 2012-2013. No measures were used in the year of interest for the remaining two departments that participated in this study: Campus Recreation and Student Conduct and Judicial Affairs. As such, those departments are not included in the findings for this research question.

Student Residential Life's measure development. Student Residential Life[3] used a total of five measures during the academic year 2012-2013 (see Table 12). They included RA Training Feedback, Resident Feedback, RBLC Liaison Feedback, Service with Distinction, and the Facility Survey. The departments also used pre-existing measures that were developed by staff and third-party developed measures. The specific details of these two development processes are detailed in the sections below. None of the measures used by Student Residential Life had items that were assigned institutionally-defined student learning outcomes by the department or the third-party. Based on the interview with the leadership of the department, none of the measures were initially created to measure institutionally-defined student learning outcomes.

[3] *Note*. This department requested that any recorded information from the interview not be transcribed for the final reporting. Their findings are paraphrased based on the recordings and the notes of the primary investigator.

Table 12

Measure description and development process for Student Residential Life

Measure Title	Measure Description	Measure Development Process
RA Training Feedback	17 items: 2 single-select questions, 15 free-response questions	in house previously used
Resident Feedback	16 items: 8 questions, 4 point Likert scale, 8 single-select question, 1 open-ended response	in house previously used
RBLC Feedback	5items: 4 point Likert scale	in house previously used
Service with Distinction	10 items: 9 questions, 4 point Likert scale, 1 single-select question	third party created
Facility Survey	57 items: 51 questions, 7 point Likert scale, 6 single-select questions	third party created

In-house and previously used measures. A majority of measures used by Student Residential Life, 60% (3 of 5 measures), were developed in-house and constituted pre-existing measures that were in use for years before the study or not modified for the 2012-2013 academic year. The titles of these three in-house measures were RA Training Feedback, Resident Feedback, and RBLC Liaison Feedback. The director stated that the RA Training Feedback was developed to measure program effectiveness from the student perspective; the audience was the Resident Assistant students who attended training. A supervising staff member created the RA Training Feedback prior to the current leadership's arrival at MMU. The measure had been used both to gain insights into specific training sessions and the overall training experience and was only modified in the year of the study to reflect the specific sessions offered.

In the RA Training Feedback measure, all 17 questions were open-ended questions. An example of an item from this measure was, “What aspects of the roommate session did you find helpful?” The overall training was to be evaluated by the students through their responses to questions like, “What are 3 things that could have been improved in Student Staff Training?” or, “Were there topics that you would have liked to see covered that weren't?” The instrument was administered to the RAs using Survey Monkey. Other than convenience, leadership was not able to provide reasons why the staff continued to use this method.

During the interview, the director was given a specific prompt to identify the resources staff used when developing the measures from the 2012-2013 academic year. The leadership of Student Residential Life reported that the RA Training Feedback measure was pre-existing and that the staff most likely did not have direct guidance from the division assessment professional or outside sources for the 2012-2013 year for this measure. It was reported that several of the professional staff had worked at MMU for many years and some may have been in positions prior to the divisional staff being hired.

The second measure, the Resident Feedback, was developed to measure RA effectiveness from the student resident perspective. Similar to the RA Training Feedback measure, the Resident Feedback measure was one that was already in use by the department and did not have revisions for the year of interest for the study to align items to the PULs. According to the leadership in Student Residential Life, this measure mirrored the development process and distribution methods of the RA Training measure.

There were 16 items on the Resident Feedback measure that included open ended, single-select, and Likert scaled items. Items on this measure were designed to get feedback on performance of specific RAs from the residents who lived in the on-campus community. Items that gauged the RA's performance included, "My RA is a role model by promoting appropriate behavior to residents." or, "My RA fosters a community respectful of people's differences." Items like, "I know how to contact my RA if I need him/her." or, "My RA knows my name?" were used to gauge the perception of the resident of the RA. As no further details were provided during the interview that differentiated this in-house survey, it was noted that the distribution method of using Survey Monkey may also be reflective of staff tenure and convenience motives.

The third and final pre-existing in-house measure, the RBLC Liaison Feedback, was developed by the staff member who supervised the Residential-Based Learning Community (RBLC). This measure was used to gain the perspective from departments who worked with Student Residential Life to host the learning community and gave direct feedback to the staff on their performance. The interviewee for the department shared that the staff member who developed the measure had been working with the learning communities even before joining the Student Residential Life staff. All five items on this measure were Likert scaled items. Two items from this five-question survey were, "In this past year, I was more informed of issues/situations that took place in my RBLC." and, "In this past year, when I had questions, [Pat[4]] responded to me within an appropriate timeframe." The RBLC Liaison Feedback measure was not intended, according to responses given in the interview, to indicate institutional student learning outcomes. Based on the interview with the department leadership, the program was

[4] *Note*. The name of the staff was changed to a pseudonym in order to protect confidentiality.

working to develop a more refined measure for the connection and measuring of student learning outcomes to be used subsequent to the year under study.

Third-party developed measures. The two remaining measures, 40% (2 of 5 measures), were developed by a third-party. The titles of these two third-party measures were the Facility Survey and Service with Distinction. The first measure, the Facility Survey, was developed by a contract partner, Aramark. Aramark developed the measure, and the department had some opportunity to provide input into the items. The third party took full responsibility over the measure and shared the results with the Student Residential Life office afterward. The decision to why the department continued using the measure during the 2012-2013 academic year was not specifically addressed by the interviewee but reported that Student Residential Life had participated in this specific survey prior to their arrival. The measure was administered in the fall term and items were not assigned to the institution student learning outcomes by the department. The Facility Survey's 57 questions included single-select and Likert scaled items. The leadership in the department could not recall if the student learning outcomes impacted their input into the Facility Survey. (S)he felt that they had an opportunity but provided limited input for additional survey items.

The second third-party developed and final measure for Student Residential Life was a pilot campus-wide measure called Service with Distinction. This university-wide measure was developed under the direction of the Finance and Administration Division. The 10 item measure contained Likert scaled and open ended questions. The measure asked the respondent to rate the practice of customer service across the following areas: communication, initiative, respect, consistency, engagement, courtesy, knowledge, and accountability. A motivating factor in the department's decision to use this third party measure was to collaborate with another division on campus. Finance and Administration distributed the measure in the spring semester in the year of interest for this study. The goal of the measure was to assess customer service based on the Service with Distinction principle with all the constituents of the department and was not intended to measure institutional learning outcomes. The Service with Distinction's central tenant is that every interaction at MMU is about understanding and valuing people. The department leadership at Student Residential Life felt that their department was a great place to pilot the measure since the goal of Service of Distinction was to reinforce the choice of students to be at MMU.

Dean of Students' measure development. The Dean of Students[5] used a total of two measures during the academic year 2012-2013. The titles of the measures were JagVenture Feedback and the New Student Welcome (see Table 13). The process utilized in the department included using two pre-existing measures. The first, JagVenture Feedback, was developed by a staff member. Based on the interview, the staff member felt that the measure was in use for at least the year prior to the year of the study. However, since (s)he was newer to the department and program (s)he was not fully certain of the original year the measure was used. The second measure, New Student Welcome, was a pre-existing measure that the origin of which was also unknown. During the year of the study, the JagVenture Feedback did have minor modifications according to the leadership in the Dean of Students.

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[5] *Note*. This department requested that the interview not be recorded. As such, their findings are paraphrased based on the notes of the primary investigator.

Table 13

Measure description and development process for the Dean of Students

Measure Title	Measure Description	Measure Development Process
JagVenture Feedback	6 items: 2 questions, 5 point Likert scale 4 open-ended response	in house
New Student Welcome	8 items: 6 questions, 5 point Likert scale, 2 open-ended response	pre-existing / unknown

Both measures were brief and were designed to gain student satisfaction for the specific programs. The interviewee disclosed that (s)he was not certain of the critical choices made during the measure development, since both measures were inherited when the programs joined the newly formed department. During the interview, it was also determined that the surveys were distributed on paper forms. (S)he further mentioned that none of the measures used by the Dean of Students had items that were aligned to the institutionally-defined student learning outcomes. These measures were not initially created to measure institutional learning outcomes. The leadership from Dean of Students stated that both measures were designed to measure the program effectiveness from the student perspective and the audience for both was the participants in the programs.

JagVenture Feedback was a six item measure that included Likert scaled and open-ended items. Examples of the type of Likert scaled items are, “I found this activity to be informative.” and, “This activity helped me to experience something new.” These items were repeated throughout the measure depending on the activity or experience that occurred. According to the staff in the Dean of Students, the JagVenture program hosted approximately 40 students and was a voluntary new student program. (S)he felt that the survey was used to provide programmatic feedback and to foster changes. Based on the measure that was shared none of the items had been coded to measure student learning outcomes by the department.

The New Student Welcome was an 8 item measure that included Likert scaled and open-ended items. Examples of the type of Likert scaled items are, “In the future, do you think this would be a good event for parents/families to attend?” and, “As a result of attending this event I was able to meet other [MMU] students.” During the interview, it was shared that the measure was distributed in paper form. An incentive was given to those who completed the survey which provided responses from returning students (not the target audience). Although the history of the measure was not clearly shared during the interview it was noted that the results from the measure were used to help develop the program. Based on the measure that was shared, no items from the New Student Welcome were assigned institutionally defined student learning outcomes.

University Union’s measure development. The University Union used a total of two measures during the academic year 2012-2013. The titles of the measures were the Manager PUL Self-Assessment and the Fall 2012 Training Feedback (see Table 14). The following sections detail each measure separately and provide the department’s intended use of the measure and the processes used in the measure’s development.

Table 14

Measure description and development process for University Union

Measure Title	Measure Description	Measure Development Process
Fall 2012 Training Feedback	64 items: 62 questions, 4 point Likert scale 2 open-ended response	in house / pre-existing

Manager PUL Self-Assessment	48 items: 48 questions, 4 point Likert scale	in house with division assistance

Fall 2012 Training Feedback. The first measure, the training feedback, was initially created a year before the study to measure the effectiveness of the training program from the student perspective. Fall 2012 Training Feedback was a 64 item measure that included Likert scaled and open-ended items According to the staff member who created the measure, the approach included seeing if, “the information (the department gained from the survey) was practical versus if there was alignment (in the measure toward PULs).” (S)he further added, “There was not anything purposefully aligned (with the PULs) in the training assessments.” It is important to note, the staff member from the department was looking at learning outcomes in his/her daily work. Therefore, even though the department did not assign items to the learning outcomes, modifications may have been affected by the existence of them. “We definitely did modify the standard training survey that had been used (the year before), and I would say if the PULs came in play, at all, they were in the background.”

According to the leadership in the University Union, the Fall 2012 Training Feedback was not designed to measure institutional learning outcomes. Items were created “for each section (of the training), [and] questions asked if they (the students) knew how it (the information presented in training) applies to my student work”. A direct example of one of the Likert scaled items from the Fall 2012 Training Feedback was, “For the A/V Session, the speaker was knowledgeable about the topic.” An example open-ended question was, “Which topics were the most helpful or interesting, for you?”

When prompted during the interview, the staff member shared that (s)he did not use resources outside of the department in creating the sixty-four items of this measure.

Manager PUL Self-Assessment. By contrast, the second measure, the Manager PUL Self-Assessment, was created with intentionality towards measuring student learning outcomes of the student staff of the facility. This measure was developed in-house using the staff resources within University Union and consultation with the division assessment leadership. The measure was developed during the year before the study and modified only editorially during the year of the study. “I used the same measure in the 2011-2012 year; I used the exact same measure, in the second year.” When describing the process for the measure development for the Manager PUL Self-Assessment, leadership within the University Union outlined the details and steps used for alignment:

> (the Manager PUL Self-Assessment) was not a pre-created thing. I worked with [the division’s assessment director]. [I] educated myself about the PULs, getting a basic gist of what we were wanting to do, using the documents on the institution’s website about the PULs. It is more like there are resources for faculty in how to work with these in developing a syllabi, documenting specific outcomes and examples that they gave to faculty and I was able to use that as a resource to understand and expand on what the definition of each PUL was… some of them were word for word ways to articulate a PUL… and then in other ones I had to put it in words that were in our context. Then [the division’s assessment director] had developed for the division a bank of questions and he referred me to that and I know that I looked at that them.

For the University Union, only the Manager PUL Self-Assessment had items that aligned to the institutionally-defined student learning outcomes. This measure was implemented as a part of the manager evaluation process and was initially crafted to measure the institutional student learning outcomes. The Manager PUL Self-Assessment measure included 48 items that were all four-point Likert scaled questions. Leadership in University Union stated they, “came up with the assessment survey that was included in the performance documentation for the … managers” There was intentionality in the measure and item development based on the job description for the students. The Union Staff member stated, “I reviewed the descriptions myself and did my own mapping and looked at what I know the jobs do and would fall under the jobs based on what I know.”

Student Leadership and Engagement’s measure development. The office of Student Leadership and Engagement used a total of 25 measures during the academic year 2012-2013. The titles of the measures used were Foundations, Cultural Leadership Lunch, SOLD, Freedom Ride, Catalyst, Project Leadership, Advancing Women Mentoring Program, Jagapalooza, Homecoming, Events, Service Event, Involvement Expo, Nuts&Bolts, myInvolvement Training, Student Organizations, CUBE, Speaker, Leadership Consultants, NSLC, Project Leadership, Leadership to Go, AFLV, New Greek Member Training, Greek President Retreat, and Greek Council Retreat (see Table 15). With one exception, the processes of measure development for this department were rooted in the institutionally-defined student learning outcomes. According to the leadership in Student Leadership and Engagement, “We have been reporting for five years on outcomes from our leadership program and what we were doing.” This length of time and commitment to measuring the student learning outcomes can be seen in the processes the department used in developing the measures. When discussing the processes for all the program areas the leadership in Student Leadership and Engagement said, “The creation of the instrument differs by program area. Most of what I work with for my programs is paper instruments created by our staff, looking at the goals and what we are trying to accomplish with the program. Then we would look at the connected PULs and finding the questions that relate to that.” The next sections outline the measures based on the three main processes used: in-house and previously used; in-house with division guidance; and a combination of in-house and previously used with divisional guidance.

Table 15

Measure description and development process for Student Leadership and Engagement

Measure Title	Measure Description	Measure Development Process
Foundations	52 items: all 4 point Likert scale	in-house & division guidance
Cultural Leadership Lunch	2 items: all 4 point Likert scale	in-house & division guidance
SOLD	13 items: all 4 point Likert scale	in-house & division guidance
Freedom Ride	36 items: 6, 4 point Likert scale, 12 free-response, 18 journal reflection questions	in-house & division guidance
Catalyst	11items: all 4 point Likert scale	in-house & division guidance
Project Leadership	5 items: 4, 4 point Likert scale, 1 open-ended response	in-house & division guidance
Advancing Women Mentoring Program	13 items: all 4 point Likert scale	in-house & division guidance
Jagapalooza	16 items: all 4 point Likert scale	in-house & division guidance
Homecoming	10 items: all 4 point Likert scale	in-house & division guidance
Events	2 items: all 4 point Likert scale	in-house & division guidance
Service Event	4 items: all 4 point Likert scale	in-house & division guidance
Involvement Expo	2 items: all 4 point Likert scale	in-house & division guidance
Nuts&Bolts	3 items: all 4 point Likert scale	in-house & division guidance
myInvolvement Training	3 items: all 4 point Likert scale	in-house & division guidance

Student Organizations	9items: all 4 point Likert scale	in-house & division guidance
CUBE	14 items: all 4 point Likert scale	in-house & division guidance
Speaker	5 items: all 4 point Likert scale	in-house & division guidance
Leadership Consultants	12 items: all 4 point Likert scale	in-house & division guidance
NSLC	35 items: all 4 point Likert scale	in-house & division guidance
Project Leadership	57 items: all 4 point Likert scale	in-house & division guidance
LeadtoGo	9 items: all 4 point Likert scale	in-house & division guidance
AFLV	15 items: 3, 4 point Likert scale, 4 open-ended response, 8 focus-group questions	in-house & division guidance
New Greek Member	8 items: all open-ended response	in-house previously used
Greek President Retreat	9 items: 3, 4 point Likert scale, 6 open response	in-house previously used & question pool
Greek Council Retreat	9 items: 3, 4 point Likert scale, 6 open-ended response	in-house previously used & question pool

In-house and previously used measures. A single measure, 4% (1 of 25 measures), was developed in-house and constituted a pre-existing measure that was in use for years before the study and not modified for the 2012-2013 academic year. This process made it stand out from the remaining measures for this department. The title of this in-house measure was New Greek Member Training. It is important to note that none of the eight open-ended response questions of this measure were assigned to student learning outcomes by either the department or program prior to data collection. Some student responses from these items, however, were coded in the annual report for 2012-2013 to institutionally-defined student learning outcomes based on the department's interpretation of the student response. According to the department's leadership, "mapping the data back to the PULs then once we have the data" was common with qualitative student responses.

Despite that significant difference in this one measure, a pervasive similarity for measure development for this department was the distribution of measures. During the interview it was disclosed that, “most of what I work with for my programs are paper instruments created by our staff.” The reasoning behind this method was the feeling across the department “that our response rate was better when we would do a paper survey.”

In-house and with divisional guidance measures. The largest proportion of measures, 88% (22 of 25 measures), were newly created, in the year of the study. They were developed in-house using the staff resources within Student Leadership and Engagement and through consultation with the division assessment leadership. “We have two question banks that we used; the divisional question bank and a leadership bank that we created for our program and we used them both.” (S)he continued, “And we definitely pulled resources from our assessment director in the division.” The use of the question banks was a critical part of the process for the 2012-2013 year and was also used in education for the staff about the student learning outcomes. From the interview it was shared, “We have created our own internal question bank based on our department outcomes that are not exactly the PULs but are connected to the PULs as we have tried to make assessment engrained in the culture.”

In the process for item selection from the bank of questions, education of the staff on the meaning of outcomes became a step in the process. The leadership in this area shared, “For the broader PULs, we were using the question bank, we were looking at the questions to be able to understand what the PUL means and then we would pick a question based on the wording and then if program participants could answer the question as it related to the content of the program then we could use the question as a question for our program." When using items from the question banks, the alignment to the student learning outcome was predetermined for Student Leadership and Engagement based on the bank's assignment of the item to a PUL.

Across all 25 measures for Student Leadership and Engagement, 24 measures contained items that were assigned to the institutionally-defined student learning outcomes. The processes for these 24 measures were a product of what the interviewee defined earlier as adherence to the question banks as the sole resource of development. "I think that for everything, for the PUL data, they were always directly aligned to a PUL." From the 24 measures, 22 were new measures developed for 2012-2013; 18 of those measures had 100% of the items assigned by the department to the student learning outcomes. The 18 measures with 100% PUL assignment were also the responsibility of a staff member who was described during the interview as fully buying into the assessment of student learning for the department. The leadership in Student Leadership and Engagement stated, "I had one staff who was really excited and wanted to assess everything and at the end of the year we had so much data to evaluate and go through." The combination of the staff enthusiasm and the resources of the question banks drove the development of these 18 measures.

The wordings of two sample items from measures that used the banks are, "The Involvement Expo provided me with the skills to make connections with others on campus (students, faculty and staff)." and, "Participating in this service event provided me with an opportunity to make connections with others (students, faculty or staff) on campus." The structure of both items is near identical with the exception of the name of the program or event that was changed. Similarly, the department assigned the same student learning outcomes to these items as PULs were pre-defined for them through the question bank.

The remaining four measures for those newly created measures contained items that both did and did not have department assigned institutionally-defined student learning outcomes. The titles of these four measures were Freedom Ride, Project Leadership, Student Organizations, and AFLV. The first measure, the Freedom Ride, had 36 items. This measure was specifically used to assess outcomes from students who participated in a long term leadership experience called Freedom Ride. The composition of the measure was six questions that were measured on a four-point Likert scale, 12 open-ended response questions, and 18 journal reflection questions. Only the six questions that were measured on a four-point Likert scale were assigned to the institutionally-defined student learning outcomes. These items were created using the question banks. “For the most part, the vast majority, we used a PUL question from the question bank or change one slightly to fit what we were doing.” None of the open-ended response or journal reflection questions, however, were aligned to the institutionally-defined student learning outcomes or came from the question bank. The Freedom Ride journal activities occurred over five days; participants’ journal activities on Tuesday, Thursday, and Friday included four items and Monday and Wednesday participant’s journal activities included three items. An example of a journal reflection question was, “What role do leadership and social justice play in social activism?” The journaling activities were included in the measure of Freedom Ride according to the department as a way to measure the student learning over the experience. The 12 open-ended response questions were included in the final survey with the Likert scaled items after the event was over. It is important to note that the items for the open-ended response or journal reflection questions were not assigned student learning outcomes at the outset of the measure development. Although the student responses were later department coded with the institutionally-defined student learning outcomes for the annual reporting documents.

The second measure, Project Leadership included five items. This measure was used for understanding the outcomes from students who attending the specific one-day conference titled Project Leadership. The composition of the measure was four questions that were measured on a four-point Likert scale and one open-ended response question. Similar to the Freedom Ride process for measure development, the question banks were used for the four questions that were measured on a four-point Likert scale; also those items were assigned institutionally-defined student learning outcomes. A question from the Project Leadership measure, “This event provided me with skills to identify appropriate campus resources for my individual and/or student organization needs” mirrors an item from Nuts&Bolts, “This program provided me with the skills to identify appropriate campus resources for my individual student organization needs.” Nuts&Bolts was a measure that was earlier grouped in the 18 measures that used the question bank for 100% of the items. The remaining item on Project Leadership that was not assigned student learning outcomes was the item “What did you learn from this program?” This specific item was not addressed during the interview so the process of developing this item for the measure is unknown.

Student Organization was the third measure and it utilized nine items. This measure was used for understanding the outcomes from students who held leadership positions within academic student organizations[6]. The composition of the measure was eight questions that were measured on a four-point Likert scale and one single-select question. Similar to the previous two measures' process for development, the question banks were used for seven of the eight questions that were measured on a four-point Likert scale; those items were also assigned institutionally-defined student learning outcomes. One four-point Likert scaled item that was not from the question bank was, "Being involved in this organization allowed me to use information I learned through my coursework: chose one (always, quite a bit, sometimes, very little)." An item from the Student Organization measure, "Being involved with this organization provided me with the skills to communicate ideas and information" mirrors an item from the NSLC[7] measure, "Attending Money Management provided me with skills to communicate ideas and information." The NSLC measure was earlier grouped in the 18 measures that used the division and department question banks for 100% of the items for the measure development. The final item on Student Organizations was the single-select item "Being involved with this student organization I have been able to connect my experiences to the Principles of Undergraduate Learning: (select what applies from PUL list)." This specific item was not addressed during the interview and results of the item were not reported in the annual reporting documents and processes for this item development is unknown.

The fourth and final measure for this section is AFLV[8]. The AFLV measure was developed in the 2012-2013 year to evaluate student attendee outcomes from the three-

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[6] *Note.* This is a specific label or reference in use at MMU for Student Leadership and Engagement in regards to the group who was asked to complete this measure.
[7] *Note.* NSCL is the acronym that MMU Student Leadership and Engagement used and stands for National Conference on Student Leadership and is also the name of a three-day leadership conference.
[8] *Note.* AFLV is the acronym that MMU Student Leadership and Engagement used and stands for Association of Fraternal Leadership & Values.

day conference of the same name. The composition of the measure was three items that were measured on a four-point Likert scale and 12 open-ended response questions. Similar to the Freedom Ride process for measure development, the question banks were used for the four questions that were measured on the four-point Likert scale; also those items were assigned institutionally-defined student learning outcomes. A sample question from the AFLV measure was, “AFLV provided me with skills to develop individual/organizational goals.” mirrors an item from the Cube[9] measure. “My involvement in Cube Council helped me develop individual and organizational goals.” The Cube measure was earlier grouped in the 18 measures that used the division and department question banks for 100% of the items for the measure development. The remaining open-ended response items on AFLV were not assigned student learning outcomes. Two examples of the open-ended responses questions were, “What do you feel like you have learned from your attendance at AFLV?” and, “What did you learn from AFLV?” These items are notably similar to the free-response question in Project Leadership. Similarly these 12 items were not addressed during the interview, so the process of developing items in this measure is unknown.

In-house and previously used measures with divisional guidance. The final two measures for Student Leadership and Engagement were named Greek President Retreat and Greek Council Retreat. Both these measures had nine items each. Both measures were also developed by the staff responsible for Greek life at MMU and measures similar to these were used in the year before the study. The composition of both measures was three questions that were measured on a four-point Likert scale and six open-ended

[9] *Note*. Cube is the specific label or reference is use at MMU to represent a council that represents student organizations that have assigned spaces (offices, carrel and/or storage) in Student Leadership and Engagement.

response questions. Additionally, both measures contained items that were used in previous years. For the year of interest, the same three questions were added to each measure and a student learning outcome was assigned by the department to each of these new items. When discussing the process for modifying existing measures, the leadership of Student Leadership and Engagement shared, “A specific example might be that a staff might have asked ‘at this program I met new people’ and would have mapped that to communication, but that does not mean that they learned anything about communication. I would have to challenge staff to think more critically about the program and a specific learning moment in order to be mapped back.”

For both of these measures, the three questions that were measured on a four-point Likert scale were assigned institutionally-defined student learning outcomes. An example of a four-point Likert scaled item that was on both measures was, “This retreat provided me with ways to generate new ideas or ways to improve things.” Although item development was not discussed at the fined grained level for these two measures it might be assumed that the measures were developed intentionally parallel and with common structure. None of the free-response questions were assigned institutionally-defined student learning outcomes for either measure. Similar to the New Greek Member measure, some student responses from these items were coded in the annual report for 2012-2013 to institutionally-defined student learning outcomes based on the department’s interpretation of the student response.

Overall Division of Student Affairs Measure Development. The resources departments used to develop the measures with items that aligned to learning outcomes was of interest to this study in understanding the measure development and a summary is provided in Figure 1. Of the 34 measures used across departments, 94% (n=32) of the measures were created in-house (i.e. by a member of the division of student affairs at MMU). Of the 32 in-house developed measures, 23 utilized the division resources (including the division developed pool of questions and/or the division assessment director) while nine did not. The two remaining measures were created by a third party (i.e. another division at MMU that is not student affairs or a vendor) (see Table 16).

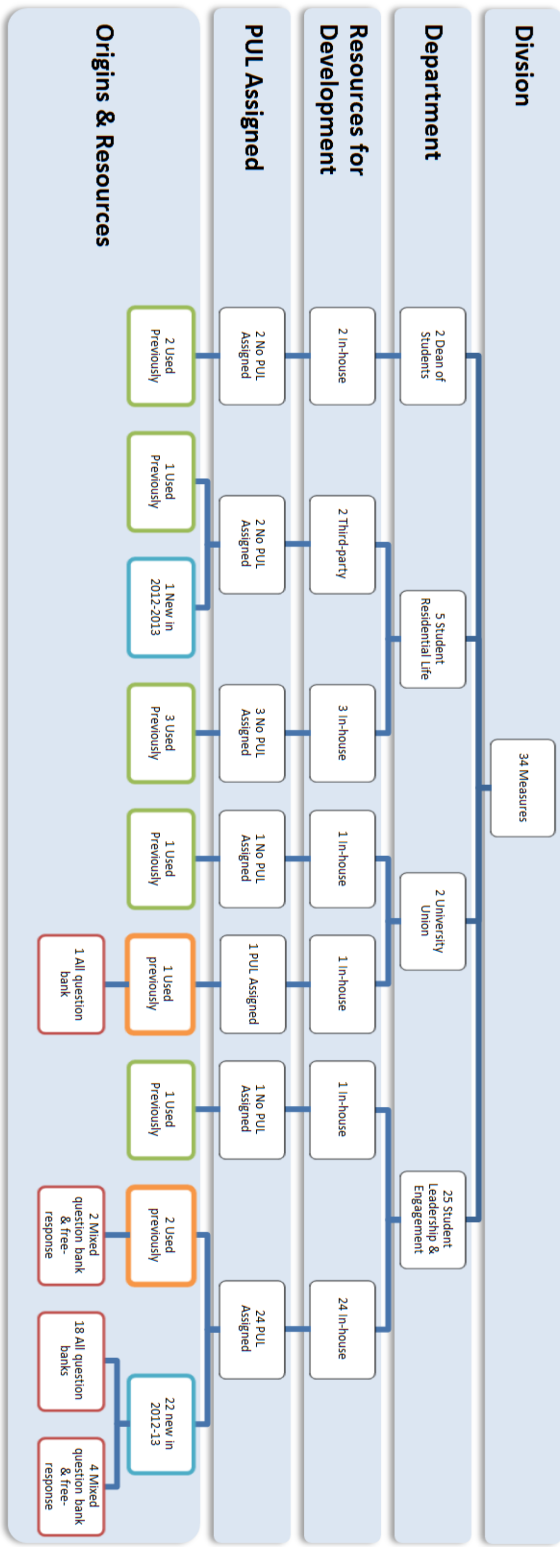

Figure 1. MMU Measure Development Themes. This charts the measure counts for the Division of Student Affairs at MMU broken down by department, resources used, and the PUL assignment.

The measures that were pre-existing (i.e. measured used in previous years without any modification for the year of the study) or were created in-house without divisional support constituted 20.59% (7 of 34) of the total measures in the Division of Student Affairs at MMU. In all seven cases, these measures can be summarized as those that were repeated from the previous year without regard to the institutionally-defined student learning outcomes taken into consideration. The division utilized measures that were developed by a third-party (n=2). Similarly, these items were developed without the intention to measure the institutionally defined student learning outcomes; noting one of the two measures was repeated from previous years.

Table 16

Summary of timing of measure development and resources used by department

	Timing of Development			Resources Used		
	Recycled	Altered	New	In-house	Third-party	Division
University Union	x		x	x		x
Student Leadership and Engagement	x	x	x	x		x
Student Residential Life	x		x	x	x	
Dean of Students	x			x		

In looking further at the 25 measures that had items with assigned institutionally-defined learning outcomes by departments, neither the Dean of Students nor the Student Residential Life is represented. Of these 25 measures, one of the measures was from the University Union and the remaining 24 were from the Office of Student Leadership and Engagement. Both departments used the division resources for these 25 measures that had alignment to the institutionally-defined learning outcomes. Of these measures, seven of the measures were modified for the year of the study and 18 were created new for the year of the study. A total measure count and the process of alignment of items were address earlier in the department descriptions and the total measure breakdown and items with student learning outcomes assignments are given in Table 17.

Table 17

Total number of measures by department given with the number of measure with and without items assigned to the institutionally-defined learning outcomes

		Total Measures	
	Total Measures	With items assigned	Without items assigned
University Union	2	1	1
Office of Student Leadership and Engagement	25	24	1
Student Residential Life	5	0	5
Dean of Students	2	0	2
Campus Recreation	0	0	0
Student Conduct and Judicial Affairs	0	0	0
Total	34	25	9

Research Question Two Findings

The findings related to the second research question are presented in this section. The second question asked, "To what extent are department-level questions aligned with the literature-based description of the specific institution's student learning outcomes?" The department by department description of the items and the alignment to literature are covered first followed by findings related to the division and then the overall item alignment to literature.

Of the final participating departments, Student Residential Life, Dean of Students, University Union, and Student Leadership and Engagement provided measures used during the academic year 2012-2013. Further, and as noted in the previous section, only

University Union and Student Leadership and Engagement intentionally aligned items to the institutionally-defined student learning outcomes. Further, no measures were used in the year of interest for Campus Recreation or Student Conduct and Judicial Affairs. As such, these four departments are excluded in the following data.

Each department provided a self-designated assignment with the institutionally-defined learning outcomes on an item-by-item basis for measures used during the academic year 2012-2013. Within the total 34 measures provided, there were 585 items. The sample included 191 items, or 32.65%, that were not assigned, by the respective departments, to any of the institutionally-defined student learning outcomes (or PULs). Of the total collected items, 394 items were assigned a PUL by the department. Further, of these 394 items, 235 (or 59.64%) were assigned a single PUL by the department and 159 (or 40.36%) were assigned two PULs (see Table 18). The next sections detail the two departments (University Union and Student Leadership and Engagement) that identified or assigned the institutionally-defined student learning outcomes to items and the final rubric rankings of these items to literature based definitions of measuring the outcomes.

Table 18

Total number of items, by department, with the number of items aligned to the institutionally-defined learning outcomes (PUL)

		Total Items Assigned		
	Total items	None	1 PUL	2 PULs
University Union	112	64	39	9
Student Leadership and Engagement	354	8	196	150
Student Residential Life	105	105	0	0
Dean of Students	14	14	0	0
Total	585	191	235	159

University Union - PUL assignment and rankings. Inclusive of all items for the department, the total number of items used in the University Union during the 2012-2013 academic year is 112 (see Table 19). The 48 items from the Manager PUL Self-Assessment were identified by the department as assigned to the following institutionally defined student learning outcomes PUL1 (Core Communication and Quantitative Skills), PUL2 (Critical Thinking), PUL4 (Intellectual Depth, Breadth, and Adaptiveness), PUL5 (Understanding Society and Culture), and PUL6 (Values and Ethics). None of the items from the Manager PUL Self-Assessment used by the University Union were assigned to PUL3) Integration and Application of Knowledge (Table E1 provides a breakdown of PULs by measure).

Table 19

Total number of items, by measure, for University Union including the number of items assigned by the department to the institutionally-defined learning outcomes (PUL)

Department Measure Title	# items	# items assigned PUL	PUL* Assigned to items
Manager PUL Self-Assessment	48	48	1,2,4,5,6
Fall 2012 Training Feedback	64	0	0
Total items	**112**	**48**	

Note. *Key for PUL:
1) Core Communication and Quantitative Skills
2) Critical Thinking
3) Integration and Application of Knowledge
4) Intellectual Depth, Breadth, and Adaptiveness
5) Understanding Society and Culture
6) Values and Ethics
0) No PUL Assigned

In mapping the student learning outcomes the department assigned 39 items out of 48 to a single learning outcome. An example of an item that was assigned to one PUL was, “As a result of my (University Union) Student Building Manager work experience, I am better able to apply knowledge learned during training to real job scenarios." This item was assigned to the PUL2 (Critical Thinking) student learning outcome. Nine items were assigned to two PULs. An item that was assigned to both PUL1 (Core Communication and Quantitative Skills) and PUL5 (Understanding Society and Culture) was, "As a result of my (University Union) Student Building Manager work experience, I am better able to effectively exchange information with a variety of people of different ages, backgrounds, etc." (Table E2 lists all items and department assignment of PULs).

Rubric rankings. None of the 48 items used by the University Union met the rubric's exemplar or milestone rankings (rubric is located in Appendix C). For the 48 items assigned a PUL, 62.5% (30 of 48) did not meet rubric level of benchmark and 37.5% (18 of 48) did meet rubric level of benchmark (Table E2 contains the full code structure of each item). When looking at the 48 items that the University Union assigned to the institutionally-defined learning outcomes, the 30 items that did not met rubric level of benchmark were assigned to PUL1 (Core Communication and Quantitative Skills), PUL2 (Critical Thinking), or PUL4 (Intellectual Depth, Breadth, and Adaptiveness). The literature defined benchmarks for measuring these outcomes require direct measurement of student outcomes. Self-reported outcomes do not meet the benchmark measurement for these three student learning outcomes. An explicit example of an item University Union assigned to these outcomes (PUL1, PUL2, or PUL4) is, "As a result of my (University Union) Student Manager work experience, I am better able to assess a particular conflict or emergency situation and identify and implement an approach for resolving it." This item was assigned two PULs by University Union: PUL1 (Core

Communication and Quantitative Skills) and PUL4 (Intellectual Depth, Breadth, and Adaptiveness).

Of the 48 items the University Union assigned to the institutionally-defined learning outcomes, 18 items did meet the rubric level of benchmark. The items that met benchmark were assigned PUL5 (Understanding Society and Culture) or PUL6 (Values and Ethics). An explicit example of an item that was assigned a PUL and met the rubric definition of benchmark was, "As a result of my Campus Center Student Manager work experience, I am better able to make informed and principled choices and foresee the consequences of these choices." This item was assigned to one PUL by University Union; PUL6 (Values and Ethics). Based on the literature for this outcome a self-reported measure of the outcome meets the criteria to effectively measure the outcome.

Student Leadership and Engagement - PUL assignment and rankings. Inclusive of all items for the department the total number of items used in Student Leadership and Engagement during the 2012-2013 academic year is 354 (see Table 20). Of the 353 items, 288 items were assigned by the department to the following institutionally defined student learning outcomes PUL1 (Core Communication and Quantitative Skills), PUL2 (Critical Thinking), PUL3 (Integration and Application of Knowledge), PUL5 (Understanding Society and Culture), and PUL6 (Values and Ethics). None of the items used by the Student Leadership and Engagement were assigned to PUL4 (Intellectual Depth, Breadth, and Adaptiveness) (Table E1 provides a breakdown of PULs by measure).

Table 20

Total number of items, by measure, for Student Leadership and Engagement, including the number of items assigned by the department to the institutionally-defined learning outcomes (PUL)

Department Measure Title	# items	# items assigned PUL	PUL* Assigned to items
Foundations	52	52	1,2,3,5,6
Cultural Leadership Lunch	2	2	5
SOLD	13	13	1,2,3,6
Freedom Ride	36	6	1,2,3,5,6
Catalyst	11	11	1,2,3,5,6
Project Leadership	5	4	1,2,3,5
Advancing Women Mentoring Program	13	13	1,2,3,5
Jagapalooza	16	16	1,2,3,5
Homecoming	10	10	1,2,3,5,6
Events	2	2	3,5,6
Service Event	4	4	3,5,6
Involvment Expo	2	2	3,5
Nuts&Bolts	3	3	1,2
myInvolvment Training	3	3	1,2,3
Student Organizations	9	7	1,2,3,5,6
CUBE	14	14	1,2,3,5,6
Speaker	5	5	5,6
Leadership Consultants	12	12	1,2,3,5,6
NSLC	35	35	1,2,3,5,6
Project Leadership	57	57	1,2,3,5,6
LeadtoGo	9	9	1,2,3,5
AFLV	15	3	2,3,6
New Greek Member	8	0	0
Greek President Retreat	9	3	2,3,5
Greek Council Retreat	8	2	1,3
Total items	**353**	**288**	

Note. *Key for PUL:
1) Core Communication and Quantitative Skills
2) Critical Thinking
3) Integration and Application of Knowledge
4) Intellectual Depth, Breadth, and Adaptiveness
5) Understanding Society and Culture
6) Values and Ethics
0) No PUL Assigned

Rubric rankings. None of the 288 items used by Student Leadership and Engagement met the exemplar or milestone rankings of the rubric (rubric is located in Appendix C). Of the 288 items, 46.88% (135 items of 288) of Student Leadership and Engagement items did not meet rubric level of benchmark. The remaining 53.13% (153 of 288 items) of the Student Leadership and Engagement items met rubric level of benchmark (Tables E3 – E26 lists all items and department assignment of PULs by individual measure).

Of the 288 items that Student Leadership and Engagement assigned to institutionally-defined learning outcomes, 135 did not meet the rubric level of benchmark. These 135 items were department assigned to PUL1 (Core Communication and Quantitative Skills) or PUL2 (Critical Thinking). When reviewing the literature definitions for measuring these outcomes, direct measurement of student outcomes are required. Further, self-reported outcomes do not meet the benchmark measurement for these two student learning outcomes. An explicit example of an item that was assigned to these outcomes is, “My involvement in Cube Council helped me work collaboratively within a team.” This item was assigned to two PULs by the Office of Student Leadership and Engagement; PUL1 (Core Communication and Quantitative Skills) and PUL2 (Critical Thinking).

From the 288 items Student Leadership and Engagement assigned institutionally-defined learning outcomes, 153 items did meet the rubric level of benchmark. These 153 items were assigned by the department to PUL3 (Integration and Application of Knowledge), PUL5 (Understanding Society and Culture), or PUL6 (Values and Ethics).

An explicit example of an item that was assigned to these outcomes is, “Catalyst[10] provided me with a greater understanding of respecting the views of people who see things differently than I do.” This item was assigned two PULs by Student Leadership and Engagement; PUL5 (Understanding Society and Culture) and PUL6 (Values and Ethics). Based on the literature for these outcomes a self-reported outcome meets the criteria to effectively measure the outcome.

PUL assignment and rankings - MMU Division of Student Affairs. None of the items for the Division of Student Affairs at MMU met exemplar or milestone rankings based on the literature definitions of the institutionally-defined student learning outcomes. In total, 29.4% (171 out of 585) of the items met rubric level of benchmark and 71.6% (414 of 585) did not meet benchmark across all the items shared for the Division of Student Affairs at MMU (see Appendix E). However, when using only the 336 items to which departments associated an institutionally-defined student learning outcome, the percent of items that met the rubric level of benchmark increases to 51.19% (171 out of 336) (see Table 21).

[10] Catalyst is a leadership program hosted at MMU through the Student Leadership and Engagement department.

Table 21

Total number of measures, total items, items assigned by the departments to the institutionally-defined learning outcomes (PUL), and number of items ranked at specific levels by departments within the Division of Student Affairs at MMU

				Items ranked		
	Measures	Total Items	Items assigned PUL	Benchmark	Milestone	Exemplar
University Union	2	112	48	18	0	0
Student Leadership and Engagement	25	354	346	153	0	0
Student Residential Life	5	105	0	0	0	0
Dean of Students	2	14	0	0	0	0
Campus Recreation	0	0	0	0	0	0
Student Conduct and Judicial Affairs	0	0	0	0	0	0
Total	34	585	394	171	0	0

The items that met the rubric level of benchmark across the Division of Student Affairs were defined by the departments to have measured PUL3 (Integration and Application of Knowledge), PUL5 (Understanding Society and Culture), and PUL6 (Values and Ethics). Literature defined benchmarks for measuring these outcomes allow for self-reported outcomes to meet the benchmark measurement for these three student learning outcomes. Student Leadership and Engagement used items like this sample, “This breakout provided me with skills to learn more about my personal values and ethics”. The department assigned two PULs to this item: PUL5 (Understanding Society and Culture) and PUL6 (Values and Ethics). A similar item for University Unions, “As a result of my [University Union] Manager work experience, I am better able to apply my set of values and ethics to a specific situation.” was assigned to PUL6 (Values and Ethics). Both departments assigned PUL6 (Values and Ethics) and in both items the language references “values and ethics.” According to literature, accepted methods for measuring values and/or ethics includes the use of one measure including self-report, observations, or validated measure. Both these items were ranked as benchmark using the rubric of defining measure of student learning outcome used in this study. In order to move the ranking toward milestone and exemplar when measuring values and/or ethics multiple indicators or measures for a single student and learning outcome should be used.

Any items that were defined by departments to have measured PUL1 (Core Communication and Quantitative Skills), PUL2 (Critical Thinking), and PUL4 (Intellectual Depth, Breadth, and Adaptiveness) did not meet any of the rubric levels (benchmark, milestone, or exemplar) of the literature defined methods for measuring the outcome. When looking at the literature defined benchmarks for measuring these outcomes, direct measurement of student outcomes are required and self-reported outcomes do not meet the benchmark measurement for these three student learning outcomes. An example of where the Division of Student Affairs’ items were assigned to one of these outcomes is, “This seminar provided me with critical thinking skills to systematically review my ideas about how to approach an issue.” This specific item, used by Student Learning and Engagement, was assigned to PUL2 (Critical Thinking). University Union also assigned PUL2 (Critical Thinking) to the item, “As a result of my [University Union] Manager work experience, I am better able to analyze processes, based upon on-the-job experiences, to identify opportunities for improvement.” According to literature, accepted methods for measuring critical thinking would include using student demonstrations, observable work, rubrics, or standardized testing which these items do not produce.

The processes and methods of measures for MMU's Division of Student Affairs during the 2012-2013 academic year relied on using student self-reported outcomes. Further, the resources within the departments did not allow for individual student responses to be tracked across measures or departments and could not provide data depth to change the rubric rankings beyond benchmark. This lack of student level data also limits the opportunity to measure student learning for a single student, reducing the item's overall rubric ranking. In example, for the milestone ranking for PUL 6 (Values and Ethics) multiple self-report methods would be acceptable. If the division or department could demonstrate an item's measurement for a specific student across multiple measures then the use of items within the division or department question banks may be at a milestone ranking.

Two explicit examples of items that were developed using the division bank of questions include one from University Union ("As a result of my [University Union] Student Manager work experience, I am better able to apply my set of values and ethics to a specific situation") and another from Student Leadership and Engagement ("This program provided me with skills to apply my values and ethics to a specific situation"). If this item response could be connected to the same student then the item, from the division question bank, could be ranked as milestone.

Research Question Three Findings

The findings related to the third research question are presented in this section. Question three asks: "To what extent do items used in measuring the institution's specific student learning outcomes across student affairs departments agree with similarly identified constructs (based on departmental identification) across the division of student affairs?" The overall findings are addressed in the following progression: 1) agreement across all debriefers in the primary PUL codings the debriefers identified, 2) the agreement of departments' primary PUL identification compared in turn to each individual debriefer's primary PUL code, 3) agreement across all debriefers in the secondary PUL codings the debriefers identified, and 4) the agreement of departments' secondary PUL identification compared in turn to each individual debriefer's secondary PUL code.

Primary PUL coding – Debriefers only. The sample of items (n=147) was coded by each debriefer to a primary PUL. Using Intraclass Correlation as an estimate of the inter-rater reliability across the three coding debriefers primary PUL codes (without inclusion of the department primary PUL identification), 81.3% of the debriefers' codes were found to be in agreement as a group of coders ($ICC_{(2,3)} = .813$, $p<.001$). The Cronbach's alpha for the 3 debriefers was .813.

An example of an item where all the debriefers agreed on the same code for the primary PUL is, "My involvement on the Homecoming Committee helped me develop the ability to plan and execute events." The debriefer-assigned PUL code to that item was PUL3 (Integration and Application of Knowledge). All three debriefers agreed on the same primary PUL code in 48 of the 147 items (32.65%). In the cognitive interviewing processing, debriefers often talked through the coding choice as based on the specific content of the question or item. In this current example item, the Homecoming committee involvement was interpreted by debriefers as in line with the intention of PUL3. An item where two of the three debriefers agreed on the item coding was, "As a result of my [University Union] Area Manager work experience, I am better able to understand subjects other than the one in which I am majoring.” For this item, two of the debriefers assigned the PUL4 (Intellectual Depth, Breadth, and Adaptiveness) code. The third debriefer assigned the code PUL0 (None of the PULs). Cases where two of the three debriefers agreed on the same code for the primary PUL occurred 123 times or for 83.67% the sample (123 out of 147).

However, cases where debriefers did not agree on the primary PUL coding also occurred. An example of an item on which none of the debriefers agreed was the following, “My involvement in Cube Council helped me learn how to manage conflict.” Debriefers chose three different primary codes for this item including PUL1 (Core Communication and Quantitative Skills), PUL2 (Critical Thinking), and PUL6 (Values and Ethics). This lack of agreement among the debriefers occurred for 24 of the measures or in 16.33% (24 out of 147) of the items. Often the debriefer would allude to their uncertainty of the intention of the item or program to which it referred and would then choose the PUL to which their experience drew them. In this specific case, a debriefer’s personal understanding of student involvement in a council might have been a driver over the actual intention of the PUL.

Primary PUL agreement – Department and debriefer pairings. This next section outlines each of the three debriefers in turn. The Intraclass Correlation Coefficients across each debriefer will be discussed. Table 22 includes the coefficients, Cronbach’s alphas, and significance for the primary PUL coding. All of the debriefers codes were found to be significant and over 70% in agreement with the department primary PUL codes.

Table 22

Intraclass Correlations and Cronbach's alphas for primary coding of the institutionally-defined learning outcomes to the sample items (n=147)

	ICC†	Cronbach's alpha
All CogIntv Debriefers††	.813**	.813
CogIntvA & Dept	.762**	.768
CogIntvB & Dept	.717**	.717
CogIntvC & Dept	.767**	.775

Note. † ICC = Intraclass Correlation Coefficients. ††All CogInt Debriefers do not include the department.
*p<.05, **p<.001

Agreement for departments and Debriefer A. The item sample (n=147) was coded by Debriefer A to primary PULs providing all valid cases for comparison. Using Intraclass Correlation as an estimate of the inter-rater reliability across the coding of Debriefer A's primary PUL codes and of the departments primary PUL identification, 76.2% of the codes were found to be in agreement ($ICC_{(1,2)} = .762$, $p<.001$). The Cronbach's alpha was .768.

An example of item agreement between Debriefer A's response and the department identified PUL was, "Attending Living with Purpose at NSLC provided me with skills to communicate ideas and information." PUL1 (Core Communication and Quantitative) was coded by both the department and the debriefer as the primary PUL. According to Debriefer A the mirror language from the PUL description (i.e. "express ideas and facts") and the wording of the item (i.e. "communicate ideas and information") made the coding apparent to them.

Agreement for departments and Debriefer B. The item sample (n=147) was coded by Debriefer B to primary PULs, with the exception of one item providing 146 valid cases for comparison. Using Intraclass Correlation as an estimate of the inter-rater reliability across the coding of Debriefer B's primary PUL codes and of the departments primary PUL identification, 71.7% of the codes were found to be in agreement ($ICC_{(1,2)}$ = .717, p<.001). The Cronbach's alpha was .717.

An example of an item where the Debriefer B's response and the department identified PUL agreed was, "This program provided me with skills to prioritize what activities are more important to me." Both coded PUL6 (Values and Ethics) to this specific item. According the Debriefer B the PUL description (i.e. "informed and principled choices") and the intention provided by the item (i.e. prioritize activities of importance) provided them foundation for the coding of the item to a student learning outcome that is centered on values.

Agreement for departments and Debriefer C. The item sample (n=147) was coded by Debriefer C to primary PULs providing all valid cases for comparison. Using Intraclass Correlation as an estimate of the inter-rater reliability across the coding of Debriefer C's primary PUL codes and of the departments primary PUL identification, 76.7% of the codes were found to be in agreement ($ICC_{(1,2)}$ = .767, p<.001). The Cronbach's alpha was .775.

An example of an item where the Debriefer C's response and the department identified PUL was in agreement was, "This program provided me with skills to generate new ideas or ways to prevent burnout." Both coded this specific item as PUL3 (Integration and Application of Knowledge). According the Debriefer C, (s)he believed that the prevention of burnout was a transferred skill and would be an application of the program to "enhance their personal lives" as the PUL description states.

Secondary PUL coding – Debriefers only. The sample of items (n=147) was coded by each debriefer to a secondary PUL. Using Intraclass Correlation as an estimate of the inter-rater reliability across the three coding debriefers secondary PUL codes (without inclusion of the department secondary PUL identification), 25.8% of the debriefers' codes were found to be in agreement as a group of coders ($ICC_{(2,3)} = .258$, $p<.05$). The Cronbach's alpha for the 3 debriefers was .266.

An example of an item where all the debriefers agreed on the same code for the secondary PUL is, "This program provided me with the critical thinking skills to: generate new ideas or ways to improve things." The debriefer-assigned PUL code to that item was PUL0 (No PUL Assigned). Of note, all three debriefers also agreed on the same primary PUL code PUL2 (Cognitive Thinking) for this specific item example. An example of an item where two of the three debriefers agreed on coding was, "Catalyst provided with the critical thinking skills to generate new ideas or ways to improve my leadership skills." For this item, two of the debriefers assigned the PUL3 (Integration and Application of Knowledge) code. The third debriefer assigned the code PUL0 (None of the PULs).

An interesting case of disagreement was in the item, "This program provided me with skills to identify issues of personal importance and recognize my personal values." For this item the department respectively assigned PUL5 and PUL6 as the primary and secondary PUL. Across all three debriefers, the primary PUL was in agreement and was coded as PUL6. Although there was agreement between the department primary and all the debriefer's secondary PUL this item would have been one of disagreement in all three pairings for the secondary PULs.

Secondary PUL agreement – Department and debriefer pairings. This next section outlines each of the three debriefer's coding for the secondary PULs in turn. The Intraclass Correlation coefficients across each debriefer will be discussed. Table 23 includes the coefficients, Cronbach's alphas, and significance for the secondary PUL coding. The debriefers' codes for the secondary codes were not all found to be significant. Further, the significant secondary PUL codes for the debriefers were all under 35% in agreement with the department secondary PUL codes.

Table 23

Intraclass Correlations and Cronbach's alphas for secondary coding of the institutionally-defined learning outcomes to the sample items (n=147)

	ICC†	Cronbach's alpha
All CogIntv Debriefers††	.258*	.266
CogIntvA & Dept	.324*	.330
CogIntvB & Dept	.093	.101
CogIntvC & Dept	.223*	.263

Note. † ICC = Intraclass Correlation Coefficients. ††All CogInt Debriefers do not include the department.
*p<.05, **p<.001

Agreement for departments and Debriefer A. The item sample (n=147) was coded by Debriefer A to secondary PULs providing all valid cases for comparison. Using Intraclass Correlation as an estimate of the inter-rater reliability across the coding of Debriefer A's secondary PUL codes and of the departments secondary PUL identification, 32.4% of the codes were found to be in agreement ($ICC_{(1,2)} = .324$, $p<.05$). The Cronbach's alpha was .330.

An example of item agreement between Debriefer A's response and the department identified PUL was, "My involvement on the Homecoming Committee helped me develop the ability to identify personal leadership skills and strengths." PUL6

(Values and Ethics) was coded by both the department and the debriefer as the secondary PUL. According to Debriefer A, the mirror language from the PUL description (i.e. “express ideas and facts”) and the wording of the item (i.e. “communicate ideas and information”) made the coding apparent to them.

Disagreement in the secondary PUL, however, was more common. For example, for the item, “This breakout provided me with skills to recognize how groups and communities I belong to influence my leadership style.” the department respectively assigned PUL5 and PUL6 as the primary and secondary PUL. Another item from the same measure that the department coded identically was, “This breakout provided me with skills to learn more about my own personal values and ethics.” For the first item, Debriefer A agreed with both assignments by coding PUL5 and PUL6 as the primary and secondary PUL. In the second item, however, Debreiefer A chose PUL6 for the second item but coded it as a primary PUL. In this the second example, therefore, the item would have been in disagreement in the secondary PUL coding for this pairing.

Agreement for departments and Debriefer B. The item sample (n=147) was coded by Debriefer B to secondary PULs providing all valid cases for comparison. Using Intraclass Correlation as an estimate of the inter-rater reliability across the coding of Debriefer B’s secondary PUL codes and of the departments secondary PUL identification, 9.3% of the codes were found to be in agreement ($ICC_{(1,2)} = .093$, $p=.261$). The Cronbach’s alpha was .101.

An example of an item where the Debriefer B’s response and the department identified PUL agreed was, “As a result of my Campus Center Student Building Manager work experience, I am better able to effectively exchange information with a variety of people of different ages, backgrounds, etc." Both coded PUL5 (Understanding Society and Culture) to this specific item. According the Debriefer B, (s)he felt that the intention provided by second half of the item (i.e. "variety of people of different ages, backgrounds, etc.") gave them foundation for the coding of the item to a student learning outcome that discussed the student's ability to, "appreciate the diversity of the human experience" as provided to them in the PUL descriptions.

A select case of disagreement that is more complex is the specific item worded, "This breakout provided me with skills to discuss challenges of college life with peers and begin to develop solutions." For this item the department respectively assigned PUL3 and PUL5 as the primary and secondary PULs. Debriefer A was in total disagreement and coded the PULs at primary PUL1 and secondary PUL2. However, Debriefer B coded primary PUL as PUL1 (in agreement with Debriefer A) and PUL3 as the secondary (in agreement with the department assigned primary PUL).

Agreement for departments and Debriefer C. The item sample (n=147) was coded by Debriefer C to secondary PULs providing all valid cases for comparison. Using Intraclass Correlation as an estimate of the inter-rater reliability across the coding of Debriefer C's secondary PUL codes and of the departments secondary PUL identification, 22.3% of the codes were found to be in agreement ($ICC_{(1,2)} = .223$, $p<.05$). The Cronbach's alpha was .263.

An example of an item where the Debriefer C's response and the department identified PUL agreed was, "This seminar motivated me to think of new ideas or ways to improve my organization's meetings." Both coded this specific item as not being aligned to any of the institutionally-defined student learning outcomes. According the Debriefer

C, it was apparent to them that this item was intended to measure a level of motivation in the student and not learning.

The case of disagreement from the previous section the specific item worded, "This breakout provided me with skills to discuss challenges of college life with peers and begin to develop solutions." is even further complicated when you look at the coding for Debriefer C. As a refresher, the department assigned PUL3 as the primary and PUL5 as the secondary PUL. Debriefer C coded PUL5 (in agreement with the department assigned secondary PUL) as the primary and PUL6 as the secondary. Therefore, this item would have been in disagreement for this pairing regardless of the match in PUL5.

Summary of Findings

This chapter presented the findings related to the departmental processes for aligning the institutionally-defined student learning outcomes to measures used in the 2012-2013 academic year. Of the 34 measures shared by the division, 32 surveys were developed in-house by staff members with varying degrees of input at the division-level. The two instruments that were third-party developed surveys were used to evaluate the program or department and were not validated measures intended to measure student learning. Twenty five (out of 34) measures had items for which the department assigned PULs: the remaining nine measures had no PUL assignments. Of the 25 measures, 22 were measures created new in the 2012-2013 year. The three previously used measures were modified during the year. All 25 measures included some items that were developed or mirrored the bank of questions provided by the division assessment leadership.

In total there were 585 items across all 34 measures, and 336 of the items were assigned by the departments as measuring student learning outcomes. None of the 336 measures met milestone or exemplar rubric ratings and only 171 items met the benchmark ranking. These 171 were assigned by the departments to PUL3 (Integration and Application of Knowledge), PUL5 (Understanding Society and Culture), and PUL6 (Values and Ethics). The remaining 165 items were assigned by departments to PUL1 (Core Communication and Quantitative Skills), PUL2 (Critical Thinking), and PUL4 (Intellectual Depth, Breadth, and Adaptiveness) and did not meet any of the rubric levels (benchmark, milestone, or exemplar). Outcome measurement relied solely on student self-reporting. The lack of direct measures of student outcomes and tracking of individual students was noted as a factor in the lower rubric rankings for items used.

Debriefers and departments were found to have significant agreement in assigning primary institutionally-identified student learning outcomes to items. The agreement between departments and the debriefers were near the range of 72% and 77% across the primary PUL assignments and coding. However, the secondary PUL coding was not universally significant in agreement and the reliability of the assignment and coding was reduced. These mixed results provide for a rich discussion of the next steps in measuring student learning outcomes for divisions of student affairs.

Chapter V addresses these finding and their relationship to the literature and discusses the implication of these findings to practice and future research.

Chapter V

Discussion and Conclusion

This chapter provides an interpretation of the findings presented in Chapter IV and discusses implications for leadership within divisions of student affairs and their departments in measuring student learning outcomes. The limitations of this study and the implications for future research are also addressed. This chapter concludes with summary remarks about this study in whole.

Summary of findings

Processes of measure development. The central themes for the processes in development of measures that emerged focused on the resources that the departments utilized and timing of the measure development. Specifically, resources that departments across the Division of Student Affairs at MMU used were in-house resources, third-party developed measures, and instruments developed with input from the divisional assessment expert. The three types of timing in the measure development were to recycle, alter, or start a new measure. The two sections below discuss these findings with respect to relevant literature.

Resources. The use and stewardship of resources toward the mission of an institution to effectively achieve the institution mission and goals is critical in sustaining best practices in student affairs (ACPA & NASPA, 1997; Ashley-Pauley, 2012). The current study found resources as a primary theme in the development of the measures used. One sub-theme of resources used included survey measures developed in-house, the most prominent across departments within the Division of Student Affairs at MMU. Upcraft and Schuh (1996) maintain that, “local assessment studies will have the desired impact of demonstrating the worth of student services and programs and ensuring their survival" (p. 10). Of the 34 measures presented in this study by the division, staff members developed 32 surveys with varying degrees of input at the division-level. This finding is similar to the findings of Green et al. (2008) that the most common reported assessment method for divisions of student affairs was locally developed surveys. However, Palomba and Banta (1999) cautioned that, "locally developed instruments can take a great deal of time to construct and may provide results that are difficult to interpret" (p. 100). Further, while results from locally-developed instruments "provide us with the richest information about the efficacy of our own educational practices" they must also be validated (Maki, 2004, p. 94). This stressed the importance of validity which would lead to the consideration of using outsourced or third-party instruments to measure student learning.

The second sub-theme, third-party developed surveys, was consistent with two instruments in use during the 2012-2013 academic year for the Division of Student Affairs at MMU. It is important to note that neither instrument was intended to measure student learning. Student Residential Life was the only department reported to use this method and it is noted that these measures were program assessments and used solely for evaluation. *Principles of Good Practice for Student Affairs* (ACPA & NASPA, 1997) emphasizes systematic inquiry to improve student and institutional performance, which was not the case with these measures. The use of measures across time, as in the third-party Facility Survey, can help with a clear understanding of performance and demonstrates systemic purpose; however, this study was not able to determine the motives for this practice.

The third and final sub-theme of resources used for the development of measures was input from the divisional assessment expert. Of the 34 measures used in the Division of Student Affairs at MMU, 25 were developed with divisional guidance in some form. The divisional leadership led the development of a bank of questions as a resource for the departments, which resulted in some of the departments' assignment and measuring student learning outcomes in all 25 of these measures. Scholars agree student learning outcomes should be measurable, meaningful, realistic, and ongoing and in alignment with the institutional mission (Bresciani et al., 2004; Huba & Freed, 2000; Maki, 2004). Measures that were aligned to the institutional mission were possible at MMU because there were resources that had a focus on the overall divisional contribution to student learning. Further, this finding supports previous assertions that divisional leadership's emphasis on assessment affects the use of assessment for student affairs (Green et al., 2008; Seagraves & Dean, 2010).

Missing from this central theme and sub-themes for the division are the use of broader institutional resources or collaborations and larger validated measures for student learning in the development of measures. Collaborations between student affairs staff and colleagues across the institution to plan for and foster student learning are important (ACPA, 1996). A single department, Student Residential Life, had a collaborative assessment measure, Service with Distinction that was created in Finance and Administration for pilot in the 2012-2013 year; indicating a move toward this practice. Further, Student Leadership and Engagement specified that, for the year following the study, work with faculty on measuring student learning was beginning to take shape. Kuh and Banta (2000) elaborate on the collaborations that must be drawn upon in order to create environments where student learning is pervasive. With the exception of the two earlier mentioned examples, collaboration was absent in the findings for this study. Given the history and institutional culture of the PULs at MMU, it could be expected that more collaborations would be evident in the work of the Division of Student Affairs. However, based on the findings for this current study, this lack of collaboration on the development of measures of student learning is common and remains undocumented at the department level. This finding provides an opportunity for the leadership in student affairs to be aware of the nature of collaborations and the impact toward measuring student learning in ways that are in tandem with academic partners.

Timing of measure development. From the 34 measures used in the 2012-1013 academic year, 11 of the measures were used before the year of the study. Of these 11, eight were recycled and used without modification while three were altered and used with modifications. The remaining 23 measures were new measures. The eight recycled measures also were not assigned PULs by the departments. Outcomes assessment is an active and cyclical process that requires attention to the measures used (Bresciani et al., 2004; Bresciani et al., 2009; Huba & Freed, 2000; Maki, 2010). The recycled measures occurred more often in departments where the program or department staff had responsibility for the area in the years before the study or the measure came with the program (the former for Student Leadership and Engagement and the later was the case of the Dean of Students). This finding is similar to those of Seagraves and Dean (2010), who identified that the tenure of the staff or their buy-in toward assessment of student learning outcomes was confounding to this theme of previously used measures.

In both altered and new groups, for the 2012-2013 academic year, the assigning of institutionally-defined student learning outcomes was connected to the measure development process (with the exception of the pilot of the Service with Distinction survey). By altering existing measures and/or tailoring newly created measures, to align with institutional goals, the division was making an explicit attempt to demonstrate how student affairs contributed to the overall attainment of these goals. This finding is analogous to Doyle's (2004) conclusion that the primary reason for student affairs to engage in assessment was to demonstrate contribution at an institutional level. The primary purpose for 25 measures (22 new and 3 altered) was to assign and measure the PULs. Based on this outcome of the study, it is recognized that the measuring of institutional outcomes was a priority for the Division of Student Affairs at MMU. However, this is contrary to Green's (2006) findings of a lack of use of institutional outcomes for divisions of student affairs. For the case of MMU and the pervasive culture of the PULs, there was a distinct opportunity for the Division of Student Affairs to move toward institutional contributions that Doyle (2004) called for yet Green (2006) was not able to document.

Another sub-theme to the altered and newly created measures for the Division of Student Affairs at MMU was the use of divisional resources for these specific measures. As mentioned in the resources used in measure development, the division-wide bank of questions and working with the division assessment professional was central to the identification of PULs for 25 measures. The altered or newly developed measures are the same 25 measures, creating an interconnection between the resources used and the timing for measure development. This finding is related to a conclusion in Green (2006) where divisions that had an assessment expert created an environment receptive to measuring student learning outcomes. The findings in this study support that having competency available for assessment and evaluation increases the measuring of the impact of student affairs toward student learning.

PUL assignment and rankings. By the early 2000's, attention had shifted toward having common student learning outcomes across institutions of higher education (AACU, 2011; CHEA, 2003; Humphreys, 2006). Further, the need for and utility of alignment of the learning outcomes and the measures both inside and outside of the classroom existed (Briggs, 1996). The emphasis on the significance of learning outcomes, as opposed to simply performing well on a test or measure, was the focus of Shepard's (2000) work and is relevant to the present study, because of student affairs' early history and emphasis on satisfaction surveys or program evaluations in place of high-quality assessment of learning. The findings presented below further an understanding of student affairs' contributions to measuring institution-wide student learning outcomes. This discussion on PUL assignment and the rankings for the Division of Student Affairs at MMU connects the institutional goals and student learning.

PUL Assignment. Across the 34 measures, there were 585 items in total used in the 2012-2013 academic year for the Division of Student Affairs at MMU. Of those, 336 items were assigned by the departments as measuring the institutionally-defined student learning outcomes. This finding is in contrast to what Green et al. (2008) described as local surveys that were associated with a functional area and not tied to the overall mission of the division or the institution. However, these findings do support Doyle's (2004) assertion of assessment within student affairs as needing to make a contribution at an institutional level. The 336 individual items that were aligned to the institutional student learning outcomes were also more likely to have been items from a divisionally or department created bank of questions; mirroring the division resource theme that threaded the timing of measures.

Rankings. When ranking the items to literature-based practices for the learning outcomes, however, the findings were weak. Close to half of the items to which departments assigned learning outcomes did not meet the benchmark, milestone, or exemplar rubric rating for measuring these outcomes. The other half of the items only met benchmark, the lowest ranking. This outcome is supported by Bresciani's (2006) finding that, despite institutions being known for having best practices in assessment, there still exists a disconnect between literature and research in the daily practices of assessment wok within institutions of higher education.

For the 171 items that met the benchmark ranking, a discussion on methods of collecting data becomes relevant. The processes and methods of measures for MMU's Division of Student Affairs during the 2012-2013 academic year relied on using student self-reported outcomes. Self-reported data is an acceptable measure for Integration and Application of Knowledge, Understanding Society and Culture, and Values and Ethics (Dzuranis et al., 2013; Elder, 2004; King et al. 2007; Strayhorn, 2006; Watson et al., 2013). Student affairs has traditionally been most successful at incorporating principles of learning based on direct interaction with students (Doyle, 2004). To progress beyond acceptable levels, however, student affairs educators need to consider moving to multiple methods of data collection, where students show gains over time (Bresciani, 2003; Huba

& Freed, 2000; Palomba & Banta, 1999) and across the multiple departments in a division.

For the remaining 165 items that did not meet benchmark rankings, an understanding of the student learning outcome and the best practices for measurement are needed. Core Communication and Quantitative Skills, Critical Thinking, and Intellectual Depth, Breadth, and Adaptiveness require direct student measures to acceptably measure student learning in these areas (Bruning, 1994; Eisenberg et al., 2004; King & Kitchener, 2004; Nusche, 2008; Rhodes, 2010; Steedle et al., 2010; Strayhorn, 2006). To make progress in measuring student learning in these arenas, student affairs educators need to consider direct measures of student learning (Maki, 2010; Palomba & Banta, 1999; Schuh, 2013; Shutt et al., 2012). This finding also contributes to Banta's (2004) discussion of the disconnect between research and practice in measuring student learning outcomes. There needs to be more intentionality in item development to match the intended learning outcome and less focus on satisfying interests outside of campus (Peterson & Einarson, 2001).

Findings from this study indicate that in order to change the rankings of items on the rubric to align to literature, changes in the items used for student learning outcomes and methods employed may need to occur. Banta (2004) suggested that professionals in student affairs should be collecting meaningful data related to measuring student learning outcomes and move away from basic attendance and satisfaction data. Components that were missing from the sample of measures provided in this study were rubrics, evaluations of student performance, or other direct measures.

Further, the resources used by the departments for item tracking did not allow for individual student responses to be followed across measures or departments. If departments provide this level of data, a possible change in the rubric rankings beyond benchmark might be possible. A lack of student level data limited the opportunity to measure student learning for a single student across departments or time reducing the item's overall ranking. Data of this depth would support the assertion that student learning should be measured across experiences and time (Dzuranis et al., 2013; Rhodes, 2010). If the division or department could demonstrate an item's measurement for a specific student across multiple measures then the use of items within the division or department question banks might be at a milestone ranking.

PUL coding and department agreement. This section outlays an exploratory understanding of the agreement in student learning outcome assignments to a sample if items used in the Division of Student Affairs at MMU during the academic year 2012-2013. These findings address a gap in the conversation of the context of assessment in higher education and the impact of how we align our assessment practices toward achievement of overall institutional outcomes (Chemoist, 2012). It was found that the debriefers' primary codes were 81.3% in agreement as a group of coders ($ICC_{(2,3)} = .813$, $p<.001$). This suggests a high degree of agreement in the coding for the debriefer group in the primary PUL coding. Further, the department assignments were in strong agreement for 76.2%, 71.7% and 76.7% for Debriefer A, B, and C coding respectively ($ICC(1,2) = .762$, $p<.001$, $ICC(1,2) = .717$, $p<.001$, and $ICC(1,2) = .767$, $p<.001$) in the primary PUL assignments and codings. A conclusion that can be drawn from these findings is that the assignment of the learning outcomes may be strongly in agreement with the outcome it intends to measure. Having the assignment of the outcomes in agreement supports Huba and Freed's (2000) assertion that institutions need to maintain clearly stated learning outcomes and measures in order to offer guidance for all activities, services, and programs and inform undergraduates about student affairs educators' intentions.

Further, specific items that are pulled from the bank questions and have high agreement should be considered division-wide items that measure the same student learning outcome across the division. This discussion is akin to the research findings that institutions are defining and measuring similar outcomes across all students (Hart, 2009). The advantages to this process would be creating a divisional aggregate contribution to the institutionally-defined learning outcome and opportunities for the collaborations discussed earlier.

However, the agreement was not as strong for the secondary PUL assignments and codings. The debriefers' secondary PUL codes were only 25.8% in agreement as a group of coders ($ICC_{(2,3)} = .258$, $p<.05$). This indicates a poor rate of agreement in the secondary coding. Further, the department assignments were in agreement for 32.4%, 9.3% and 22.3% for Debriefer A, B, and C coding respectively (ICC(1,2) = .324, $p<.05$, ICC(1,2) = .093, $p>.05$, and ICC(1,2) = .223, $p<.05$). The lower correlates for agreement indicate that the secondary PUL assignment and coding show poor reliability. A conclusion that can be drawn from these findings is that the item construction process itself had a negative impact on the level of debriefer agreement. Sanchez (1992) found that questionnaire formatting alone can highly influence the quality of data. Given that measure items were grouped around specific experience and learning objectives while the debriefers did not have this same contextual aid, item interpretation may have resulted in different coding.

It is important to note that the department assignments for PULs would have occurred for the entire measure and having a complete set of items in front of them. The context was one of the departmental concerns over representing well the impact of its programs and/or events with the measurement of the PUL and the culture of their campus in the foreground. The coding context of the debriefers was more removed from the operations of the department and the culture of the institution. Each debriefer was given an individualized sample of items, in a random order, where items from the same measure would mostly likely not appear adjacent. Both situations would most likely produce different assignments and codes as the finding in this study demonstrate.

As these findings serve as a beginning understanding of agreement, consideration of the primary and secondary PUL and the match or mismatch must be taken into account. This study demonstrates the complexity of aligning items to learning outcomes and the need to have the competency to understand the item and measures. Further, this study highlights the strength needed in data collection methods across a division of student affairs.

Implications for Practice

A major contribution of this work for student affairs is in the area of data collection methods on student learning. As a field student affairs is not moving quickly enough to capture the holistic picture of student learning that occurs outside of the classroom. The internal and external pressures to demonstrate learning in ways that contribute to the institutional outcomes, however, are progressively growing at a rapid rate. As Schuh (2013) extols, “The extent to which [student affairs] contribute[s] to student learning will solidify their role in the university” (p. 93). This study has highlighted a need for strong data collection practices that include having student level data across a division as an approach to solidify student affairs contribution to student learning. Resources must be devoted to improve the business practices for student affairs that include data gathering solutions and the contribution to that data in a shared and collaborative form.

Another implication for practice is the need for some level of standardization in measuring student outcomes. There must be accountability to the institution for outcomes of students’ participation in any of the departments of student affairs; yet to date student affairs cannot uniformly respond to that call. The addition of same or similar measures, items, or tools for measuring student outcomes must come soon. This must, however, not be done in a vacuum. The current practices within academic affairs and in the K-12 sectors of education must help inform best practices and guide the measuring of learning for student affairs as a field.

Another implication from this study is that assessment practices need to move in pace with goals and initiatives for the division and the institution. The alteration of measures already in use at MMU demonstrates the positive consequence of moving in partnership where the department can continue a practice while aligning to the institutional priorities. Additionally, the data also demonstrate that there is a consistent practice for a variety of reasons (i.e. staff departures) that measures are consistently reused, irrespective of new institutional goals. In everyday practice the work done in assessing student learning outcomes must be in tandem with these goals. For student affairs to remain relevant to students and the institution, it is important understand these goals to continually realign efforts without losing sight of efforts already in place (ACPA & NASPA, 1997; Huba & Freed, 2000; Maki, 2010; Palomba & Banta, 1999).

This study found a lack of measures that were consistent with or contained items similar to those found in national surveys (i.e. NSSE) or national datasets structure around specific learning outcomes. The integration of these types of measures into a division of student affairs builds credibility into programs and services. If divisions of student affairs move to this practice, while also providing for a reduction in the number of measures created, it will allow for the use of existing data without adding to student survey fatigue.

This study highlights the competency needs in assessment and instrument design particularly given the reliance on in-house developed measures. Assessment and evaluation professional development opportunities and curriculum for student affairs preparations were addressed by NASPA & ACPA (2010) in a joint effort to underscore this need for better training on instrument development for student affairs professionals. There are implications for divisions of student affairs to continually assess the competency of staff and provide opportunities for continual growth in areas of assessment and evaluation. Further, educational programs for future student affairs professionals should be considering this need and how their programs are addressing this issue (e.g. coursework on assessment and instrument design).

Another implication for practice that this study brought to bear was the need for internal measurement development tracking. The leadership within departments and divisions of student affairs need to document the major decisions made and the processes for development in order have accurate records for their own processes. Further, as professionals navigate across institutions, the predecessors and owners of measurement development should be held accountable. In other words, departments should be obligated to provide notes and clear paths of decisions made so that successive leaders can continue to further the work already in progress.

This study emphasized that collaboration across an institution whether with faculty, with research expertise, or with staff in Institutional Research may be an underutilized resource. Leadership within the departments and divisions of student affairs must seek out the resources on their respective campuses toward improvement for learning. For MMU, there was dedicated assessment expertise as a divisional resource. As this is not always the case for institutions, divisions of student affairs must find ways to be creative while continuing to further the measurement of student learning that is occurring outside of the classrooms. Further, the utilization of collaborations will help in alignment of the goals of the division of student affairs with those of the institution.

Student affairs professionals have found themselves participating in institutional conversation as their local culture has shifted to a broader one of assessment and evidence (Shefman, 2014). And to that end, ultimately this work has opened a call to the field of student affairs to increasingly measure student learning outcomes in direct ways. Meaningful participation in institutional discussions demands that divisions of student affairs carefully attend to the development of valid and reliable items for measuring student learning. Such efforts are likely to pay important dividends given the field's integral contribution to the larger frame of student success across an institution and in all of higher education. This current study highlights that the time is now for the field of student affairs to step up to the call for accountability toward measuring student learning.

Limitations and Future Research

The explorations within this study are valuable and timely, but should be considered knowing the limitations of this work and how it impacts future research. First the discussion addresses considerations that are special to this work including the selected methodologies, intended scope of this work, limitations in literature for student affairs, the accessibility of data, and limitations of the time frame used. After the limitations, this section will close with a broader discussion of select future research from the perspective of the author.

Limitations. This study is intentionally limited to a specific student affairs division at a large, urban research institution. This sampling frame is appropriate for this study, however, does not look at more than a single academic year. The selected institution was recognized for their institutional-wide use of student learning outcomes in the academic areas; limiting the generalizability to institutions that have not garnered a similar reputation for campus-wide learning outcomes. Further the implications to an application of student learning outcomes to student affairs can only provide a model to understand what the process of alignment may look like and may not be generalized to another campus. The intentional sample selection is hoped to provide meaningful data in their respective functional areas regarding this topic. Therefore, the findings of this study may have limitations because of the selected case.

Case study work is limited in its generalizability (Creswell, 2005). This study is not intended to be a step-by-step guide in creating assessment practices that may or may not align to institutional-level student learning outcomes. This study is limited by the time frame covered of only a single year. Therefore, there may be some limitation in a longer-term understanding of the processes of measurement and the implications in the years following the study time-frame. However, more investigation taken on the processes of instrument development and outcome can inform practice and move divisions and institutions forward in how they may address similar issues.

The use of cognitive interviewing to measure item alignment is not ideal. However, given that the data were not available at the respondent level factor analysis was not a viable option. The method used is the best way to understand analytically the continuity or discrepancy of the item assignments to PULs between the department and the higher education assessment professional interviewed. Also, given the content specificity the recommended range of reviewers of 5 to 15 (Beatty & Willis, 2007) could not be met and was considered in the presentation of the findings of this study.

Social desirability of conducting interviews with the staff member responsible for developing the processes of their assessment measures, especially within the context of public accountability presented in the introduction to this study is a limitation that should be considered. Given that assessment is a controversial and impactful topic, participants may be more interested in responding in a way that did not accurately reflect their practice. For this purpose the use of a second party from the institution to check the reliability of the responses was utilized. Further, the researcher was an unknown party to the interviewees and had no connection to the staff professionally or personally. In addition, the researcher is located in the southwest having no previous interaction with the institution. Therefore, this intentionality in design may have helped reduce some of the need to appear socially desirable.

A lack of use of externally validated measures (e.g. CLA+[11] for assessment of critical thinking skills) appeared as a theme and worked to the detriment of the institution's assessment efforts. By utilizing pre-existing instruments that have been validated, the institution can measure student learning outcomes in a consistent manner and one in which they can benchmark against peer institutions. Hayes et al. (1995) focus on the importance of valid assessment instruments and the utility and relevance of findings toward a broader audience. Divisions of student affairs may be using such measures, but this study was unable to uncover that with the data shared by the departments. A lack of validated measure use also appears as a theme in the ranking of items in their measure of learning. Since not all departments within the division participated in the present study, it is difficult to assess the pervasiveness of the underutilization of validated measures and therefore is a recognized limitation for this study.

The availability of data parameters prior to the study limited the understanding of the impact of the type of data and the follow-up work necessary. Most relevant is that it was not known to the researcher that the student level data was unavailable. This placed significant limitations on the types of analyses that could be completed. Similarly, the data utilized for this study were archival data that was primarily collected for departmental program evaluation and assessment. Although collected in a process that

[11] The Collegiate Learning Assessment (CLA) and CLA+ are measures developed by the Council for Aid to Education (2014) and are used to assess master of student. "CLA+ measures critical thinking, problem solving, scientific and quantitative reasoning, writing, and the ability to critique and make arguments (Overview section, para 2).

was appropriate for the purposes of the department, the data proved insufficient for more rigorous study.

In many ways, a gap in literature identified as part of the review is an inherent limitation to the study. The literature used to create the study's rubric on student learning outcomes was deeply rooted in higher education academic affairs measurement literature. This literature was intentionally used as the foundation in the rubric creation acknowledging the collaborative nature needed for measuring student learning across an institution. To date, literature is not considering the unique impact and student interactions of student affairs and best practices for student affairs are not documented. There is a need for multi-faceted approaches to measure learning in this context that can enhance the literature. The availability of research and literature that considers impacts on student learning outside of a classroom and ways to reliably measure that learning are needed. Therefore, this literature limitation must be taken into the understanding of the PUL assignment and rubric rankings findings of this study.

In the analysis of the interview data, there were many processes that were not uncovered, because the measures were not available prior to the interviewing. Limitations also existed in the availability for additional data beyond the initial interview. Given these considerations, secondary probing interviews could be added to future work to address gaps in the process and to continue to increase the knowledge base about the depth of the processes. However, there are limitations to use of historical interviewing in how much real data an interviewee can recall. Given the timeframe of the study, the data was based on recollection of the participants and some of the key players who may have developed the instruments were either no longer at MMU, not available for interview, or could not recall specific data points about the process used.

Future research. In light of these limitations, there are recommendations for future research that can continue to grow the body of work toward understanding the process of incorporating the institutional mission and student learning outcomes in the assessment activities within a division of student affairs. A study of current practices that clearly documents the processes as they occur would be ideal. The collection of drafts of measures and meeting notes about measures will give a more fine grained understanding of the major decisions that are being made at the time decisions are made.

Biggs (1996) argues that higher education should apply constructivist theory to learning where the learner arrives at knowing through the accumulation and construction of knowledge. Therefore, it is recommended to collect data across a division of student affairs using standard items that are traceable to the student level. There needs to be longer term research that collects data across years of student engagement in learning activities outside the classroom that were beyond the scope of this project.

A final recommendation for future research is a deeper look at the correlations between student learning outcomes. This was beyond the scope of this project, but data such as presented here opens the discussion about the relationship of student learning outcomes. Little was discussed in this work about the correlations between the student learning outcomes in this study. Questions should be asked about how closely related are these outcomes to each other. In example, answering questions about the relationship between critical thinking outcomes and the integration and application of knowledge outcomes as measured in student affairs can build more to the knowledge of the impacts and interactions of student learning outside of the classroom. Future work could develop more of the literature of measuring student learning for the field of student affairs within higher education growing not only the literature and research but the measuring of outcomes for practice.

Conclusion

The literature asserts that the necessity for assessment in student affairs is identical to that of the necessity of assessment for all higher education programs (AAHE, 1992; ACPA, 1996; Blimling, Whitt, & Associates, 1999; CAS, 2011; Keeling, 2004; Schuh & Upcraft, 2001; Upcraft & Schuh, 1996). It is evident, based on the findings of this study, that there is more progress to be made. Student affairs needs to consider that literature must be expanded to incorporate ways of measuring learning in the co-curricular context. As a practice, student affairs needs to move away from self-reported data and toward multi-faceted direct measures of student learning.

The current body of literature supports an understanding of how the assessment in student affairs has evolved, addresses the practical application of assessment practices, and anecdote as to what divisions have done to shift toward a culture of assessment. This work added to a more fine grained understanding of the steps undertaken to assess student learning or the steps in creation toward measurement of outcomes. Up to this point, literature has not provided clear connections in assessment practices toward the overall institutional student learning outcomes. This work has documented that institutions and divisions of student affairs are still striving to make those connections.

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Appendix A

Email soliciting study participation

Dear Members of the DSA Leadership Team at [MMU],

I would like to inform you about a Doctoral Dissertation study being conducted by as part of the program in the Department of Educational Psychology at the University of Houston. This study has been reviewed by the University of Houston Committee for the Protection of Human Subjects; for information contact (713) 743-9204. The goal of this study is to better understand the processes for measuring institutionally defined student learning outcomes in a division of student affairs. I am recruiting all divisional leadership from [MMU] involved in the assessment planning to be interviewed for this study. The timeframe of interest for this study is the academic year 2012-2013 and your contribution to the study would be invaluable to our understanding of how a division of student affairs contributes to student learning.

For your convenience, interview slots are available based on your schedule and the following Doodle <<insert URL>> can be used to indicate what day/time you are available. Interviews are expected to be completed by the middle of March 2014.

Interviews will last approximately 45 minutes to one-hour and will take place over the phone or internet communication portal (i.e. Skype). I am flexible to interview using the medium that best suits your needs. Please note that data from the interviews will not use names of yourself or other staff and will attempt to provide as near to anonymity as possible (i.e. to the greatest extent possible limitations will be set on the use of individual and departmental names as well as limits on the use of departmental defining features). As an outside graduate student interested in the division-wide picture, the goal of the interview is a collection of themes in the processes aligning outcomes and not to look at the individual departments. Further, I have not prior or current connection to [MMU] which will assist in creating this anonymity for you and your department.

Of interest to the study are the process and ways that your department has measured student learning. Prior to the interview or following the interview I would like to obtain the measures used by your department in the academic year 2012-2013. This could include any survey, journaling activities, advisor rubrics, or other methods that your department deemed useful in measuring student outcomes in your department. At the confirmation of your participation of this study a secure file transfer protocol will be sent to you for these files.

Participation in any portion of this study is strictly voluntarily and there is no penalty for not participating in this study. You will be asked to sign informed consent forms prior to the start of the interview.

Please confirm a date and time that fits your schedule per the above Doodle. I look forward to talking with you and helping create a better understanding of how a division of student affairs contributes to student learning on our campuses.

Sincerely,

Pamelyn Klepal Shefman

Doctoral Candidate, EPSYID - Higher Education

University of Houston

Appendix B

Interview Protocol for the Division of Student Affairs Department Staff Assessment Leadership

Protocol notes: Please recognize that the included notes are intended for the interviewer and the development of the protocol and are not intended for the interviewee.

Opening Questions

1. How long have you been in your current role/position (in this department)? Can you define your departmental role as it relates to creating instruments for measuring student outcomes during the 2012-2013 academic year (note: if your department did not measuring student outcomes that year please respond to your role in the department in regards to any assessment activities done)?

Defining the number of measures

2. In the request for interview, you received a brief outline of the study and that focus to be studied was the measures used during the academic year 2012-2013. (To provide clarity the following definition of measurement instrument should be understood: Measurement is defined simply as “the methods used to gather information for the purposes of assessment” (Upcraft, 2003, p. 556) for the purposes of today’s questions you can reference any survey, journaling activities, advisor rubrics, or other methods that your department deemed useful in measuring student outcomes in your department).
    a. Based on this definition of measure and your role we discussed, to the best of your knowledge how many measurement instruments did your department use during the academic year 2012-2013?
    b. Can you please provide your departmental or internal title for each instrument used (if applicable)? (NOTE: this question may reflect any data provided before the interview and is confirmation of the number of measures used during the year details about the types of items and the data collected occur in the other questions.)

3. Do you have electronic copies of these measures that you can share or can someone from your department or division provide those? (NOTE: This question will be used only if items were not provided earlier.)

Measurement details/PUL Alignment

4. For each measurement discussed earlier can you define the estimated audience it was distributed to or intended to be use by using one of the following groups:
    a. All students on our campus (both graduate and undergraduate)
    b. A sample of all students (a stratified random sample)
    c. Participants from a specific program or activity (i.e. only users of a service, attendants at a specified event, etc.)

5. For each measurement can you define the learning outcomes or specific PULs that you measured? Can you define the specific question or questions that you used to align to the primary and/or secondary student learning outcome or PUL?

Measurement process/development

6. For each measurement can you define the process that you used to create the instrument? Examples of a process might be “we used a tool that we purchased/licensed”, “a staff member created all the questions”, “we have been using the survey since before I was in the position”, etc.

7. In your approach to developing your measures what resources did you use? Examples of resources may be obtaining measures and examples from colleagues within your division or outside or receiving guidance from staff or professionals that work with designing measurement instruments (IR, Assessment Directors, etc.). If you used different approaches for different measures can you please be specific to processes for each measure.

8. In the measure development process, were there any decisions you and/or the department made about the measures? In other words, how did you refine the measure to the final measure used? Did the PULs take a role in your development process?

9. Thinking back to when your department aligned measures to primary or secondary PULs, what process did you use to determine the measure alignment to the primary or secondary PUL? Please address your department’s approach to the alignment of primary and/or secondary PULs. Specifically, if you can, reflect on the process of your department’s assessment practices prior to aligning PULs? How did your department account for the alignment toward PULs during the academic year?
    a. If you continued to use the same measures from a previous year how did your department fit them into the primary or secondary PULs? Specifically, did you “re-purpose” a measure that was already in use or make minor modifications to fit your primary or secondary PULs?
    b. Did you begin new measures based on alignment to the institutionally defined PULs?

10. Did your department report all the learning outcomes measures you used or were there measures that you administered but did not report (i.e. department annual

report or divisional reports)? If so, where was it reported? (examples might be reported in accreditation documentation, reported to stakeholders, etc.)

11. How has measuring PULs affected your department's impact on campus? What have you done with the measure results (including reporting, measure refinement, etc.)?

Closing Question

12. Is there anything that our conversation did not cover that you are thinking about in regards to your department measurement or process used in creating measures?

Appendix C

Rubric for Learning Outcome Alignment

This is used at an item level.

Student Learning Outcome	Exemplar 3	Milestone 2	Benchmark 1
Core Communication and Quantitative Skills	Uses student demonstrations or observable work of these skills with rubrics and standardized testing as a combination of all three	Uses student demonstrations or observable work of the skill with rubrics or standardized testing with a combination of one	Based on student demonstrations or observable work or measure that is based on quantitative measure but not both
Critical Thinking	Uses student demonstrations or observable work with both rubrics and standardized testing	Uses student demonstrations or observable work with rubrics or standardized testing	Uses student demonstrations or observable work or rubrics and standardized testing Without the combination
Integration and Application of Knowledge	Demonstration of a student's ability to apply knowledge or integrate knowledge into new contexts or real world settings based on observations	Student's ability to apply knowledge or integrate knowledge into new contexts or real world settings based on student self-report or observation	The student's ability to apply knowledge or integrate knowledge in same contexts or real world settings based on student self-report
Intellectual Depth, Breadth, and Adaptiveness	Demonstrated intellectual depth and breadth of a field of study and adapted to the context of the situation and discipline	Demonstrated intellectual depth or breadth of a field of study and adapted to the context of the situation and discipline	Demonstrated intellectual depth or breadth of a field of study without an adaption to the context of the situation and discipline
Understanding Society and Culture	Use of multiple standardized tools to measure our understanding of a student's understanding of society and culture and shifts in competence	Use of a single standardized tools to measure our understanding of a student's understanding of society and culture and shifts in competence	Use of student self-report to measure our understanding of a student's understanding of society and culture and shifts in competence
Values and Ethics	Use of multiple (3 or more) measures including self-report, observations, or valid measures	Use of two measures including self-report, observations, or valid measures	Use of one measures including self-report, observations, or valid measures

Appendix D

Study Code Book Items

Code Book Values

Department Codes
UUN = University Union
CRC = Campus Recreation
CAP = Counseling and Psychological Services (CAPS)
DOS = Dean of Students Office
SRL = Student Residential Life
SLE = Office of Student Leadership and Engagement
SCA = Student Conduct Affairs
SHC = Student Health Center

Learning outcomes:
1=PUL1 = Core Communication and Quantitative Skills
2=PUL2 = CT = Critical Thinking
3=PUL3 = AK = Integration and Application of Knowledge
4=PUL4 = IN = Intellectual Depth, Breadth, and Adaptiveness
5=PUL5 = SC = Understanding Society and Culture
6=PUL6 = VE = Values and Ethics
0=PUL0 = No PUL Assigned/Coded

Rubric Item-objective Congruence:
0 = No congruence
1 = Benchmark
2 = Milestone
3 = Exemplar

Timing Themes:
Recycled = Previous, in house measure, no changes and/or Previous, third-party
Altered = Previous, in house measure, with changes
New = New, in-house, division support and/or New, third-party

Resources Themes:
In-house = developed by the department alone
Third-party = developed outside of the division of student affairs at MMU and/or by a vendor
Division = used divisional guidance and/or used division-wide question bank

Cognitive interview Coding
Key numbers
1000's = DOS
2000's = SRL
3000's = UUN
4000's = SLE

Cognitive Interview Codes

DeptPrimary PUL = Assigned Primary PUL by department
DeptSecondary PUL = Assigned Secondary PUL by department
CogAPrimary PUL = Coded Primary PUL by Debriefer A
CogBPrimary PUL = Coded Primary PUL by Debriefer B
CogCPrimary PUL = Coded Primary PUL by Debriefer C
CogASecondary PUL = Coded Secondary PUL by Debriefer A
CogBSecondary PUL = Coded Secondary PUL by Debriefer B
CogCSecondary PUL = Coded Secondary PUL by Debriefer C

Appendix E

Department PUL Assignment and Rubric Ranking Literature Alignment Scores

Table E1

Listing by department and measure with the institutionally-defined learning outcomes assigned within the measure

Department Measure Title	PUL* included in measure items	PUL* missing from measure items
Office of Student Leadership and Engagement		
Foundations	1,2,3,5,6	4
Cultural Leadership Lunch	5	1,2,3,4,6
SOLD	1,2,3,6	5,4
Freedom Ride	1,2,3,5,6	4
Catalyst	1,2,3,5,6	4
Project Leadership	1,2,3,5	4,6
Advancing Women Mentoring Program	1,2,3,5	4,6
Jagapalooza	1,2,3,5	4,6
Homecoming	1,2,3,5,6	4
Events	3,5,6	1,2,4
Service Event	3,5,6	1,2,4
Involvment Expo	3,5	1,2,4,6
Nuts&Bolts	1,2	3,4,5,6
myInvolvment Training	1,2,3	4,5,6
Student Organizations	1,2,3,5,6	4
CUBE	1,2,3,5,6	4
Speaker	5,6	1,2,3,4
Leadership Consultants	1,2,3,5,6	4
NSLC	1,2,3,5,6	4
Project Leadership	1,2,3,5,6	4
LeadtoGo	1,2,3,5	4,6
AFLV	2,3,6	1,4,5
New Greek Member	0	n/a
Greek President Retreat	2,3,5	1,4,6
Greek Council Retreat	1,3	2,4,5,6
University Union		
Manager PUL Self-Assessment	1,2,4,5,6	3
Fall 2012 Training Feedback	0	n/a

*Key:
1) Core Communication and Quantitative Skills
2) Critical Thinking

3) Integration and Application of Knowledge
4) Intellectual Depth, Breadth, and Adaptiveness
5) Understanding Society and Culture
6) Values and Ethics
0) No PUL Assigned

Note for Tables E2 through E27 the following key descriptions apply:

*PUL Key:
1) Core Communication and Quantitative Skills
2) Critical Thinking
3) Integration and Application of Knowledge
4) Intellectual Depth, Breadth, and Adaptiveness
5) Understanding Society and Culture
6) Values and Ethics
0) No PUL Assigned

**Literature Align Score Key:
0) Did not meet benchmark
1) Met benchmark
2) Met milestone
3) Met exemplar

Table E2

Item by item department assignment to the institutionally-defined learning outcomes (PUL) for University Union's Manager PUL Self-Assessment Measure

#	Item	Primary PUL*	Secondary PUL*	LitAlign Score**
1	As a result of my [University Union] Building Manager work experience, I am better able to Effectively exchange information with a variety of people of different ages, backgrounds, etc.	1	5	1
2	As a result of my [University Union] Building Manager work experience, I am better able to Identify resources to solve problems or answer questions	1	0	0
3	As a result of my [University Union] Building Manager work experience, I am better able to Give instruction and delegate responsibility in a management/supervisory role	1	0	0

4	As a result of my [University Union] Building Manager work experience, I am better able to Assess a particular conflict or emergency situation and identify and implement an approach for resolving it	1	4	0
5	As a result of my [University Union] Building Manager work experience, I am better able to Operate educational technology equipment	1	0	0
6	As a result of my [University Union] Building Manager work experience, I am better able to Use computer software	1	0	0
7	As a result of my [University Union] Building Manager work experience, I am better able to Communicate in a professional and reasoned manner in confrontational or emergency situations	1	0	0
8	As a result of my [University Union] Building Manager work experience, I am better able to Contribute to a team approach to accomplishing tasks and solving problems	1	2	0
9	As a result of my [University Union] Building Manager work experience, I am better able to Apply knowledge learned during training to real job scenarios	2	0	0
10	As a result of my [University Union] Building Manager work experience, I am better able to Analyze processes, based upon on-the-job experiences, to identify opportunities for improvement	2	0	0
11	As a result of my [University Union] Building Manager work experience, I am better able to Understand subjects other than the one in which I am majoring	4	0	0
12	As a result of my [University Union] Building Manager work experience, I am better able to Describe people's different ways of life, including religion, ethnicity, sexual and gender orientation, and race	5	0	1
13	As a result of my [University Union] Building Manager work experience, I am better able to Describe the general connection between [MMU] and the community in which it is located	5	0	1
14	As a result of my [University Union] Building Manager work experience, I am better able to Respect the views of people who see things differently than I do	5	0	1
15	As a result of my [University Union] Building Manager work experience, I am better able to Make informed and principled choices and foresee the consequences of these choices	6	0	1

16	As a result of my [University Union] Building Manager work experience, I am better able to Apply my set of values and ethics to a specific situation	6	0	1
17	As a result of my [University Union] Area Manager work experience, I am better able to Effectively exchange information with a variety of people of different ages, backgrounds, etc.	1	5	1
18	As a result of my [University Union] Area Manager work experience, I am better able to Identify resources to solve problems or answer questions	1	0	0
19	As a result of my [University Union] Area Manager work experience, I am better able to Give instruction and delegate responsibility in a management/supervisory role	1	0	0
20	As a result of my [University Union] Area Manager work experience, I am better able to Assess a particular conflict or emergency situation and identify and implement an approach for resolving it	1	4	0
21	As a result of my [University Union] Area Manager work experience, I am better able to Operate educational technology equipment	1	0	0
22	As a result of my [University Union] Area Manager work experience, I am better able to Use computer software	1	0	0
23	As a result of my [University Union] Area Manager work experience, I am better able to Communicate in a professional and reasoned manner in confrontational or emergency situations	1	0	0
24	As a result of my [University Union] Area Manager work experience, I am better able to Contribute to a team approach to accomplishing tasks and solving problems	1	2	0
25	As a result of my [University Union] Area Manager work experience, I am better able to Apply knowledge learned during training to real job scenarios	2	0	0
26	As a result of my [University Union] Area Manager work experience, I am better able to Analyze processes, based upon on-the-job experiences, to identify opportunities for improvement	2	0	0
27	As a result of my [University Union] Area Manager work experience, I am better able to Understand subjects other than the one in which I am majoring	4	0	0

28	As a result of my [University Union] Area Manager work experience, I am better able to Describe people's different ways of life, including religion, ethnicity, sexual and gender orientation, and race	5	0	1
29	As a result of my [University Union] Area Manager work experience, I am better able to Describe the general connection between [MMU] and the community in which it is located	5	0	1
30	As a result of my [University Union] Area Manager work experience, I am better able to Respect the views of people who see things differently than I do	5	0	1
31	As a result of my [University Union] Area Manager work experience, I am better able to Make informed and principled choices and foresee the consequences of these choices	6	0	1
32	As a result of my [University Union] Area Manager work experience, I am better able to Apply my set of values and ethics to a specific situation	6	0	1
33	As a result of my [University Union] Manager work experience, I am better able to Effectively exchange information with a variety of people of different ages, backgrounds, etc.	1	5	1
34	As a result of my [University Union] Manager work experience, I am better able to Identify resources to solve problems or answer questions	1	0	0
35	As a result of my [University Union] Manager work experience, I am better able to Give instruction and delegate responsibility in a management/supervisory role	1	0	0
36	As a result of my [University Union] Manager work experience, I am better able to Assess a particular conflict or emergency situation and identify and implement an approach for resolving it	1	4	0
37	As a result of my [University Union] Manager work experience, I am better able to Operate educational technology equipment	1	0	0
38	As a result of my [University Union] Manager work experience, I am better able to Use computer software	1	0	0
39	As a result of my [University Union] Manager work experience, I am better able to Communicate in a professional and reasoned manner in confrontational or emergency situations	1	0	0
40	As a result of my [University Union] Manager work experience, I am better able to Contribute to a team approach to accomplishing tasks and solving problems	1	2	0

41	As a result of my [University Union] Manager work experience, I am better able to Apply knowledge learned during training to real job scenarios	2	0	0
42	As a result of my [University Union] Manager work experience, I am better able to Analyze processes, based upon on-the-job experiences, to identify opportunities for improvement	2	0	0
43	As a result of my [University Union] Manager work experience, I am better able to Understand subjects other than the one in which I am majoring	4	0	0
44	As a result of my [University Union] Manager work experience, I am better able to Describe people's different ways of life, including religion, ethnicity, sexual and gender orientation, and race	5	0	1
45	As a result of my [University Union] Manager work experience, I am better able to Describe the general connection between [MMU] and the community in which it is located	5	0	1
46	As a result of my [University Union] Manager work experience, I am better able to Respect the views of people who see things differently than I do	5	0	1
47	As a result of my [University Union] Manager work experience, I am better able to Make informed and principled choices and foresee the consequences of these choices	6	0	1
48	As a result of my [University Union] Manager work experience, I am better able to Apply my set of values and ethics to a specific situation	6	0	1

Table E3

Item by item department assignment to the institutionally-defined learning outcomes (PUL) for Office of Student Involvement and Engagements measure of Foundations

#	Item	Primary PUL*	Secondary PUL*	LitAlign Score**
1	This seminar will help me to communicate with others about my personality and leadership style.	1	0	0
2	This seminar provided me with skills to communicate ideas and information.	1	0	0
3	As a result of this seminar, I am able to describe the impact that communication has on my work as a leader	1	0	0

	and on teams.			
4	This seminar provided me with critical thinking skills to systematically review my ideas about how to approach an issue.	2	0	0
5	This seminar allowed me to develop new ideas about how to work with someone with a different personality type.	2	0	0
6	This seminar provided me with critical thinking skills to systematically review my ideas about how to communicate as a leader.	2	0	0
7	This program provided me with skills to generate new ideas or ways to improve the balance in my life.	2	0	0
8	This program provided me with skills to generate new ideas or ways to prevent burnout.	2	0	0
9	As a result of this seminar, I am able to define strategies for working with others based on their unique communication style.	2	0	0
10	This seminar will help to enhance my personal life.	3	0	1
11	This seminar will help to enhance my personal life.	3	0	1
12	This program will enhance my personal life.	3	0	1
13	This program will enhance my personal life.	3	0	1
14	What I learned today in this seminar will enhance my personal life.	3	0	1
15	What I learned today in this seminar will enhance my personal life.	3	0	1
16	This program provided me with skills to work effectively with people who are different than me.	5	0	1
17	This program provided me with skills to respect the views of people who see things differently than I do.	5	0	1
18	This program provided me with skills to solve a problem or address an issue.	5	0	1
19	This program provided me with skills to recognize my personal values and ethics.	6	0	1
20	This program provided me with skills to apply my values and ethics to a specific situation.	6	0	1
21	This program provided me with skills to identify issues of personal importance and recognize my personal values.	6	0	1
22	This seminar provided me with skills to identify my own personal leadership skills and traits.	1	2	0
23	This seminar will help me communicate with others about my personality and leadership style.	1	2	0

24	This seminar provided me with skills to communicate ideas and information.	1	2	0
25	This seminar provided me with skills to communicate within a team to solve problems.	1	2	0
26	This program provided me with skills to prioritize what activities are more important to me.	1	2	0
27	This program provided me with skills to manage my time better.	1	2	0
28	This program provided me with skills to prioritize what activities are more important to me.	1	2	0
29	This program provided me with strategies to manage conflicts with friends, classmates, and/or student org members.	1	2	0
30	As a result of this seminar, I am able to describe the impact that communication has on my work as a leader and on teams.	1	2	0
31	This program provided me with skills to develop individual goals, priorities, and/or quality of time management.	1	2	0
32	This program provided me with skills to identify issues of personal importance.	5	6	1
33	This program provided me with skills to recognize my personal values and ethics.	5	6	1
34	This program provided me with skills to idenitfy my own personal leadership skills and traits and how they relate to social justice.	5	6	1
35	This program provided me with skills to recognize how groups and communities I belong to influence my leadership style.	5	6	1
36	This program provided me with skills to identify issues of personal importance.	5	6	1
37	This program provided me with skills to apply my values and ethics to a specific situation.	5	6	1
38	This program provided me with skills to identify my own personal leadership skills and traits.	5	6	1
39	As a result of this program, I am able to further define my sense of purpose through the personal exploration of my strengths, passions, and/or abilities.	5	6	1
40	As a result of this seminar, I am able to identify my own communication style based upon the DiSC personality profile.	5	6	1
41	This program provided me with skills to work effectively with people who are different than me.	5	6	1
42	This program provided me with skills to learn about my personal values.	5	6	1

43	This program provided me with skills to respect the views of people who see things differently than I do.	5	6	1
44	This program provided me with skills to identify issues of personal importance and recognize my personal values.	5	6	1
45	This session allowed me to have a fuller understanding of myself through interacting with others.	5	6	1
46	As a result of this seminar, I am able to define strategies for working with others based on their unique communication style.	5	6	1
47	This seminar allowed me to develop new ideas about how to work with someone with a different personality type.	3	5	1
48	This program provided me with skills to generate new ideas or ways to improve the balance in my life.	3	5	1
49	This program provided me with skills to generate new ideas about what motivates me.	3	5	1
50	This program provided me with skills to generate new ideas or ways to prevent burnout.	3	5	1
51	This program provided me with skills to solve a problem or address an issue.	3	5	1
52	I learned how to effectively use my voice to create and engage in a positive collegiate experience.	1	2	0

Table E4

Item by item department assignment to the institutionally-defined learning outcomes (PUL) for Office of Student Involvement and Engagements measure of Cultural Leadership Lunch

#	Item	Primary PUL*	Secondary PUL*	LitAlign Score**
1	This program provided me with the opportunity to learn about different races, ethnicities, and cultures.	5	0	1
2	This program provided me with skills work effectively with people who are different than me.	5	0	1

Table E5

Item by item department assignment to the institutionally-defined learning outcomes (PUL) for Office of Student Involvement and Engagements measure of SOLD

#	Item	Primary PUL*	Secondary PUL*	LitAlign Score**
1	This program provided me with the information resource skills to identify information that will assist my organization in managing our finances.	1	0	0
2	This program provided me with the quantitative skills to support a funding proposal using quantitative data and budgeting.	1	0	0
3	This program provided me with the communication skills to: Formally communicate ideas and information (oral, visual, aural, etc.)	1	0	0
4	This program provided me with the communication skills to: Communicate effectively in an environment with my peers	1	0	0
5	This program provided me with the information resource skills to: Identify sources of information that are most appropriate for a problem solving, connecting with university resources, or real-life situations	1	0	0
6	This program provided me with the communication skills to discuss challenging problems with peers to develop a solution.	1	0	0
7	This seminar motivated me to think of new ideas or ways to improve my organization's meetings.	2	0	0
8	This seminar provided me with ideas on how to discuss problems with my peers to develop a solution.	2	0	0
9	This program provided me with the critical thinking skills to: Generate new ideas or ways to improve things	2	0	0
10	This program provided me with the critical thinking skills to: Analyze different ideas and proposed solutions	2	0	0
11	This program provided me with the ability to integrate and apply knowledge so I can further the goals of my student organization.	3	0	1
12	This program provided me with an understanding of values and ethics that allows me to make informed judgments when faced with difficult solutions.	6	0	1
13	This program provided me with an understanding of values and ethics that allows me to recognize the consequences of my actions when faced with a conflict.	6	0	1

Table E6

Item by item department assignment to the institutionally-defined learning outcomes (PUL) for Office of Student Involvement and Engagements measure of Freedom Ride

#	Item	Primary PUL*	Secondary PUL*	LitAlign Score**
1	What is Social Justice?	0	0	0
2	How would you describe your leadership style?	0	0	0
3	What aspects of the Social Change Model of Leadership (if any) connect with your personal leadership style?	0	0	0
4	As a result of participating in the service project at the Refugee Empowerment Program, what did you learn about social justice?	0	0	0
5	How can you apply what you learned from the mini research project this afternoon to living out your own vision for social justice?	0	0	0
6	Have your life experiences influenced how you understand your social identities?	0	0	0
7	How do your values impact your approach to leadership?	0	0	0
8	What messages from your life experiences have you received about racial inequity?	0	0	0
9	Did you connect with a Civil Rights leader as a result of the Social Change Model of Leadership activity at the National Civil Rights Museum? If so, how?	0	0	0
10	What is one thing you will you take away from your visit to the National Civil Rights Museum?	0	0	0
11	How do social justice and vulnerability relate to each other?	0	0	0
12	How does the Archie Bunker’s Neighborhood activity compare to reality?	0	0	0
13	What did you learn about the Civil Rights Movement as a result of the historical tour and Underground Railroad museum?	0	0	0
14	Describe Malcolm X’s leadership style: 1) before converting to Islam, 2) After jail, and converting to Islam and 3) After his pilgrimage to Mecca	0	0	0

15	What role do leadership and social justice play in social activism?	0	0	0
16	What did you learn as a result of participating in the visioning process this morning?	0	0	0
17	Based on our visit to the Rock n' Soul Museum, what role do you think music played in past social movements? What role (if any) do you think music plays in the social movements of today?	0	0	0
18	Freedom Ride participants completed an evaluation at the conclusion of the trip. In addition to the scale questions listed below, students were also asked several open ended questions, including:	0	0	0
19	What was most helpful about the Freedom Rides?	0	0	0
20	What was the least helpful about the Freedom Rides?	0	0	0
21	What is one thing we could do to improve the trip in the future?	0	0	0
22	What did you learn at Freedom Rides? What will you take away from this trip?	0	0	0
23	Has the trip helped you explore social justice issues? If so, how?	0	0	0
24	Did the Social Change Model for Leadership Development provide you a good foundation for exploring leadership change and social justice on this trip? Is so, how?	0	0	0
25	What individual identities impact your view of social justice? Did you explore these on your trip? Is so, how?	0	0	0
26	Are there personal actions you plan to take as a result of this trip? If so, what?	0	0	0
27	Was there a social justice leader you connected with on this trip? If so, what?	0	0	0
28	What did you learn about yourself and your leadership style on this trip?	0	0	0
29	How would you describe your small group experience?	0	0	0
30	How would you describe your experience on the trip to your friends and classmates?	0	0	0

31	Freedom Rides helped me develop the skill of communicating within a team	1	0	0
32	Freedom Rides provided me with the critical thinking skills to generate new ideas or ways to improve things.	2	0	0
33	Freedom Rides caused me to think about how to solve a problem or address an issue.	3	0	1
34	Freedom Rides provided me with a greater understanding of respecting the views of people who see things differently than I do.	5	0	1
35	Freedom Rides allowed me to effectively work with people from different races, ethnicities, and cultures.	5	0	1
36	Freedom Rides helped me recognize my personal values.	6	0	1

Table E7

Item by item department assignment to the institutionally-defined learning outcomes (PUL) for Office of Student Involvement and Engagements measure of Catalyst

#	Item	Primary PUL*	Secondary PUL*	LitAlign Score**
1	Catalyst provided me with skills to communicate ideas and information within a team.	1	0	0
2	Catalyst provided me with skills to identify personal leadership skills and traits	2	0	0
3	What I learned today at Catalyst will enhance my personal life	3	0	1
4	Catalyst provided me with a greater understanding of respecting the views of people who see things differently than I do.	5	0	1
5	Catalyst helped me recognize my personal values.	6	0	1
6	Catalyst provided me with skills to communicate ideas and information within a team.	1	2	0
7	Catalyst provided me with skills to identify personal leadership skills and traits.	5	6	1
8	Catalyst provided me with a greater understanding of respecting the views of people who see things differently than I do.	5	6	1

9	Catalyst helped me recognize my personal values.	5	6	1
10	Catalyst provided with the critical thinking skills to generate new ideas or ways to improve my leadership skills.	3	5	1
11	Catalyst allowed me to make connections with others on campus.	3	5	1

Table E8

Item by item department assignment to the institutionally-defined learning outcomes (PUL) for Office of Student Involvement and Engagements measure of Project Lead

#	Item	Primary PUL*	Secondary PUL*	LitAlign Score**
1	This event provided me with skills to identify appropriate campus resources for my individual and/or student organization needs.	1	0	0
2	This event provided me with skills to generate new ideas or ways to improve my leadership skills.	2	0	0
3	The information learned as a result of this event will enhance my personal life.	3	0	1
4	This event provided me with skills to respect the views of people who see things differently than I do.	5	0	1
5	What did you learn from this program?	0	0	0

Table E9

Item by item department assignment to the institutionally-defined learning outcomes (PUL) for Office of Student Involvement and Engagements measure of Advancing Women Mentoring Program

#	Item	Primary PUL*	Secondary PUL*	LitAlign Score**
1	This program provided me with skills to communicate ideas and information.	1	0	0

2	This program provided me with skills to generate new ideas or ways to improve my communication skills.	2	0	0
3	This program provided me with skills to discuss challenges of communication with my peers, mentors, and mentees.	2	0	0
4	This program improved my understanding of issues facing women in the workplace and on college campuses.	5	0	1
5	This program provided me with professional development opportunities.	1	2	0
6	This program provided me with skills to communicate ideas and information.	1	2	0
7	This program has helped me recognize my individual strengths.	5	6	1
8	As a result of participating in this program, I have a better understanding of my personal leadership style.	5	6	1
9	This program provided me with skills to discuss challenges of communication with my peers, mentors, and mentees.	5	6	1
10	This program improved my understanding of issues facing women in the workplace and on college campuses.	5	6	1
11	This program provided me with skills to recognize how groups and communities I belong to influence my leadership style.	5	6	1
12	This program has helped me make connections with others on campus.	3	5	1
13	This program improved my understanding of resources available to me on the IUPUI campus.	1	2	0

Table E10

Item by item department assignment to the institutionally-defined learning outcomes (PUL) for Office of Student Involvement and Engagements measure of Jagapoloza

#	Item	Primary PUL*	Secondary PUL*	LitAlign Score**
1	As an attendee, This program provided me with the skills to communicate ideas and information	1	0	0

2	As an attendee, This program provided me with the skills to generate new ideas or ways to improve things	2	0	0
3	As an attendee, This program provided me with the skills to make connections with others on campus	3	5	1
4	As a volunteer, This program provided me with the skills to communicate ideas and information	1	0	0
5	As a volunteer, This program provided me with the skills to generate new ideas or ways to improve things	2	0	0
6	As a volunteer, This program provided me with the skills to make connections with others on campus	3	5	1
7	Based on my experience as a member of the Jagapalooza Committee, please reflect on how you developed in the areas below and assign the appropriate rating for your current level of development: ability to effectively communicate within a team setting.	1	0	0
8	Based on my experience as a member of the Jagapalooza Committee, please reflect on how you developed in the areas below and assign the appropriate rating for your current level of development: ability to manage conflict and resolve problems.	1	0	0
9	Based on my experience as a member of the Jagapalooza Committee, please reflect on how you developed in the areas below and assign the appropriate rating for your current level of development: ability to think critically in an effort to generate new ideas or ways to improve things.	2	0	0
10	Based on my experience as a member of the Jagapalooza Committee, please reflect on how you developed in the areas below and assign the appropriate rating for your current level of development: ability to build partnerships with others on campus (students, faculty, or staff) and in the Indianapolis community.	3	0	1
11	Based on my experience as a member of the Jagapalooza Committee, please reflect on how you developed in the areas below and assign the appropriate rating for your current level of development: ability to work collaboratively	1	2	0

12	Based on my experience as a member of the Jagapalooza Committee, please reflect on how you developed in the areas below and assign the appropriate rating for your current level of development: ability to understand and respect the views of people who see things differently than me.	5	0	1
13	Based on my experience as a member of the Jagapalooza Committee, please reflect on how you developed in the areas below and assign the appropriate rating for your current level of development: ability to identify personal leadership skills and strengths.	5	0	1
14	Based on my experience as a member of the Jagapalooza Committee, please reflect on how you developed in the areas below and assign the appropriate rating for your current level of development: ability to plan and execute events	1	2	0
15	Based on my experience as a member of the Jagapalooza Committee, please reflect on how you developed in the areas below and assign the appropriate rating for your current level of development: ability to manage your time effectively	1	2	0
16	Based on my experience as a member of the Jagapalooza Committee, please reflect on how you developed in the areas below and assign the appropriate rating for your current level of development: ability to identify campus resources to meet my individual/committee needs	1	2	0

Table E11

Item by item department assignment to the institutionally-defined learning outcomes (PUL) for Office of Student Involvement and Engagements measure of Homecoming

#	Item	Primary PUL*	Secondary PUL*	LitAlign Score**
1	My involvement on the Homecoming Committee helped me develop the ability to work collaboratively.	1	0	0
2	My involvement on the Homecoming Committee helped me develop the ability to effectively communicate within a team setting.	1	0	0

3	My involvement on the Homecoming Committee helped me develop the ability to manage conflict and resolve problems.	5	0	1
4	My involvement on the Homecoming Committee helped me develop the ability to think critically in an effort to generate new ideas or ways to improve things.	2	0	0
5	My involvement on the Homecoming Committee helped me develop the ability to understand and respect the views of people who see things differently than I do.	5	0	1
6	My involvement on the Homecoming Committee helped me develop the ability to plan and execute events.	1	2	0
7	My involvement on the Homecoming Committee helped me develop the ability to identify personal leadership skills and strengths.	5	6	1
8	My involvement on the Homecoming Committee helped me develop the ability to manage my time effectively.	1	2	0
9	My involvement on the Homecoming Committee helped me develop the ability to build partnerships with others on campus (students, faculty or staff) and in the Indianapolis community.	3	5	1
10	My involvement on the Homecoming Committee helped me develop the ability to identify campus resources to meet my individual and committee needs.	1	2	0

Table E12

Item by item department assignment to the institutionally-defined learning outcomes (PUL) for Office of Student Involvement and Engagements measure of Events

#	Item	Primary PUL*	Secondary PUL*	LitAlign Score**
1	Attending this event assisted me with connecting with others (students, faculty or staff) on campus.	3	5	1

2	Attending this event assisted me with developing an understanding and appreciation of the arts.	6	0	1

Table E13

Item by item department assignment to the institutionally-defined learning outcomes (PUL) for Office of Student Involvement and Engagements measure of Service Events

#	Item	Primary PUL*	Secondary PUL*	LitAlign Score**
1	As a result of participating in this service event, my confidence that I can contribute to improving life in my community has increased.	3	0	1
2	As a result of participating in this service event, I believe that having an impact on community problems is within my reach.	5	0	1
3	Participating in this service event provided me with an opportunity to make connections with others (students, faculty or staff) on campus.	3	5	1
4	Participating in this service event assisted me in understanding the importance of giving back to my community.	6	0	1

Table E14

Item by item department assignment to the institutionally-defined learning outcomes (PUL) for Office of Student Involvement and Engagements measure of Involvement Expo

#	Item	Primary PUL*	Secondary PUL*	LitAlign Score**
1	The Involvement Expo provided me with the skills to make connections with others on campus (students, faculty and staff)	3	5	1

2	The Involvement Expo provided me with the skills to make connections with a student leader, student organization, etc.	3	5	1

Table E15

Item by item department assignment to the institutionally-defined learning outcomes (PUL) for Office of Student Involvement and Engagements measure of Nuts&Bolts

#	Item	Primary PUL*	Secondary PUL*	LitAlign Score**
1	This program provided me with the skills to identify appropriate campus resources for my individual student organization needs.	1	2	0
2	As a result of attending this program, I have a better understanding of campus resources and services.	1	2	0
3	This program provided me with the skills to use the Office of Student Involvement programs and services.	1	2	0

Table E16

Item by item department assignment to the institutionally-defined learning outcomes (PUL) for Office of Student Involvement and Engagements measure of myInvolvement Training

#	Item	Primary PUL*	Secondary PUL*	LitAlign Score**
1	This program provided me with the skills to [Generate new ideas or ways to improve things]	2	0	0
2	This program provided me with the skills to [Solve a problem or address an issue]	3	0	1
3	This program provided me with the skills to [Manage my organizational functions through the use of the student organization database]	1	2	0

Table E17

Item by item department assignment to the institutionally-defined learning outcomes (PUL) for Office of Student Involvement and Engagements measure of Student Organizations

#	Item	Primary PUL*	Secondary PUL*	LitAlign Score**
1	Serving on the executive board provided me with the skills to communicate within a team to solve problems	1	0	0
2	Serving on the executive board provided me with the skills to generate new ideas or ways to improve things	2	0	0
3	Serving on the executive board provided me with the skills to solve a problem or address an issue	3	0	1
4	Serving on the executive board provided me with the skills to recognize my personal values and ethics	6	0	1
5	Being involved with this organization provided me with the skills to communicate ideas and information	1	0	0
6	Being involved with this organization provided me with the skills to make connections with students, faculty, and staff on campus.	3	5	1
7	Being involved with this organization provided me with the skills to recognize how groups and communities I belong to influence my leadership style.	5	6	1
8	Being involved in this organization allowed me to use information I learned through my coursework: chose one (always, quite a bit, sometimes, very little)	0	0	0
9	Being involved with this student organization I have been able to connect my experiences to the Principles of Undergraduate Learning: (select what applies from PUL list)	0	0	0

Table E18

Item by item department assignment to the institutionally-defined learning outcomes (PUL) for Office of Student Involvement and Engagements measure of Cube

#	Item	Primary PUL*	Secondary PUL*	LitAlign Score**
1	My involvement in Cube Council helped me work collaboratively within a team.	1	2	0
2	My involvement in Cube Council helped me develop the skill of communicating within a team.	1	2	0
3	My involvement in Cube Council helped me learn how to manage conflict.	1	2	0
4	My involvement in Cube Council helped me develop the ability to analyze different ideas and proposed solutions to solve a problem or address an issue.	2	0	0
5	My involvement in Cube Council provided me with the critical thinking skills to generate new ideas or ways to improve things.	2	0	0
6	My involvement in Cube Council will enhance my personal life.	3	0	1
7	My involvement in Cube Council has allowed me to work effectively with individuals of different races, ethnicities and religions.	5	0	1
8	My involvement in Cube Council provided me with a greater understanding of respecting the views of people who see things differently than I do.	5	0	1
9	My involvement in Cube Council helped me recognize my personal values.	6	0	1
10	My involvement in Cube Council helped me develop individual and organizational goals.	1	2	0
11	My involvement in Cube Council helped me identify my personal leadership skills and strengths.	5	6	1
12	My involvement in Cube Council helped me make informed decisions when faced with ethical dilemmas.	6	0	1

13	My involvement in Cube Council helped me develop time management skills.	1	2	0
14	My involvement in Cube Council helped me make connections with others on campus (students, faculty or staff).	3	5	1

Table E19

Item by item department assignment to the institutionally-defined learning outcomes (PUL) for Office of Student Involvement and Engagements measure of Speaker

#	Item	Primary PUL*	Secondary PUL*	LitAlign Score**
1	The speaker assisted me in learning how to respect the views of people who see things differently than I do.	5	0	1
2	The speaker assisted me in analyzing solutions to a social issue.	5	6	1
3	The speaker assisted me in learning about social identity.	5	6	1
4	The speaker assisted me in learning how my personal values and ethics differ from those of my peers.	5	6	1
5	The speaker assisted me in identifying the personal advantages or benefits provided to me based on my group identity or status.	5	6	1

Table E20

Item by item department assignment to the institutionally-defined learning outcomes (PUL) for Office of Student Involvement and Engagements measure of Leadership Consultants

#	Item	Primary PUL*	Secondary PUL*	LitAlign Score**

1	My involvement in Leadership Consultants has helped me define a sense of purpose through personal exploration of strengths, passions and abilities.	5	6	1
2	My involvement in Leadership Consultants helped me work collaboratively within a team.	1	2	0
3	My involvement in Leadership Consultants has helped me develop the skill of communicating within a team.	1	0	0
4	My involvement in Leadership Consultants has helped me develop the ability to analyze different ideas and proposed solutions to solve a problem or address an issue.	3	5	1
5	My involvement in Leadership Consultants has helped me with the critical thinking skills to generate new ideas or ways to improve things.	2	0	0
6	My involvement in Leadership Consultants will enhance my personal life.	3	0	1
7	My involvement in Leadership Consultants has provided me with greater understanding of respecting the views of people who see things differently than I do.	5	0	1
8	My involvement in Leadership Consultants has helped me to develop facilitation skills.	1	2	0
9	My involvement in Leadership Consultants has helped me to improve my presentation skills.	1	2	0
10	My involvement in Leadership Consultants has helped me develop individual and organizational goals.	1	2	0
11	My involvement in Leadership Consultants has helped me make connections with others on campus (students, faculty or staff).	3	5	1
12	My involvement in Leadership Consultants has helped increase my awareness of resources that are provided for students and organizations through the Office of Student Involvement and IUPUI.	1	2	0

Table E21

Item by item department assignment to the institutionally-defined learning outcomes (PUL) for Office of Student Involvement and Engagements measure of NSLC

#	Item	Primary PUL*	Secondary PUL*	LitAlign Score**
1	Attending Living with Purpose at NSLC provided me with skills to communicate ideas and information.	1	0	0
2	Attending Living with Purpose at NSLC provided me with the skills to manage my time better.	1	2	0
3	Attending Living with Purpose at NSLC provided me with the skills to prioritize what activities are most important to me.	5	6	1
4	Attending Living with Purpose at NSLC provided me with the skills to identify issues of personal importance.	5	6	1
5	Attending Living with Purpose at NSLC provided me with the skills to identify personal leadership skills and traits.	5	6	1
6	Attending Living with Purpose at NSLC provided me with skills to generate new ideas and ways to improve things.	2	0	0
7	Attending Living with Purpose at NSLC provided me with skills to solve a problem or address an issue.	3	5	1
8	Attending Dance Floor at NSLC provided me with skills to communicate ideas and information.	1	0	0
9	Attending Dance Floor at NSLC provided me with the skills to work collaboratively with a team.	1	2	0
10	Attending Dance Floor at NSLC provided me with the skills to make connections with others on campus.	3	5	1

11	Attending Dance Floor at NSLC provided me with the skills to build partnerships with others on campus.	3	5	1
12	Attending Dance Floor at NSLC provided me with the skills to discuss challenges with peers to develop a solution.	5	6	1
13	Attending Dance Floor at NSLC provided me with skills to generate new ideas or ways to improve things.	2	0	0
14	Attending Dance Floor NSLC provided me with skills to solve a problem or address an issue.	3	5	1
15	Attending Be the One at NSLC provided me with skills to communicate ideas and information.	1	0	0
16	Attending Be the One at NSLC provided me with the skills to work collaboratively with a team.	1	2	0
17	Attending Be the One at NSLC provided me with the skills to make connections with others on campus.	3	5	1
18	Attending Be the One at NSLC provided me with the skills to build partnerships with others on campus.	3	5	1
19	Attending Be the One at NSLC provided me with the skills to discuss challenges with peers to develop a solution.	5	6	1
20	Attending Be the One at NSLC provided me with skills to generate new ideas or ways to improve things.	2	0	0
21	Attending Be the One at NSLC provided me with the skills to solve a problem or address an issue.	3	5	1
22	Attending Leadership on the Big Screen provided me with skills to communicate ideas and information.	1	0	0
23	Attending Leadership on the Big Screen at NSLC provided me with the skills recognize my individual strengths.	5	6	1

24	Attending Leadership on the Big Screen at NSLC provided me with the skills to recognize my personal values and ethics.	6	0	1
25	Attending Leadership on the Big Screen at NSLC provided me with the skills to identify issues of personal importance.	5	6	1
26	Attending Leadership on the Big Screen at NSLC provided me with the skills to identify personal leadership skills and traits.	5	6	1
27	Attending Leadership on the Big Screen at NSLC provided me with skills to generate new ideas or ways to improve things.	2	0	0
28	Attending Leadership on the Big Screen at NSLC provided me with the skills to solve problems or address an issue.	5	0	1
29	Attending Money Management provided me with skills to communicate ideas and information.	1	0	0
30	Attending Money Management at NSLC provided me with the skills recognize my individual strengths.	5	6	1
31	Attending Money Management at NSLC provided me with the skills to recognize my personal values and ethics.	6	0	1
32	Attending Money Management at NSLC provided me with the skills to identify issues of personal importance.	5	6	1
33	Attending Money Management at NSLC provided me with the skills to identify personal leadership skills and traits.	5	6	1
34	Attending Money Management at NSLC provided me with skills to generate new ideas or ways to improve things.	2	0	0
35	Attending Money Management at NSLC provided me with the skills to solve problems or address an issue.	3	5	1

Table E22

Item by item department assignment to the institutionally-defined learning outcomes (PUL) for Office of Student Involvement and Engagements measure of Project Leadership

#	Item	Primary PUL*	Secondary PUL*	LitAlign Score**
1	Project Leadership provided me with skills to identify my own personal leadership skills and traits.	5	6	1
2	Project Leadership provided me with skills to develop individual and/or organizational goals.	1	2	0
3	Project Leadership provided me with skills to prioritize what activities are most important to me.	1	2	0
4	Project Leadership provided me with skills that can be applied to my academic work.	2	0	0
5	Project Leadership provided me with skills to respect the views of people who see things differently than I do.	5	0	1
6	Project Leadership provided me with skills to generate new ideas or ways to improve my leadership skills.	2	0	0
7	Project Leadership provided me with skills to identify appropriate campus resources for my individual and/or student organization needs.	1	2	0
8	Project Leadership provided me with skills to make connections with others on campus.	3	5	1
9	The information learned as a result of Project Leadership will enhance my personal life.	3	0	1
10	The Student Planning Committee program provided me with skills to communicate ideas and information.	1	0	0
11	The Student Planning Committee program provided me with skills to communicate within a team to solve problems.	1	0	0
12	The Student Planning Committee program provided me with skills to manage conflict with friends, classmates, and student organization members.	1	2	0
13	The Student Planning Committee program provided me with skills to work collaboratively with a team.	1	2	0

14	The Student Planning Committee program provided me with skills to plan an event or program.	1	2	0
15	The Student Planning Committee program provided me with skills to work effectively with people of different races, ethnicities, and religions.	5	0	1
16	The Student Planning Committee program provided me with skills to make connections with others on campus (students, faculty, and staff).	3	5	1
17	The Student Planning Committee program provided me with skills to build partnerships with others on campus (students, faculty, and staff).	3	5	1
18	The Student Planning Committee program provided me with skills to generate new ideas or ways to improve things.	2	0	0
19	The Student Planning Committee program provided me with skills to discuss challenges with peers to develop a solution.	2	0	0
20	The Student Planning Committee program provided me with skills to solve a problem or address an issue.	3	0	1
21	The Student Planning Committee program provided me with skills to identify appropriate campus resources for my needs.	1	2	0
22	The Student Planning Committee program provided me with skills to use Office of Student Involvement programs and services.	1	2	0
23	This breakout provided me with skills to prioritize what activities are most important to me.	1	2	0
24	This breakout provided me with skills to apply information from this program to academic work.	1	2	0
25	This breakout provided me with new ideas on how my involvement produced transferrable skills.	3	5	1
26	The information learned in this breakout will enhance my personal life.	3	0	1
27	This breakout provided me with skills to communicate ideas and information through grant writing.	1	0	0

28	This breakout provided me with skills to develop new ideas on how to receive funding through grants.	3	5	1
29	This breakout provided me with skills that I will be able to apply to my academic and professional work.	1	2	0
30	This breakout provided me with skills to identify appropriate campus resources for my individual funding needs.	1	2	0
31	This breakout provided me with skills to manage my time better	1	2	0
32	This breakout provided me with skills to develop a personal action plan to exhibit self-care in my life.	5	6	1
33	This breakout provided me with skills to discuss challenges of college life with peers and begin to develop solutions.	3	5	1
34	This breakout provided me with skills to work collaboratively within my student organization.	1	2	0
35	This breakout provided me with skills to develop new ideas to communicate information to/from the executive board	3	5	1
36	This breakout provided me with skills to recognize how groups and communities I belong to influence my leadership style.	5	6	1
37	This breakout provided me with skills to discuss challenges with peers to develop a solution.	2	0	0
38	The breakout provided me with skills to generate new ideas to help me become an advocate for myself and others.	2	0	0
39	This breakout provided me with skills to identify issues of personal importance.	5	6	1
40	This breakout provided me with skills to learn more about my own personal values and ethics.	5	6	1
41	This breakout provided me with the skills to identify my own personal leadership skills and traits	5	6	1
42	This breakout provided me with skills to recognize how groups and communities I belong to influence my leadership style	5	6	1
43	This breakout provided me with skills to make connections other student leaders	3	5	1

44	This breakout provided me skills to identify issues of personal importance through the Social Change Model	5	6	1
45	This breakout provided me with skills to learn more about my personal values and ethics	5	6	1
46	This breakout provided me with skills to build partnerships and make connections with others.	3	5	1
47	This breakout provided me with skills to respect the views of people who see things differently than I do	5	0	1
48	This breakout provided me with skills to generate new ideas to help me build confidence as a leader.	2	0	0
49	This breakout provided me with skills to prioritize what activities are most important to me	1	2	0
50	This breakout provided me with skills to learn more about my personal values.	6	0	1
51	This breakout provided me with skills to develop new ideas on how to stay motivated in my work as a leader and/or in my work with student organizations	3	5	1
52	This breakout provided me with the skills to identify the own personal leadership skills and traits of others	5	6	1
53	This breakout provided me with the skills to work collaboratively with a team	1	2	0
54	This breakout provided me with skills to work communicate ideas to help empower other leaders.	1	0	0
55	This breakout provided me with the skills to communicate ideas and information	1	0	0
56	This breakout provided me with the skills to apply information from this program to my academic work	2	0	0
57	This breakout provided me with the skills to develop new ideas to become a stronger facilitator	2	0	0

Table E23

Item by item department assignment to the institutionally-defined learning outcomes (PUL) for Office of Student Involvement and Engagements measure of LeadtoGo

#	Item	Primary PUL*	Secondary PUL*	LitAlign Score**
1	This session helped me learn the steps in planning a successful program.	1	2	0
2	This session provided me with the information to help identify characteristics of a successful program.	1	2	0
3	This session helped me to gain an understanding of how to identify the risks involved in event planning.	1	2	0
4	This program provided me with the skills to identify appropriate campus resources for my program needs.	1	2	0
5	This program provided me with an understanding why recognition is important when working in a group.	1	2	0
6	This program helped me identify different methods of motivation and how to apply them in your organization.	3	5	1
7	This program provided me with the skills to develop organizational goals.	1	2	0
8	This program helped me identify different methods of motivation and how to apply them in your organization.	3	5	1
9	This program provided me with the skills to develop organizational goals.	1	2	0

Table E24

Item by item department assignment to the institutionally-defined learning outcomes (PUL) for Office of Student Involvement and Engagements measure of AFLV

#	Item	Primary PUL*	Secondary PUL*	LitAlign Score**

1	AFLV provided me with skills to generate new ideas or ways to improve things in my chapter and at IUPUI.	2	0	0
2	AFLV helped me recognize my personal values and ethics.	6	0	1
3	AFLV provided me with skills to develop individual/organizational goals.	3	0	1
4	What was your favorite session at AFLV and why?	0	0	0
5	What did you learn from AFLV?	0	0	0
6	How do you plan on using what you learned at AFLV?	0	0	0
7	Would you go back to AFLV? Why or why not?	0	0	0
8	What are your general thoughts about AFLV?	0	0	0
9	What was your favorite part of the conference? What is something that can be improved about the experience?	0	0	0
10	What do you feel like you have learned from your attendance at AFLV?	0	0	0
11	What have you learned about your own leadership style and abilities?	0	0	0
12	How have you applied what you learned to the organizations you work with?	0	0	0
13	Have you applied the information in other areas in your life? If so, how?	0	0	0
14	Do you feel this experience is valuable for student leaders?	0	0	0
15	Is there anything you have not been able to share?	0	0	0

Table E25

Item by item department assignment to the institutionally-defined learning outcomes (PUL) for Office of Student Involvement and Engagements measure of Greek President Retreat

#	Item	Primary PUL*	Secondary PUL*	LitAlign Score**
1	What did you learn?	0	0	0
2	What do you plan to implement when we	0	0	0

	return?			
3	Which sessions did you take the most away from and why?	0	0	0
4	How did you bond with others?	0	0	0
5	What would you have liked to learn?	0	0	0
6	What could improve this program?	0	0	0
7	This retreat provided me with skills to manage my organizational functions	2	0	0
8	This retreat provided me with ways to generate new ideas or ways to improve things	3	0	1
9	This retreat provided me with skills to identify my personal leadership skills and traits	5	0	1

Table E26

Item by item department assignment to the institutionally-defined learning outcomes (PUL) for Office of Student Involvement and Engagements measure of Greek Council Retreat

#	Item	Primary PUL*	Secondary PUL*	LitAlign Score**
1	What did you learn?	0	0	0
2	What do you plan to implement when we return?	0	0	0
3	Which sessions did you take the most away from and why?	0	0	0
4	How did you bond with others?	0	0	0
5	What would you have liked to learn?	0	0	0
6	What could improve this program?	0	0	0
7	This retreat provided me with skills to work collaboratively with a team	1	0	0
8	This retreat provided me with ways to generate new ideas or ways to improve things	3	0	1

Appendix F

Debriefer Coding

KeyNumber	Item	Department	DeptPrimary PUL	DeptSecondary PUL	CogAPrimary PUL	CogBPrimary PUL	CogCPrimary PUL	CogASecondary PUL	CogBSecondary PUL	CogCSecondary PUL
1001	I found this activity to be informative	DOS	0	0	3	4	0	0	0	0
1002	This activity helped me to experience something new	DOS	0	0	0	0	0	0	0	0
1003	As a result of attending this event I was able to meet other students.	DOS	0	0	1	1	0	0	0	0
1004	Add your comments	DOS	0	0	0	0	0	0	0	0
2001	Select Gender	SRL	0	0	0	0	0	0	0	0
2002	Have you requested maintenance services in the past 6 months?	SRL	0	0	0	0	0	0	0	0
2003	How did you submit your request for services?	SRL	0	0	0	0	0	0	0	0
2004	If requested services, Thinking about the services you requested, please rate each of the following items: timeliness.	SRL	0	0	0	0	0	0	0	0
2005	The facility service provider incorporated programs and practices that are environmentally friendly.	SRL	0	0	5	4	0	0	0	0
2006	The facility service provider participates in community service activities and charitable programs.	SRL	0	0	5	0	0	0	0	0
2007	The facility service provider helps educated and engage the campus in its efforts.	SRL	0	0	0	0	0	0	0	0
2008	The facility service provider cares about and supports their employees' wellbeing and growth.	SRL	0	0	0	0	2	0	0	0
2009	I have good knowledge about the services and schedules provided by the facilities department.	SRL	0	0	3	3	3	0	0	0

2010	Among the topic/concerns listed, please indicate how IMPORTANT each of the following is for your facility service provider to focus on at your school: reducing the campus' carbon footprint.	SRL	0	0	0	6	2	0	0	0
2011	Please rate the PERFORMANCE of the service provider at your school in the following areas: recycling (overall program).	SRL	0	0	0	0	0	0	0	0
2012	Please rate the PERFORMANCE of the service provider at your school in the following areas: recycling (availability of containers).	SRL	0	0	0	0	2	0	0	0
2013	Please indicate your level of agreement with the following statement: I am conscious of the water I use when I shower, brush my teeth, wash the dishes, or wash clothes.	SRL	0	0	5	0	0	6	0	0
2014	Please indicate your level of agreement with the following statement: I am aware of ways I can impact the environment while living in my own home, apartment, or residence hall.	SRL	0	0	5	4	2	0	0	0
2015	What are 3 things that could have been improved in Student Staff Training?	SRL	0	0	0	0	2	0	0	0
2016	What are three things that you thought went well during Student Staff Training?	SRL	0	0	0	0	2	0	0	0
2017	What aspects of the programming sessions did you find helpful?	SRL	0	0	0	2	2	0	0	0
2018	What could we do differently next year for the programming sessions?	SRL	0	0	0	0	3	0	0	0
2019	In this past year, when I had questions, Allison responded to me within an appropriate timeframe.	SRL	0	0	0	0	0	0	0	0
2020	In what community do you live?	SRL	0	0	0	0	0	0	0	0
2021	My RA knows my name?	SRL	0	0	0	0	0	0	0	0
2022	I know how to contact my RA if I need him/her.	SRL	0	0	3	0	0	0	0	0
2023	Please list strengths your RA exhibits or areas of improvement needed. In your response, please list your RAs name.	SRL	0	0	0	0	2	0	0	0

2024	What is your primary relationship with Housing & Residence Life (select one: housing resident, campus partner/colleague, vendo)	SRL	0	0	0	0	0	0	0	0
2025	Rate how well Housing & Residence Life is practicing the following customer service standards when working with you: initiative.	SRL	0	0	0	0	0	0	0	0
2026	Rate how well Housing & Residence Life is practicing the following customer service standards when working with you: engaged.	SRL	0	0	0	0	2	0	0	0
3001	What was your overall impression of Fall 2012 staff training?	UUN	0	0	0	0	2	0	0	0
3002	As a result of participating in Fall 2012 training I got to know my co-workers better than I did before.	UUN	0	0	0	5	2	0	0	0
3003	For the Service with Distinction Program This is an important topic to cover during staff training.	UUN	0	0	0	0	0	0	0	0
3004	For the Employee Policies Review Session The speaker was knowledgeable about the topic.	UUN	0	0	3	0	2	0	0	0
3005	For the Employee Policies Review Session This is an important topic to cover during staff training.	UUN	0	0	0	4	0	0	0	0
3006	For the Resume/Interviewing Workshop The speaker was knowledgeable about the topic.	UUN	0	0	0	0	0	0	0	0
3007	For the Reception Review Session The speaker was knowledgeable about the topic.	UUN	0	0	3	0	2	0	0	0
3008	For the Reception Review Session The speaker was engaging.	UUN	0	0	0	1	2	0	0	0
3009	For the Reception Review Session This is an important topic to cover during staff training.	UUN	0	0	0	6	0	0	0	0
3010	For the Cultural Arts Gallery Review Session As a result of this session, I can apply what I learned to my work in the Campus Center.	UUN	0	0	3	3	4	0	0	0
3011	For the Cultural Arts Gallery Review Session The speaker was engaging.	UUN	0	0	0	1	2	0	0	0

3012	For the Setup Session The speaker was knowledgeable about the topic.	UUN	0	0	3	0	0	0	0	0
3013	For the Information Desk Session As a result of this session, I can apply what I learned to my work in the Campus Center.	UUN	0	0	3	3	3	0	0	0
3014	For the A/V Session As a result of this session, I can apply what I learned to my work in the Campus Center.	UUN	0	0	3	3	4	0	0	0
3015	For the A/V Session The speaker was knowledgeable about the topic.	UUN	0	0	3	9 9	2	0	0	0
3016	Other comments about training, or suggestions for next year.	UUN	0	0	0	0	0	0	2	0
3017	As a result of my Campus Center Student Building Manager work experience, I am better able to Effectively exchange information with a variety of people of different ages, backgrounds, etc.	UUN	1	5	1	1	1	5	5	5
3018	As a result of my Campus Center Student Building Manager work experience, I am better able to Apply knowledge learned during training to real job scenarios	UUN	2	0	3	3	3	0	0	0
3019	As a result of my Campus Center Student Building Manager work experience, I am better able to Describe people’s different ways of life, including religion, ethnicity, sexual and gender orientation, and race	UUN	5	0	6	5	5	5	0	0
3020	As a result of my Campus Center Student Building Manager work experience, I am better able to Make informed and principled choices and foresee the consequences of these choices	UUN	6	0	6	4	3	0	6	0
3021	As a result of my Campus Center Student Building Manager work experience, I am better able to Apply my set of values and ethics to a specific situation	UUN	6	0	6	6	6	0	3	0
3022	As a result of my Campus Center Student Area Manager work experience, I am better able to Contribute to a team approach to accomplishing tasks and solving problems	UUN	1	2	1	3	1	2	0	0

3023	As a result of my Campus Center Student Area Manager work experience, I am better able to Understand subjects other than the one in which I am majoring	UUN	4	0	4	4	0	0	0	0
3024	As a result of my Campus Center Student Manager work experience, I am better able to Give instruction and delegate responsibility in a management/supervisory role	UUN	1	0	1	1	1	5	0	0
3025	As a result of my Campus Center Student Manager work experience, I am better able to Communicate in a professional and reasoned manner in confrontational or emergency situations	UUN	1	0	1	1	1	0	3	0
3026	As a result of my Campus Center Student Manager work experience, I am better able to Understand subjects other than the one in which I am majoring	UUN	4	0	4	4	4	0	0	0
3027	As a result of my Campus Center Student Manager work experience, I am better able to Describe the general connection between this campus and the community in which it is located	UUN	5	0	5	5	3	0	0	0
3028	As a result of my Campus Center Student Manager work experience, I am better able to Make informed and principled choices and foresee the consequences of these choices	UUN	6	0	6	6	2	0	0	0
4001	AFLV provided me with skills to generate new ideas or ways to improve things in my chapter and on campus.	SLE	2	0	2	2	3	0	0	0
4002	AFLV provided me with skills to develop individual/organizational goals.	SLE	3	0	3	2	3	0	3	0
4003	What was your favorite part of the conference? What is something that can be improved about the experience?	SLE	0	0	0	0	2	0	0	0
4004	How have you applied what you learned to the organizations you work with?	SLE	0	0	3	3	4	0	0	0

4005	This program provided me with skills to generate new ideas or ways to improve my communication skills.	SLE	2	0	1	2	1	2	1	0
4006	This program provided me with professional development opportunities.	SLE	1	2	0	0	0	0	0	0
4007	This program has helped me make connections with others on campus.	SLE	3	5	1	1	0	0	0	0
4008	What I learned today at Catalyst will enhance my personal life	SLE	3	0	3	3	2	0	0	0
4009	Catalyst provided me with a greater understanding of respecting the views of people who see things differently than I do.	SLE	5	0	6	5	5	0	0	0
4010	Catalyst provided with the critical thinking skills to generate new ideas or ways to improve my leadership skills.	SLE	3	5	2	2	2	0	3	3
4011	This program provided me with the opportunity to learn about different races, ethnicities, and cultures.	SLE	5	0	5	5	5	0	0	0
4012	Which sessions did you take the most away from and why?	SLE	0	0	0	0	1	0	0	0
4013	What would you have liked to learn?	SLE	0	0	0	0	0	0	0	0
4014	My involvement in Cube Council helped me work collaboratively within a team.	SLE	1	2	1	3	0	5	0	0
4015	My involvement in Cube Council helped me learn how to manage conflict.	SLE	1	2	6	1	2	0	0	0
4016	My involvement in Cube Council will enhance my personal life.	SLE	3	0	3	3	4	0	0	0
4017	My involvement in Cube Council helped me identify my personal leadership skills and strengths.	SLE	5	6	1	0	4	3	0	0
4018	Attending this event assisted me with connecting with others (students, faculty or staff) on campus.	SLE	3	5	1	1	0	0	0	0
4019	This seminar will help me to communicate with others about my personality and leadership style.	SLE	1	0	1	1	1	0	6	0
4020	This seminar will help to enhance my personal life.	SLE	3	0	3	3	2	0	0	0
4021	This program provided me with skills to respect the views of people who see things differently than I do.	SLE	5	0	5	5	5	6	0	0

4022	This program provided me with skills to recognize my personal values and ethics.	SLE	6	0	6	6	6	0	0	0
4023	This program provided me with skills to apply my values and ethics to a specific situation.	SLE	6	0	6	6	6	0	3	0
4024	This program provided me with skills to prioritize what activities are more important to me.	SLE	1	2	2	6	2	6	0	0
4025	This program provided me with strategies to manage conflicts with friends, classmates, and/or student org members.	SLE	1	2	1	1	2	6	0	0
4026	This program provided me with skills to idenitfy my own personal leadership skills and traits and how they relate to social justice.	SLE	5	6	5	6	5	0	0	0
4027	This program provided me with skills to respect the views of people who see things differently than I do.	SLE	5	6	6	5	5	5	0	0
4028	This program provided me with skills to identify issues of personal importance and recognize my personal values.	SLE	5	6	6	6	6	0	0	0
4029	As a result of this seminar, I am able to define strategies for working with others based on their unique communication style.	SLE	5	6	1	1	3	0	0	0
4030	This program provided me with skills to generate new ideas about what motivates me.	SLE	3	5	6	2	2	0	0	0
4031	This program provided me with skills to generate new ideas or ways to prevent burnout.	SLE	3	5	2	2	3	0	0	0
4032	What aspects of the Social Change Model of Leadership (if any) connect with your personal leadership style?	SLE	0	0	5	0	3	6	0	0
4033	What is one thing you will you take away from your visit to the National Civil Rights Museum?	SLE	0	0	0	0	2	0	0	0
4034	What role do leadership and social justice play in social activism?	SLE	0	0	5	0	3	6	0	0
4035	What did you learn as a result of participating in the visioning process this morning?	SLE	0	0	0	0	0	0	0	0

4036	Freedom Ride participants completed an evaluation at the conclusion of the trip. In addition to the scale questions listed below, students were also asked several open ended questions, including:	SLE	0	0	0	0	0	0	0	0
4037	What was the least helpful about the Freedom Rides?	SLE	0	0	0	0	2	0	0	0
4038	Freedom Rides helped me develop the skill of communicating within a team	SLE	1	0	1	1	1	0	0	0
4039	Freedom Rides caused me to think about how to solve a problem or address an issue.	SLE	3	0	2	2	2	0	0	0
4040	Freedom Rides provided me with a greater understanding of respecting the views of people who see things differently than I do.	SLE	5	0	6	5	5	0	0	0
4041	My involvement on the Homecoming Committee helped me develop the ability to manage conflict and resolve problems.	SLE	5	0	1	1	5	6	0	0
4042	My involvement on the Homecoming Committee helped me develop the ability to plan and execute events.	SLE	1	2	3	3	3	0	0	0
4043	My involvement on the Homecoming Committee helped me develop the ability to identify personal leadership skills and strengths.	SLE	5	6	1	0	4	6	0	0
4044	The Involvement Expo provided me with the skills to make connections with others on campus (students, faculty and staff)	SLE	3	5	1	1	1	0	0	0
4045	As a volunteer,This program provided me with the skills to make connections with others on campus	SLE	3	5	1	1	3	0	0	0
4046	Based on my experience as a member of the Jagapalooza Committee, please reflect on how you developed in the areas below and assign the appropriate rating for your current level of development: ability to build partnerships with others on campus (students, faculty, or staff) and in the Indianapolis community.	SLE	3	0	1	1	2	5	5	0

4047	Based on my experience as a member of the Jagapalooza Committee, please reflect on how you developed in the areas below and assign the appropriate rating for your current level of development: ability to identify personal leadership skills and strengths.	SLE	5	0	3	0	2	0	0	0
4048	Based on my experience as a member of the Jagapalooza Committee, please reflect on how you developed in the areas below and assign the appropriate rating for your current level of development: ability to identify campus resources to meet my individual/committee needs	SLE	1	2	3	0	2	0	0	0
4049	My involvement in Leadership Consultants has helped me develop the ability to analyze different ideas and proposed solutions to solve a problem or address an issue.	SLE	3	5	2	2	3	0	1	0
4050	My involvement in Leadership Consultants has helped me develop individual and organizational goals.	SLE	1	2	1	4	4	6	0	0
4051	My involvement in Leadership Consultants has helped increase my awareness of resources that are provided for students and organizations through the Office of Student Leadership and Engagement and the campus.	SLE	1	2	3	4	4	0	0	0
4052	This session helped me learn the steps in planning a successful program.	SLE	1	2	3	3	4	0	0	0
4053	This program provided me with the skills to develop organizational goals.	SLE	1	2	3	3	4	0	0	0
4054	This program provided me with the skills to [Solve a problem or address an issue]	SLE	3	0	2	1	2	0	2	0
4055	What are topics you are interested in learning about in the future?	SLE	0	0	0	0	0	0	0	0
4056	What other types of programs would you like to see?	SLE	0	0	0	0	4	0	0	0

4057	Attending Living with Purpose at NSLC provided me with skills to communicate ideas and information.	SLE	1	0	1	1	3	0	0	0
4058	Attending Living with Purpose at NSLC provided me with skills to solve a problem or address an issue.	SLE	3	5	2	2	2	0	0	0
4059	Attending Dance Floor at NSLC provided me with skills to communicate ideas and information.	SLE	1	0	1	1	1	0	0	0
4060	Attending Dance Floor NSLC provided me with skills to solve a problem or address an issue.	SLE	3	5	2	1	2	0	0	4
4061	Attending Be the One at NSLC provided me with the skills to work collaboratively with a team.	SLE	1	2	5	3	3	1	0	0
4062	Attending Be the One at NSLC provided me with the skills to make connections with others on campus.	SLE	3	5	1	1	0	0	0	0
4063	Attending Be the One at NSLC provided me with the skills to build partnerships with others on campus.	SLE	3	5	1	0	4	0	0	0
4064	Attending Leadership on the Big Screen at NSLC provided me with the skills to solve problems or address an issue.	SLE	5	0	2	0	2	0	0	4
4065	Attending Money Management provided me with skills to communicate ideas and information.	SLE	1	0	1	1	1	0	0	0
4066	This program provided me with the skills to use the Office of Student Involvement programs and services.	SLE	1	2	3	0	2	0	0	0
4067	What did you learn?	SLE	0	0	0	0	0	0	0	0
4068	What do you plan to implement when we return?	SLE	0	0	0	4	0	0	0	0
4069	The Student Planning Committee program provided me with skills to communicate ideas and information.	SLE	1	0	1	1	1	0	0	0
4070	The Student Planning Committee program provided me with skills to plan an event or program.	SLE	1	2	3	3	4	0	0	0

4071	The Student Planning Committee program provided me with skills to work effectively with people of different races, ethnicities, and religions.	SLE	5	0	5	5	5	0	0	0
4072	The Student Planning Committee program provided me with skills to use Office of Student Involvement programs and services.	SLE	1	2	3	3	0	0	0	0
4073	This breakout provided me with new ideas on how my involvement produced transferrable skills.	SLE	3	5	3	2	3	0	0	0
4074	The information learned in this breakout will enhance my personal life.	SLE	3	0	3	3	6	0	0	0
4075	This breakout provided me with skills to manage my time better	SLE	1	2	2	3	2	0	0	0
4076	This breakout provided me with skills to develop a personal action plan to exhibit self-care in my life.	SLE	5	6	3	6	6	0	4	0
4077	This breakout provided me with skills to discuss challenges of college life with peers and begin to develop solutions.	SLE	3	5	2	1	5	1	3	6
4078	This breakout provided me with skills to recognize how groups and communities I belong to influence my leadership style.	SLE	5	6	5	5	4	6	0	0
4079	This breakout provided me with skills to learn more about my own personal values and ethics.	SLE	5	6	6	6	5	0	0	0
4080	This breakout provided me skills to identify issues of personal importance through the Social Change Model	SLE	5	6	5	6	2	0	0	0
4081	This breakout provided me with skills to respect the views of people who see things differently than I do	SLE	5	0	6	5	5	0	0	0
4082	This breakout provided me with the skills to develop new ideas to become a stronger facilitator	SLE	2	0	1	2	1	3	3	0
4083	As a result of participating in this service event, I believe that having an impact on community problems is within my reach.	SLE	5	0	5	3	5	0	5	4

4084	This program provided me with the information resource skills to identify information that will assist my organization in managing our finances.	SLE	1	0	3	1	3	1	4	0
4085	This seminar motivated me to think of new ideas or ways to improve my organization's meetings.	SLE	2	0	0	1	3	0	3	0
4086	This program provided me with the critical thinking skills to: Generate new ideas or ways to improve things	SLE	2	0	2	2	2	0	0	0
4087	The speaker assisted me in analyzing solutions to a social issue.	SLE	5	6	5	2	5	2	5	0
4088	Serving on the executive board provided me with the skills to solve a problem or address an issue	SLE	3	0	2	2	2	0	3	0
4089	Being involved with this organization provided me with the skills to recognize how groups and communities I belong to influence my leadership style.	SLE	5	6	5	5	2	6	0	0

Appendix G

SPSS Output for ICC

```
RELIABILITY
  /VARIABLES=CogAPrimaryPUL CogBPrimaryPUL CogCPrimaryPUL
  /SCALE('ALL VARIABLES') ALL
  /MODEL=ALPHA
  /ICC=MODEL(RANDOM) TYPE(ABSOLUTE) CIN=95 TESTVAL=0.
```

Reliability

Scale: ALL VARIABLES -
No data cleaning Primary Only Cog Interviews

Case Processing Summary

		N	%
Cases	Valid	146	99.3
	Excluded[a]	1	.7
	Total	147	100.0

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

Reliability Statistics

Cronbach's Alpha	N of Items
.813	3

Intraclass Correlation Coefficient

	Intraclass Correlation[b]	95% Confidence Interval		F Test with True Value 0			
		Lower Bound	Upper Bound	Value	df1	df2	Sig
Single Measures	.591[a]	.504	.671	5.345	145	290	.000
Average Measures	.813	.753	.860	5.345	145	290	.000

Two-way random effects model where both people effects and measures effects are random.
a. The estimator is the same, whether the interaction effect is present or not.
b. Type A intraclass correlation coefficients using an absolute agreement definition.

```
RELIABILITY
  /VARIABLES=DeptPrimaryPUL CogAPrimaryPUL
  /SCALE('ALL VARIABLES') ALL
  /MODEL=ALPHA
  /ICC=MODEL(RANDOM) TYPE(ABSOLUTE) CIN=95 TESTVAL=0.
```

Reliability

Scale: ALL VARIABLES-
CogINtA and Dept Primary

Case Processing Summary

		N	%
Cases	Valid	147	100.0
	Excluded[a]	0	.0
	Total	147	100.0

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

Reliability Statistics

Cronbach's Alpha	N of Items
.768	2

Intraclass Correlation Coefficient

	Intraclass Correlation[b]	95% Confidence Interval		F Test with True Value 0			
		Lower Bound	Upper Bound	Value	df1	df2	Sig
Single Measures	.616[a]	.503	.708	4.317	146	146	.000
Average Measures	.762	.669	.829	4.317	146	146	.000

Two-way random effects model where both people effects and measures effects are random.

a. The estimator is the same, whether the interaction effect is present or not.

b. Type A intraclass correlation coefficients using an absolute agreement definition.

```
RELIABILITY
  /VARIABLES=DeptPrimaryPUL CogBPrimaryPUL
  /SCALE('ALL VARIABLES') ALL
  /MODEL=ALPHA
  /ICC=MODEL(RANDOM) TYPE(ABSOLUTE) CIN=95 TESTVAL=0.
```

Reliability

Scale: ALL VARIABLES -
CogIntv B & Dept Primary

Case Processing Summary

		N	%
Cases	Valid	146	99.3
	Excluded[a]	1	.7
	Total	147	100.0

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

Reliability Statistics

Cronbach's Alpha	N of Items
.717	2

Intraclass Correlation Coefficient

	Intraclass Correlation[b]	95% Confidence Interval		F Test with True Value 0			
		Lower Bound	Upper Bound	Value	df1	df2	Sig
Single Measures	.559[a]	.436	.661	3.532	145	145	.000
Average Measures	.717	.608	.796	3.532	145	145	.000

Two-way random effects model where both people effects and measures effects are random.

a. The estimator is the same, whether the interaction effect is present or not.

b. Type A intraclass correlation coefficients using an absolute agreement definition.

```
RELIABILITY
  /VARIABLES=DeptPrimaryPUL CogCPrimaryPUL
  /SCALE('ALL VARIABLES') ALL
  /MODEL=ALPHA
  /ICC=MODEL(RANDOM) TYPE(ABSOLUTE) CIN=95 TESTVAL=0.
```

Reliability

Scale: ALL VARIABLES -
CogINtv C and Dept Primary only

Case Processing Summary

		N	%
Cases	Valid	147	100.0
	Excluded[a]	0	.0
	Total	147	100.0

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

Reliability Statistics

Cronbach's Alpha	N of Items
.775	2

Intraclass Correlation Coefficient

	Intraclass Correlation[b]	95% Confidence Interval		F Test with True Value 0			
		Lower Bound	Upper Bound	Value	df1	df2	Sig
Single Measures	.622[a]	.508	.713	4.438	146	146	.000
Average Measures	.767	.674	.833	4.438	146	146	.000

Two-way random effects model where both people effects and measures effects are random.
a. The estimator is the same, whether the interaction effect is present or not.
b. Type A intraclass correlation coefficients using an absolute agreement definition.

```
RELIABILITY
  /VARIABLES=CogASecondaryPUL CogBSecondaryPUL CogCSecondaryPUL
  /SCALE('ALL VARIABLES') ALL
  /MODEL=ALPHA
  /ICC=MODEL(RANDOM) TYPE(ABSOLUTE) CIN=95 TESTVAL=0.
```

Reliability

Scale: ALL VARIABLES -
ALL CogIntv Secondary with 0s

Case Processing Summary

		N	%
Cases	Valid	147	100.0
	Excluded[a]	0	.0
	Total	147	100.0

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

Reliability Statistics

Cronbach's Alpha	N of Items
.266	3

Intraclass Correlation Coefficient

	Intraclass Correlation[b]	95% Confidence Interval		F Test with True Value 0			
		Lower Bound	Upper Bound	Value	df1	df2	Sig
Single Measures	.104[a]	.011	.207	1.362	146	292	.014
Average Measures	.258	.032	.440	1.362	146	292	.014

Two-way random effects model where both people effects and measures effects are random.

a. The estimator is the same, whether the interaction effect is present or not.

b. Type A intraclass correlation coefficients using an absolute agreement definition.

```
RELIABILITY
  /VARIABLES=DeptSecondaryPUL CogASecondaryPUL
  /SCALE('ALL VARIABLES') ALL
  /MODEL=ALPHA
  /ICC=MODEL(RANDOM) TYPE(ABSOLUTE) CIN=95 TESTVAL=0.
```

Reliability

Scale: ALL VARIABLES -
CogIntvA & Dept Secondary

Case Processing Summary

		N	%
Cases	Valid	147	100.0
	Excluded[a]	0	.0
	Total	147	100.0

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

Reliability Statistics

Cronbach's Alpha	N of Items
.330	2

Intraclass Correlation Coefficient

	Intraclass Correlation[b]	95% Confidence Interval		F Test with True Value 0			
		Lower Bound	Upper Bound	Value	df1	df2	Sig
Single Measures	.193[a]	.036	.341	1.492	146	146	.008
Average Measures	.324	.070	.509	1.492	146	146	.008

Two-way random effects model where both people effects and measures effects are random.

a. The estimator is the same, whether the interaction effect is present or not.

b. Type A intraclass correlation coefficients using an absolute agreement definition.

```
RELIABILITY
  /VARIABLES=DeptSecondaryPUL CogBSecondaryPUL
  /SCALE('ALL VARIABLES') ALL
  /MODEL=ALPHA
  /ICC=MODEL(RANDOM) TYPE(ABSOLUTE) CIN=95 TESTVAL=0.
```

Reliability

Scale: ALL VARIABLES -
COgIntvB & Dept Secondary

Case Processing Summary

		N	%
Cases	Valid	147	100.0
	Excluded[a]	0	.0
	Total	147	100.0

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

Reliability Statistics

Cronbach's Alpha	N of Items
.101	2

Intraclass Correlation Coefficient

	Intraclass Correlation[b]	95% Confidence Interval		F Test with True Value 0			
		Lower Bound	Upper Bound	Value	df1	df2	Sig
Single Measures	.049[a]	-.100	.199	1.112	146	146	.261
Average Measures	.093	-.222	.332	1.112	146	146	.261

Two-way random effects model where both people effects and measures effects are random.

a. The estimator is the same, whether the interaction effect is present or not.

b. Type A intraclass correlation coefficients using an absolute agreement definition.

```
RELIABILITY
  /VARIABLES=DeptSecondaryPUL CogCSecondaryPUL
  /SCALE('ALL VARIABLES') ALL
  /MODEL=ALPHA
  /ICC=MODEL(RANDOM) TYPE(ABSOLUTE) CIN=95 TESTVAL=0.
```

Reliability

Scale: ALL VARIABLES -
COgIntvC & Dept Secondary

Case Processing Summary

		N	%
Cases	Valid	147	100.0
	Excluded[a]	0	.0
	Total	147	100.0

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

Reliability Statistics

Cronbach's Alpha	N of Items
.263	2

Intraclass Correlation Coefficient

	Intraclass Correlation[b]	95% Confidence Interval		F Test with True Value 0			
		Lower Bound	Upper Bound	Value	df1	df2	Sig
Single Measures	.126[a]	-.019	.270	1.357	146	146	.033
Average Measures	.223	-.040	.425	1.357	146	146	.033

Two-way random effects model where both people effects and measures effects are random.

a. The estimator is the same, whether the interaction effect is present or not.

b. Type A intraclass correlation coefficients using an absolute agreement definition.